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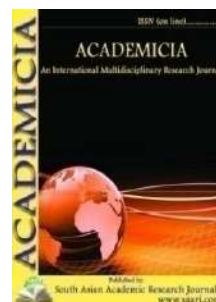
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# ACADEMICIA

## An International Multidisciplinary Research Journal

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91.	<b>INVESTIGATION OF SOLUBILITY KINETICS AND INTERACTION OF STABILIZING ADDITIVES IN PRODUCTION OF COMPLEX FERTILIZERS BASED ON GRANULAR NITRATE AND STABILIZING ADDITIVES</b>  Nazirova Rakhnaxxon Muxkharovna, Khoshimov Akhrorjon Akhadovich, Tadjiev Sayfidin Mukhiddinovich, Mirsalimova Saodat Rakhmatjanovna	657-64	10.5958/2249-7137.2020.00244.X
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93.	INFLUENCE OF INFORMATION COMMUNICATION TECHNOLOGIES ON STUDENTS DURING THE PERIOD OF GLOBALIZATION Kh. Dj. Khudoykulov, A.E.Parmanov, M.A.Tashpulatova, M.J.Mirzaev	673-83	10.5958/2249-7137.2020.00406.1
94.	ADVANTAGES OF AGRICULTURAL BIOLOGIZATION IN CONDITION OF SOIL SALINITY N. Absattarov, U. Ismailov	684-88	10.5958/2249-7137.2020.00269.4
95.	USING THE CAPABILITIES OF MODERN PROGRAMMING LANGUAGES IN SOLVING PROBLEMS OF TECHNICAL SPECIALTIES Ergashev Nuriddin Gayratovich, Shukurov Akmal Uktamovich, Jabborov Elbek Erkino'g'li	689-96	10.5958/2249-7137.2020.00270.0
96.	THE RMODYNAMIC PARAMETERS OF TECHNICAL AND PURIFIED CARBOXY METHYL CELLULOSE SAMPLES Yuldoshov Sherzod Abdullaevich, Sarimsoqov Abdushkur Abduhalilovich, Goyibnazarov Ilhom Shukhrat ugli	697-07	10.5958/2249-7137.2020.00271.2
97.	SOME THOUGHTS ABOUT HISTORICAL EVIDENCE SYSTEM AND EVIDENCE PROPERTIES Z. A. Ilhomov	708-11	10.5958/2249-7137.2020.00272.4
98.	THE ROLE OF SOCIAL CONTROL IN THE LEGAL SOCIALIZATION OF THE INDIVIDUAL Makhmudova Aziza Nugmanovna	712-21	10.5958/2249-7137.2020.00273.6
99.	DIDACTIC FUNDAMENTALS OF ELECTRONIC BOOKS VISUALIZATION Ergashev Nuriddin Gayratovich, Kholiyorova Hilola Komil qizi, Norqobilova Feruza Abduhomidovna	722-29	10.5958/2249-7137.2020.00274.8
100.	INFLUENCE OF INDUSTRY 4: 0 PROGRAM ON ENSURING COUNTRY COMPETITIVENESS IN THE INTERNATIONAL MARKET Toshpulatov Ikboljon Adiljonovich	730-36	10.5958/2249-7137.2020.00276.1
101.	POSSIBILITIES OF USING WEB-TECHNOLOGIES IN THE LEARNING PROCESS Mambetniyazov Maqsetbay Torebekovich	737-40	10.5958/2249-7137.2020.00277.3

102.	THE STRATEGY FOR THE IMPLEMENTATION OF THE MODERN GOVERNANCE SYSTEM IN UZBEKISTAN Turdiyev Bexruz Sobirovich, Ismatov Shohruhbe Murod o'g'li	741-48	10.5958/2249-7137.2020.00278.5
103.	THE REPRESENTATION OF MAKHMUD ZAMAKHSHARI AS A HISTORICAL FIGURE IN THE RAKHIMJAN OTAYEV'S NOVEL "THE WIND OF AMU" Amirqulova Zebuniso Mustafokulovna	749-53	10.5958/2249-7137.2020.00279.7
104.	TO STUDY THE IMPACT OF CAPITAL STRENGTH & TANGIBILITY ON FINANCIAL PERFORMANCE OF BANKING & INSURANCE COMPANIES LISTED IN COLOMBO STOCK EXCHANGE IN SRI LANKA Gamlayath, G R M, Rathirane, Y	754-65	10.5958/2249-7137.2020.00292.X
105.	EXPLORING THE WORK OF ALISHER NAVOI IN EUROPE Jurakulova Zilola Shavkatovna	766-72	10.5958/2249-7137.2020.00409.7
106.	ASYNCHRONOUS MODES AND SELF-EXCITATION OF SYNCHRONOUS MACHINES Norxojayeva Nargiza Nosirovna	773-77	10.5958/2249-7137.2020.00245.1
107.	SCIENTIFIC - PROPOSAL PROJECTS ON DESIGNING AGRO INDUSTRIALIZED SMALL CITIES IN THE TERRITORY OF UZBEKISTAN Rahmonov D.M, Rahmonova G.A	778-85	10.5958/2249-7137.2020.00246.3
108.	DIGITAL CONTROLLED SYNCHRONOUS ELECTRIC DRIVES Sultonov Ro'zimat Anvarjon o'g'li, O'rmonov Sanjarbek Raxmonjon o'g'li	786-89	10.5958/2249-7137.2020.00247.5
109.	NEGATIVE IMPACT OF THE TAX SYSTEM ON POLITICAL LIFE - ON THE EXAMPLE OF THE HISTORY OF THE KOKAND KHANATE (1850-1865) Burkhonov Ilyoskhon Muhiddinovich	790-95	10.5958/2249-7137.2020.00248.7
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111.	<b>IMPORTANT SOURCES IN STUDYING THE TAX SYSTEM OF THE KOKAND KHANATE</b> Hatamova Zumradkhon Nazirjonovna, Qodirova Dildora Sobirjonovna	<b>803-08</b>	<b>10.5958/2249-7137.2020.00401.2</b>
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113.	<b>ERADICATION OF KARUVELAM USING A BIO ECONOMIC MODEL</b> B. Amudhambigai, A. Neeraja, R. Roseleen Nithiya	<b>813-22</b>	<b>10.5958/2249-7137.2020.00510.8</b>
114.	<b>INSTALLING POWER COLLECTORS IN REPAIR OF EFFECTIVE BUILDINGS</b> Teshaboeva Nodira Djuraevna	<b>823-26</b>	<b>10.5958/2249-7137.2020.00403.6</b>
115.	<b>POSSESSIVE PRONOUNS IN INDONESIAN LANGUAGE</b> Sariyeva Zamira	<b>827-31</b>	<b>10.5958/2249-7137.2020.00410.3</b>
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118.	<b>CHOLPON'S TRANSLATION SKILLS</b> Khojjeva Shakhlo, Murodova Gulinigor	<b>841-48</b>	<b>10.5958/2249-7137.2020.00456.5</b>
119.	<b>DISEASE-RELATED EUPHEMISMS IN CHINESE AND UZBEK LINGUOCULTURE</b> Shokhistakhon Kudratullaevna Shamsieva	<b>849-53</b>	<b>10.5958/2249-7137.2020.00457.7</b>
120.	<b>LINGUOCULTURAL APPROACH IN THE STUDY OF SURKHANDARYA'S DIALECTS AND ETHNOGRAPHIES</b> Botir Rakhmonov	<b>854-59</b>	<b>10.5958/2249-7137.2020.00458.9</b>
121.	<b>JEWS' ENTRY INTO CENTRAL ASIA AND THE FORMATION OF JEWISH DIASPORA</b> Jamaliddin Karimov	<b>860-68</b>	<b>10.5958/2249-7137.2020.00459.0</b>

122.	<b>SYMBOLIC LANGUAGE OF NUMBERS IN MUSLIM ARCHITECTURE</b> Matluba Sadullaeva Akhrorovna	869-75	10.5958/2249-7137.2020.00460.7
123.	<b>THE USING MODELS OF 去 [QÙ]AND EQUIVALENTS IN UZBEK LANGUAGE</b> Mukhamedjanova Shahbora Kamolovna	876-84	10.5958/2249-7137.2020.00461.9
124.	<b>TRAINING SPEED QUALITY IN STUDENTS OF FOOTBALL ACADEMY</b> Shohruh Qayumov, Zafar Namozov, Sherzod Fayzullaev	885-90	10.5958/2249-7137.2020.00462.0
125.	<b>MODERATING AND MEDIATING ROLE OF INTRINSIC MOTIVATION ON DEVELOPMENTAL PERFORMANCE APPRAISAL SATISFACTION AND AFFECTIVE ORGANIZATIONAL COMMITMENT: A STUDY IN NEPAL</b> Ganesh Bhattarai	891-14	10.5958/2249-7137.2020.00318.3
126.	<b>THE PROBLEMS OF PEOPLE'S RESETTLEMENT POLICY IN THE BUKHARA REGION IN 1950-60s</b> Rizayev Baxtiyor Nazarbayevich	915-21	10.5958/2249-7137.2020.00280.3
127.	<b>PHARAOH OF THE WEAVERS OF BAHAUDDIN NAQSHBAND</b> Navruzova Gulchehra Nigmatovna, Ubaidova Vazira Erkinovna	922-26	10.5958/2249-7137.2020.00281.5
128.	<b>INNOVATIVE CHANGE IN THE NATIONAL ECONOMY IS THE KEY TO INNOVATION IN ALL AREAS</b> Djumaeva Mekhribon Abduvokhitovna, Imomov Bekhriz Marat ugli	927-31	10.5958/2249-7137.2020.00282.7
129.	<b>METHODS OF APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN EDUCATION AND PROBLEMS...</b> G.A. Ablizova, G.I. Aripova	932-35	10.5958/2249-7137.2020.00283.9
130.	<b>FROM THE HISTORY OF TRADITIONAL PERFORMANCES AND NATIONAL MUSIC IN BUKHARA FOLK FESTIVALS</b> Turaeva Guli Bahridinovna, Khodjaeva Fotima Nabixonovna	936-41	10.5958/2249-7137.2020.00284.0

131.	<b>EVOLUTION OF LANDSCAPE TEACHING AND ITS THEORETICAL FUNDAMENTALS</b> Toshov X.R, Ergasheva M.K	942-45	10.5958/2249-7137.2020.00285.2
132.	<b>THE IMPORTANCE OF COCHLEAR IMPLANT IN THE EDUCATIONAL SYSTEM OF CHILDREN WITH HEARING DISORDERS</b> Murotmusaev Komiljon Buriboevich, Khaqberdiev Jamoliddin	946-50	10.5958/2249-7137.2020.00286.4
133.	<b>EXISTING APPROACHES TO THE DEVELOPMENT AND IMPLEMENTATION OF WATER USE PLANS AND IMMEDIATE MEASURES FOR WATER USE</b> Barnayeva Munira Abduraufovna, Saylixanova Maftuna Komiljonovna, Kattayev Bobir Sobirovich, Ibodov Islom Nizomiyo`g`li, Muzaffarov Muxriddin Murodovich	951-54	10.5958/2249-7137.2020.00287.6
134.	<b>INTERPRETATION OF MOTHERLAND IN KHABIB SA'DULLAS' LYRIC WORKS</b> Ermanbetova Shohsanam Bozorboevna	955-60	10.5958/2249-7137.2020.00288.8
135.	<b>A DESCRIPTIVE STUDY TO ASSESS THE LEVEL OF ASSERTIVENESS, SELF-ESTEEM, STRESS AND ACADEMIC ACHIEVEMENT AMONG ADOLESCENTS OF KASHMIR</b> Mr. Waqar Maqbool Parray, Dr. Sanjay Kumar	961-67	10.5958/2249-7137.2020.00511.X
136.	<b>ANALYSIS OF PROVERBS AND APHORISMS IN "KUTADGU BILIG"</b> Bozorova Sabokhat	968-77	10.5958/2249-7137.2020.00415.2
137.	<b>THE BASICS OF STUDENTS' HEALTHY LIFESTYLES AND THE ROLE OF PHYSICAL EDUCATION IN ENSURING HEALTH</b> Boltaboev Khamidullo Khabibullaevich, Khatamov Zafarjon Nazirjonovich	978-83	10.5958/2249-7137.2020.00357.2
138.	<b>PATRIOTISM AS A MEANS OF DEVELOPING HARMONIOUSLY DEVELOPED YOUNG GENERATION IN THE MILITARY SYSTEM</b> Saidov Hakim Gofurovich	984-87	10.5958/2249-7137.2020.00358.4

139.	<b>OGAHI PATRIOTIC PERSON</b> Xudayberganov Yodgorbek Satimboyevich	988-91	10.5958/2249-7137.2020.00359.6
140.	<b>LINGUISTIC METHODS IN SENTENCE ANALYSIS</b> Boltakulova Gulnoza Farruxovna	992-95	10.5958/2249-7137.2020.00360.2
141.	<b>THE COGNITIVE METAPHORIZATION OF THE CONCEPT “CORONAVIRUS” IN ENGLISH, SPANISH AND UZBEK PUBLICISTIC DISCOURSE</b> Nasrullayeva Nafisa Zafarovna, Tkachyova Anastasiya Aleksandrovna, Ulugova Shohida Shohruhovna	996-01	10.5958/2249-7137.2020.00361.4
142.	<b>THE CHARACTER OF OGAHIY IN THE DRAMA</b> Xudayberganov Yodgorbek Satimboyevich	1002-05	10.5958/2249-7137.2020.00362.6
143.	<b>THE IMPORTANCE OF MATHEMATICAL TALES IN ELEMENTARY SCHOOL MATH CLASSES</b> Shoira Rakhimova Adilbekovna	1006-09	10.5958/2249-7137.2020.00363.8
144.	<b>INFORMATIZATION OF PUBLIC EDUCATION SYSTEM OF THE REPUBLIC OF UZBEKISTAN</b> Bakhodir Khurammov, Nurislom Khudoyberdiyev	1010-15	10.5958/2249-7137.2020.00364.X
145.	<b>PROBLEMS OF USING INFORMATION RESOURCE EDUCATIONAL TECHNOLOGIES FROM DIDACTIC SOURCES OF DRAWING</b> Latipov Rustam Atakhanovich	1016-18	10.5958/2249-7137.2020.00365.1
146.	<b>ROLE OF ATTITUDE AND PRACTICES ABOUT PRE-CONCEPTUAL NUTRITION AMONG FEMALE STUDENTS</b> Mohammed Abdulridha Merzah	1019-23	10.5958/2249-7137.2020.00341.9
147.	<b>TESTING AS A LEARNING KNOWLEDGE CONTROL METHOD IN FOREIGN LANGUAGE TEACHING PROCESS</b> Ibadova Nafisa Axmatilloevna, Tagaeva Tamara Bahodirovna, Khayitova Elmira Norbayevna, Saliyeva Ziroat Zokirovna, Soliyeva Zarina Botirovna	1024-29	10.5958/2249-7137.2020.00289.X



148.	<b>THE ROLE OF PHONETIC SKILLS IN THE FORMATION OF SOCIO-CULTURAL COMPETENCE IN PRE-SCHOOL CHILDREN</b> Sarimsoqov Sirojiddin Shoyzoqovich, Siddiqova Nasiba Narzullayevna, Aqiniqov Nurmuhmbed Borantayevich, Buranova Dilnoza Baxadirovna	1030-33	10.5958/2249-7137.2020.00290.6
149.	<b>IMPORTANCE OF FOREIGN LANGUAGE TRAINING OF UNIVERSITY TEACHERS IN INTERNATIONAL INTER-UNIVERSITY COMPETITION</b> Rashidova Nargiza Normurod qizi, Dehkanova Dilnoza Toshpulatovna, Nosirova Ra'no Azizovna, Qobilova Nodira Sanaqulovna	1034-37	10.5958/2249-7137.2020.00291.8
150.	<b>THE TAX SYSTEM IN TURKESTAN IN THE LATE XIX - EARLY XX CENTURIES</b> Oblomurodov Naim Khalimovich, Goyibnazarov Isobek Shakarovich	1038-44	10.5958/2249-7137.2020.00293.1
151.	<b>PLAYING AS THE MAIN FORM OF WORK IN PRESCHOOL EDUCATION</b> Rashidova Nargiza Normurod qizi, Dehkanova Dilnoza Toshpulatovna, Qobilova Nodira Sanaqulovna	1045-47	10.5958/2249-7137.2020.00294.3
152.	<b>MUTUAL SEMANTICS OF ENGLISH PERSONAL PRONOUNS AND THEIR COMBINABILITY</b> Djurayeva Shaxlo Gulyamovna, Toshmukhammedova Gulnoza Zayniddinovna, Ibadova Nafisa Axmatilloevna, Bakhromova Gulmira Ahmadjonovna	1048-50	10.5958/2249-7137.2020.00295.5
153.	<b>THE ROLE OF INTERDISCIPLINARY INTEGRATION TO IMPROVE THE EFFECTIVENESS OF EDUCATION</b> Suyunova Hilola Azamatovna, Suyunov Husniddin Miltiqboyevich	1051-58	10.5958/2249-7137.2020.00296.7
154.	<b>SCIENTIFIC AND THEORETICAL BASES OF IMPROVING THE QUALITY OF PORTFOLIO ASSETS OF COMMERCIAL BANKS</b> Majidov Jamoliddin Kamoliddinovich, Makhmudova Saida Abdurasul Kyzy	1059-65	10.5958/2249-7137.2020.00297.9

155.	<b>PROCESSING OF PHYSICOCHEMICAL COMPOSITION OF BROWN COAL</b> Isokov Yusuf Xoriddinovich, Yodgorov Normakhmat, Kenjaev Akmal Qudratovich	1066-71	10.5958/2249-7137.2020.00298.0
156.	<b>AWARENESS OF FARMERS TOWARDS EFFECT OF PESTICIDES ON HUMAN HEALTH</b> S. Lokesh Babu, Dr.D.D.Suradkar	1072-75	10.5958/2249-7137.2020.00512.1
157.	<b>MODIFICATION OF FEIGE-FIAT-SHAMIR BASED ON PUBLIC KEY CRYPTOGRAPHY</b> Sh.B. Juraev, J.M. Rashidov, M.A. Mavlonova	1076-80	10.5958/2249-7137.2020.00503.0
158.	<b>EFFECTIVENESS OF OPPORTUNITIES IN THE USE OF ELECTRONIC RESOURCES IN EDUCATION</b> Makhmudova Malokhat Akhmatovna	1081-85	10.5958/2249-7137.2020.00463.2
159.	<b>LEXICAL-SEMANTIC AND COGNITIVE SPECIFICS OF POLITICAL DISCOURSE (BASED ON SI JINPING'S SPEECHES)</b> Nasirova Saodat Abdullaevna	1086-92	10.5958/2249-7137.2020.00464.4
160.	<b>THE CREATIVE INTERRELATION OF SCIENTIFIC DEBATE WITH SOCIAL LIFE, THE POLITICAL SITUATION AND THE DIALECTICAL WAY OF THINKING THAT REFLECTS THEM</b> Turabova Sevara Kattakulovna	1093-98	10.5958/2249-7137.2020.00465.6
161.	<b>PSYCHOLOGICAL CHARACTERISTICS OF INTERACTION IN FOOTBALL TEAMS (ON THE EXAMPLE OF CHILDREN AND TEENAGERS SPORTS SCHOOL)</b> Sultonov Baxtiyor Abdumurodovich	1099-04	10.5958/2249-7137.2020.00466.8
162.	<b>LACUNAS IN UTKIR HOSHIMOV'S "THE AFFAIRS OF THE WORLD" (FROM CHINESE TRANSLATION EXPERIENCE)</b> Valieva Noiba Abboskhanovna	1105-11	10.5958/2249-7137.2020.00467.X
163.	<b>BASIC STAGES OF DEVELOPMENT OF PERSONAL CONSCIOUSNESS</b> Mamaradjabova Bogzoda Abdilkhakimovna	1112-16	10.5958/2249-7137.2020.00468.1

164.	<b>THE PRAISE OF MOTHERLAND IN AZIM SUYUN'S POETRY</b> Keldiyorova Naima Nabijonovna	1117-21	10.5958/2249-7137.2020.00469.3
165.	<b>FORMATION OF THE SKILLS OF PORTRAYING THE FUTURE TEACHER OF FINE ARTS IN PENCIL DRAWING</b> Baymetov Botir Boltaboevich	1122-27	10.5958/2249-7137.2020.00470.X
166.	<b>ISSUES WITH CONTRACTIONS OF SOME PARTS OF SENTENCE FORMED WITH COMPARATIVE FORM OF PREPOSITIONS “比 Bǐ” IN CHINESE LANGUAGE</b> Makhamadtoirova Adiba Botir qizi	1128-34	10.5958/2249-7137.2020.00471.1
167.	<b>A STUDY ON CORNEAL COLLAGEN CROSS-LINKING EFFECT ON QUALITY OF LIFE IN BULLOUS KERATOPATHY PATIENTS</b> Emine Kaya, Sait Egrilmez, Melis Palamar	1135-43	10.5958/2249-7137.2020.00346.8
168.	<b>ON ANALYSIS OF SPEECH BASED ON THE TRANSFORMATION MODEL</b> Samandarov Rustam Dosyorovich	1144-52	10.5958/2249-7137.2020.00472.3
169.	<b>THE STATE OF CEREBRAL VENOUS HEMODYNAMICS IN PATIENTS WITH HYPERTENSIVE ENCEPHALOPATHY</b> Nazarova J.A, Abdura khmonova K.B	1153-59	10.5958/2249-7137.2020.00473.5
170.	<b>TRADE RELATIONS AND THE DEVELOPMENT OF CRAFTS IN CENTRAL ASIA IN THE LATE XIX AND EARLY XX CENTURIES</b> Mamarajabov Gayrat Abdulhakimovich	1160-63	10.5958/2249-7137.2020.00474.7
171.	<b>TEACHING PRAGMATICS IN A FOREIGN LANGUAGE CLASS AND ITS IMPORTANCE IN LANGUAGE LEARNING</b> Karoeva Hilola Muinovna	1164-70	10.5958/2249-7137.2020.00475.9
172.	<b>PROVERBS ABOUT THOUGHTFUL CONVERSATION</b> Akhrorov A	1171-76	10.5958/2249-7137.2020.00476.0
173.	<b>ANALYSIS OF SOURCES OF FINANCING OF INVESTMENT ACTIVITIES OF TEXTILE ENTERPRISES</b> Khidirov Nodir Giyosalievich	1177-85	10.5958/2249-7137.2020.00477.2

174.	THE EFFECT OF ENSURING THE CONTINUITY OF MATHEMATICS SCIENCE IN TERTIARY - INSTITUTION ON THE EFFECTIVENESS OF TEACHING Nigora Shermatovna Erkaboyeva, Khurshida Aliyevna Ustadjalilova	1186-93	10.5958/2249-7137.2020.00478.4
175.	DEVELOPING THE SPEECH OF HEARING-IMPAIRED PUPILS IN PRIMARY SCHOOL BASED ON GAME TECHNOLOGY Temurova Gulchekhra Khudoykulovna	1194-99	10.5958/2249-7137.2020.00479.6
176.	APPLICATION TEMPLATES OF PEOPLE RELATED TO THEIR PROFESSION AND POSITION IN KOREAN AND THEIR TRANSLATION Ashirbaeva Dilorom Ravshanovna	1200-05	10.5958/2249-7137.2020.00480.2
177.	<b>REMOVED DUE TO TECHNICAL REASONS</b>		
178.	CHALLENGES IN TRANSLATING HYPERBOLE IN THE PROCESS OF READING Iskanova Nasiba Parmonovna, Khasanova Khurshidabonu Bakhtiyarovna, Allayarova Guzal Nuritdinovna, Bobokulova Gulchiroy Jamshidovna	1216-21	10.5958/2249-7137.2020.00329.8
179.	PSYCHOLOGICAL MECHANISMS OF NATIONAL AWARENESS AND THEIR USE IN THE PROCESS OF EARLY ADOLESCENT EDUCATION Umurzakov Dilmurod Kholmuradovich	1222-28	10.5958/2249-7137.2020.00330.4
180.	OPTIMIZATION OF PRIMARY EDUCATION Jabborova Onaxon Mannopovna, Ismoilova Dilafruz Muhiddinovna	1229-32	10.5958/2249-7137.2020.00331.6
181.	CLASSIFICATION OF SINGLE-PARENT FAMILIES AND THEIR SOCIAL-PSYCHOLOGICAL-PEDAGOGICAL CHARACTERISTICS Shaumarova Zilola Abdushukurovna	1233-37	10.5958/2249-7137.2020.00332.8
182.	POSSIBILITIES OF USING INNOVATIVE ELECTRONIC TEXTBOOK AND VIRTUAL EDUCATION TECHNOLOGY IN CHEMISTRY LESSONS M. Sh. Ahadov	1238-48	10.5958/2249-7137.2020.00333.X

183.	<b>THE ROLE OF SOLVING PROBLEMS WITH VARIOUS METHODS IN THE INTEGRATION OF THE GEOMETRIC AND NON-GEOMETRIC METRODS</b> Saipnazarov Shaylozbek Aktamovich, Raximov Abduxalil Toshbotirobich	1249-55	10.5958/2249-7137.2020.00334.1
184.	<b>CRISIS IN THE PADDY CULTIVATORS IN ANDHRA PRADESH-A STUDY OF GUNTUR DISTRICT</b> Dr. Kishore Babu. Karri	1256-61	10.5958/2249-7137.2020.00514.5
185.	<b>TEXT EDITION ISSUE OF MUTRIB POEMS</b> Madirimova Sokhiba Makhmudovna	1262-74	10.5958/2249-7137.2020.00302.X
186.	<b>SOLVING EXRTEMAL PROBLEMS BY A NON – CLASSICAL METHOD</b> Saipnazarov Shaylozbek Aktamovich, Gulamov Akromjon Rustamovich	1275-79	10.5958/2249-7137.2020.00337.7
187.	<b>GOLDEN GRAM PLANT AND ITS IMPACT ON SOIL PRODUCTIVITY</b> Esboganov Rustem Oserbayevich, Dursimbetov Ispandiyar Kerimberdievich	1280-85	10.5958/2249-7137.2020.00338.9
188.	<b>CORRELATION BETWEEN EDUCATION AND WORKMANSHIP A CASE STUDY OF MUSLIM ARTISANS OF ALIGARH LOCK INDUSTRY</b> Dr. Talmeez Fatma Naqvi, Dr. Shaikh Abul Barkat	1286-94	10.5958/2249-7137.2020.00513.3
189.	<b>ARTISTIC INTERPRETATION OF THE IMAGE OF CRAFTSMEN IN THE POEMS OF SAYFI BUKHARI</b> Mirzoyev Khayyom Toshqulovich	1295-99	10.5958/2249-7137.2020.00299.2
190.	<b>POETIC CONTENT AND FORM OF FERUZ'S POETRY</b> Maxammadieva Yulduz Yashnarovna	1300-08	10.5958/2249-7137.2020.00300.6
191.	<b>STUDYING THE SCIENTIFIC AND METHODOLOGICAL BASIS OF SERVITUDE LAW IN REGULATING LAND RELATIONS</b> Jurakulov Doniyor Ochilovich	1309-13	10.5958/2249-7137.2020.00301.8



192.	APPLYING INEQUALITIES TO CALCULATING LIMITS Saipnazarov Shaylozbek Aktamovich, Khodjabaeva Dilbar Kazaxbayevna	1314-19	10.5958/2249-7137.2020.00336.5
193.	THE ROLE OF NATIONAL AND RELATIVE PEOPLE'S POETRY IN THE FORMATION OF RAUF PARFI'S LITERARY AND AESTHETIC VIEWS Suyarova Gulrukhsor Nurilla qizi, Utamuradov Jasur Donaboyevich, Ikanova Zukhra Agzamovna	1320-25	10.5958/2249-7137.2020.00303.1
194.	SCIENCE AND EDUCATION IN THE RENEWED HISTORY OF UZBEKISTAN: ANALYSIS, AND STRATEGIC GOALS Zokir Khudoy berganov	1326-32	10.5958/2249-7137.2020.00304.3
195.	ABOUT INTERNATIONAL ECONOMIC AND SOCIAL RELATIONS BETWEEN UZBEKISTAN AND CHINA Qurbonboyev Javohir Mo'minjono'g'li	1333-37	10.5958/2249-7137.2020.00305.5
196.	WAYS TO IMPROVE THE ORGANIZATIONAL AND ECONOMIC MECHANISMS OF TOURISM DEVELOPMENT AND THE USE OF THE AIDA MODEL OF ADVERTISING Matluba Abdimanabovna Kuymuradova	1338-43	10.5958/2249-7137.2020.00306.7
197.	FUNCTIONAL SEMANTIC FEATURES OF TRANSPOSITION IN CHINESE Ochilova Khilola Khusanovna, Abdunazarova Zarina Islomovna	1344-51	10.5958/2249-7137.2020.00307.9
198.	STUDY REGARDING DESIGNING SYSTEM RELATED TO RANKING VOICE OF CUSTOMER IN THE MUNICIPALITIES OF TEHRAN Hassan Givarian, Mansoor Jafar Gholizadeh Baiee, Peyman Pournasr Khakbaz	1352-77	10.5958/2249-7137.2020.00367.5
199.	METHODOLOGY OF GIVING PROFESSIONAL KNOWLEDGE TO FUTURE TEACHERS Norquziyeva Manzura Abdurakhmonovna	1378-83	10.5958/2249-7137.2020.00388.2

200.	<b>MODERN ICT IN ENGLISH LANGUAGE TEACHING</b> Ziyaboyeva Sevara, Kazakova Marifat, Ibrokhimova Mukhaddam	1384-88	10.5958/2249-7137.2020.00389.4
201.	<b>INNOVATIVE TECHNIQUES FOR ESP PAIR WORK</b> Djuraeva Mastura	1389-93	10.5958/2249-7137.2020.00390.0
202.	<b>ABOUT SOME USEFUL AND POISONOUS PLANTS OF THE FAMILY APIACEAE L</b> Yangiboeva Z, Esankulova D, Shaymatov S	1394-97	10.5958/2249-7137.2020.00391.2
203.	<b>ABOUT TEACHING STUDENTS AN IMPROVED METHOD OF APPLYING A BLOCK-BASED ENCRYPTION ALGORITHM BASED ON THE FEISTEL NETWORK</b> Sh. R. Bobobekov	1398-06	10.5958/2249-7137.2020.00392.4
204.	<b>MAN IS THE MAIN SUBSTANTIAL ELEMENT OF MORAL LIFE</b> Muzaffarov Samandar Izbasarovich	1407-12	10.5958/2249-7137.2020.00393.6
205.	<b>USING THE AREA METHOD IN SOLVING PROBLEMS</b> Saipnazarov Shaylovbek Aktamovich, Khodjabaeva Dilbar Kazaxbayevna, B. U. Shergaziev	1413-21	10.5958/2249-7137.2020.00335.3
206.	<b>DYNAMICS OF SALINITY OF THE AGRICULTURAL SOILS IN THE CONDITIONS OF ARAL SEA</b> Kdirbaeva Guln Utabaevna, Kalimbetov Jaksibay Bayramovich	1422-26	10.5958/2249-7137.2020.00339.0
207.	<b>EFFECT OF MINERAL FERTILIZERS ON THE CHEMICAL COMPOSITION OF SOYA SEEDS</b> Userbaeva Tamarakhat, Kunakbaev Nurjan	1427-33	10.5958/2249-7137.2020.00340.7
208.	<b>INTERPRETATION OF LEXICAL AND SEMANTIC FEATURES OF UZBEK-TAJIK WORDS IN JAMAL KAMAL'S POEM "UZBEK LANGUAGE"</b> Akramova Surayo Renatovna	1434-40	10.5958/2249-7137.2020.00342.0

209.	<b>BASIC TECHNIQUES FOR PAINTING FABRICS</b> Azimova Mukhayyo Baratovna, Azimov Barot Bafoyeovich	1441-45	10.5958/2249-7137.2020.00343.2
210.	<b>MOTIVATION OF STUDENTS TO DO SPORTS AS PART OF PHYSICAL EDUCATION CLASSES</b> Fatullayeva Muazzam Azimovna, Narzullayev Farrux Ashrapovich	1446-50	10.5958/2249-7137.2020.00344.4
211.	<b>THE ESSENCE OF THE CONTENT OF THE CONCEPT OF DIGITAL EDUCATIONAL RESOURCES AND ITS ROLE IN PRIMARY EDUCATION</b> Lukmonova Salomat Gafurovna	1451-56	10.5958/2249-7137.2020.00345.6
212.	<b>AXIOLOGICAL ANALYSIS OF SOCIO-AESTHETIC PROBLEMS IN HADITHS</b> Aminova Feruza Hayitovna	1457-62	10.5958/2249-7137.2020.00421.8
213.	<b>A RESEARCH ON INTERACTION OF IDENTIFIED, INTEGRATED, INTERJECTED REGULATION WITH MOTIVATION</b> Dr. Avelina M. Aquino	1463-76	10.5958/2249-7137.2020.00382.1
214.	<b>THE ISSUE OF PROFESSIONAL TRAINING OF DEAF PEDAGOGUES-STUDENTS IN IMPROVING THE EFFECTIVENESS OF LITERARY EDUCATION - AS AN OBJECT OF RESEARCH</b> Mamarajabova Zulfiya Norboeva	1477-82	10.5958/2249-7137.2020.00481.4
215.	<b>TECHNOLOGY FOR PRODUCING MIXED YARN FOR RANGE OF DENIM FABRICS</b> Abduvaliev Ravshan Ruxillaevich, Fayzullaev Shavkat Raimovich, Nigmatova Fatima Usmanovna, Khojimatov Rasuljon Solievich	1483-87	10.5958/2249-7137.2020.00482.6
216.	<b>ENGLISH LANGUAGE IN A HISTORICAL PERSPECTIVE AND FORMING OF VOCABULARY</b> Ostonova Sanam Nematovna, Xikmatova Makhfuza Xikmatovna	1488-92	10.5958/2249-7137.2020.00483.8

217.	<b>THEORETICAL VIEWS OF BOBUR ABOUT THE DIVÂN STRUCTURE</b> Juraboev Otabek Rustambekugli	1493-98	10.5958/2249-7137.2020.00484.X
218.	<b>THE ROLE OF THE FAMILY IN TEACHING THE CHILD TO READ</b> Hayitova Firuza Abdullaevna, Panjiev Jurakul Menglimamatugli	1499-03	10.5958/2249-7137.2020.00485.1
219.	<b>PECULIARITIES OF THE FORMATION OF ANIMATED NON-SIGNIFICANT USING SUFFIXING IN THE MODERN CHINESE LANGUAGE</b> Hashimova Sabohat Abdullayevna	1504-11	10.5958/2249-7137.2020.00486.3
220.	<b>FEATURES OF THE LIMNIC ECOSYSTEM ECOMONITORING SYSTEM IN THE KHOREZM REGION OF UZBEKISTAN</b> Jumaniyazova S. I., Mamadalieva S. M	1512-17	10.5958/2249-7137.2020.00487.5
221.	<b>PLACEMENT OF CITIES OF UZBEKISTAN ON MAJOR WATER AND ECONOMIC REGIONS</b> Ismatov Jakhongir Atavullayevich	1518-21	10.5958/2249-7137.2020.00488.7
222.	<b>A STUDY ON PERFORMANCE &amp; OPERATIONAL CHALLENGES OF NEPAL AIRLINES CORPORATION</b> Rishikesh Panthi	1522-40	10.5958/2249-7137.2020.00397.3
223.	<b>SOME VIEWS OF ISLAMIC RELIGION AND MUSLIM SCHOLARS ON THE PHENOMENON OF HUMAN PERSONALITY</b> Majitov Makhmud Abdimumin ugli	1541-47	10.5958/2249-7137.2020.00394.8
224.	<b>METABOLIC DISORDERS IN WOMEN DEPENDING ON THE DURATION OF MENOPAUSE</b> Tadjieva Malika Asralovna, Zakirkhodjaeva Dildora Asralovna, Navruzova Rano Sadikovna, Mirkhoshimov Mirsobit Botirugli	1548-52	10.5958/2249-7137.2020.00395.X

225.	<b>PROBLEMS OF FORMATION AND DEVELOPMENT OF INNOVATIVE ENERGY IN THE REPUBLIC OF UZBEKISTAN</b> Nasimjon Nuriddinov, Zokirova Irodahon	1553-57	10.5958/2249-7137.2020.00396.1
226.	<b>USE OF MECHANICALLY ACTIVATED COMPONENTS IN ROAD CONSTRUCTION</b> Makhkamov Dilshod Ismatillayevich, Inoyatov Qaxramon Muydinovich, Abdurazakov Mirzokhid Abdura khmonxu jayevich, O'ktamov Sardor Makhmudjanovich	1558-66	10.5958/2249-7137.2020.00441.3
227.	<b>THE INFLUENCE OF THE EPIC POEM "ALPOMISH" TO THE MORAL AND ETHICAL EDUCATION OF STUDENTS</b> Fazilat Ibragimova, Tanzila Sulaymonova	1567-72	10.5958/2249-7137.2020.00442.5
228.	<b>IMPORTANT FEATURES OF CASTING SYSTEMS WHEN CASTING ALLOY CAST IRONS IN SAND-CLAY MOLDS</b> Turaxodjayev Nodir Djahongirovich, Saidmaxamadov Nosir Muysinaliyevich	1573-80	10.5958/2249-7137.2020.00443.7
229.	<b>OPTICAL AND RADIATION TECHNIQUES OPERATIONAL CONTROL OF THE COCOON AND THEIR EVALUATION</b> Y. Mamasodikov, G. M. Qipchaqova	1581-90	10.5958/2249-7137.2020.00444.9
230.	<b>STUDY ON DECENTRALIZED BUDGET DISTRIBUTION MODEL PRESENTATION FOR COUNTRY'S RESEARCH ORGANIZATION'S SUBSIDIARIES</b> Kaveh Lotfikia, Kamyar Lotfikia, Habib valizadeh, Vali Agheli	1591-07	10.5958/2249-7137.2020.00400.0
231.	<b>IMPROVING THE OPERATIONAL RELIABILITY OF EQUIPMENT USED IN THE TRANSPORTATION OF HIGH AND LOW TEMPERATURE OIL PRODUCTS</b> Ne'matov Xusan Ibodullayevich, Qo'yoqarov Oybek Ergashevich, Normaxmatov Bektosh Xujamqulovich, Tuyev Abduraxmon	1608-11	10.5958/2249-7137.2020.00308.0

232.	<b>IN TERMS OF METHODOLOGICAL FEATURES OF SOME STYLISTIC MEANS</b> Feruza Abdurakhimova Bokhadirovna	1612-20	10.5958/2249-7137.2020.00309.2
233.	<b>CRIMINAL LAW CHARACTERISTICS OF CRIMES IN THE FIELD OF FOREIGN ECONOMIC ACTIVITY</b> Achilov Alisher Temirovich	1621-27	10.5958/2249-7137.2020.00310.9
234.	<b>METHODS OF TEACHING LITERARY MATERIAL AT ACADEMIK LYCEUMS ACCORDING TO THE PROGRAM</b> Yusupov Konisbay Abilovich	1628-34	10.5958/2249-7137.2020.00311.0
235.	<b>ORGANIZATION OF CREDIT OBLIGATIONS AND MONITORING OF COMMERCIAL BANKS</b> Bustonov Mansurjon Mardonakulovich, Abdurakhmanova Mukhtasar Fazliddin qizi	1635-41	10.5958/2249-7137.2020.00312.2
236.	<b>FEATURE OF TECHNICAL SURVEY OF OBJECTS UNFINISHED CONSTRUCTION OF BUILDING OF DIFFERENT PURPOSE</b> Alimov Xikmat Tairovich	1642-53	10.5958/2249-7137.2020.00313.4
237.	<b>PECULIARITIES OF TREATMENT OF POST-TRAUMATIC PURULENT INFLAMMATORY COMPLICATIONS IN PATIENTS WITH Fractures OF THE LOWER JAW</b> Rakhimov Zokir Kayimovich	1654-66	10.5958/2249-7137.2020.00314.6
238.	<b>DENTAL PREVENTION OF MORBIDITY IN SILK-WELDING WORKERS</b> Kurbonova N.I	1667-69	10.5958/2249-7137.2020.00315.8
239.	<b>GOODS AND SERVICES TAX (GST) - BIGGEST TAXATION REFORM IN INDIA</b> Radha Yadav, Sagar Yadav	1670-74	10.5958/2249-7137.2020.00515.7
240.	<b>FORMATION OF THE CENTRAL ASIAN VECTOR IN THE FOREIGN POLICY OF THE FEDERAL REPUBLIC OF GERMANY</b> Bituraev Uktamjon Bazarbaevich	1675-79	10.5958/2249-7137.2020.00489.9
241.	<b>ANALYSIS OF THE RESEARCH ON TEACHING GEOGRAPHY TO BLIND STUDENTS</b> Musaev Dilshod Askarjanovich	1680-85	10.5958/2249-7137.2020.00490.5



242.	<b>THE ROLE OF SOCIAL AND HUMANITY SUBJECTS IN EDUCATION OF SPIRITUAL GENERATION</b> Fazliddin Abdunaevich Abdurazaqov	1686-89	10.5958/2249-7137.2020.00491.7
243.	<b>MODERN EDUCATIONAL TECHNOLOGIES IN PRESCHOOL INSTITUTION</b> Melibaeva Shokhista Muhiddinovna	1690-95	10.5958/2249-7137.2020.00492.9
244.	<b>THE VERBAL LACUNAS IN CHINESE AND UZBEK LANGUAGES (ON THE EXAMPLE OF GRAMMATICAL AND SOMATIC LACUNAS)</b> Ismatullayeva Nargiza Rasuljanovna	1696-1700	10.5958/2249-7137.2020.00493.0
245.	<b>EVALUATION IN 1960-1980 SCIENTIFIC RESEARCHES REGARDING THE EVENTS IN KHOREZM UNDER SOVIET UNION REPUBLIC</b> Rakhimov Navruzбек Shokhnazarovich	1701-06	10.5958/2249-7137.2020.00494.2
246.	<b>CONCEPTS OF PERSON AND RESPONSIBILITY IN ISLAM</b> Mamadaliyeva Feruza Asrorovna	1707-13	10.5958/2249-7137.2020.00495.4
247.	<b>STUDY OF ANTIOXIDANT AND ANTIRADICAL ACTIVITIES OF EUFORBIN (EUPHORBIA FERGANENSIS B.FEDTCH) POLYPHENOL</b> Gulbakhor Abdullaeva Tolibjonovna, Usmanova Farida, Muzaffar Asrarov Islamovich	1714-21	10.5958/2249-7137.2020.00496.6
248.	<b>A STUDY REGARDING RELATIONS B/W PARENTAL INVOLVEMENT AND STUDENTS' ACHIEVEMENT IN MATHEMATICS, SCIENCE IN BATTICALOA, SRI LANKA</b> Chelliah Arulmoly, Arulmoly Branavan	1722-31	10.5958/2249-7137.2020.00505.4
249.	<b>LINGUO-POETIC FEATURES OF ANTONYMS IN ALISHERNAVOI'S EPIC "LISONUT-TAYR"</b> Boltayeva Gulchehra Shokirovna, Yuldasheva Dilnoza Hasankizi	1732-38	10.5958/2249-7137.2020.00422.X

250.	THE DEVELOPMENT OF STUDENTS' MEMORY SKILLS WHEN LEARNING A FOREIGN LANGUAGE Ikromov Oybek Ibragimovich	1739-42	10.5958/2249-7137.2020.00423.1
251.	THE PHILOSOPHY OF INDEPENDENCE IS THE IDEOLOGICAL BASIS FOR RAISING THE COUNTRY'S NATIONAL DEVELOPMENT TO A HIGHER LEVEL Karimova Ra'noMalikovna	1743-48	10.5958/2249-7137.2020.00424.3
252.	MODERN METHODOLOGICAL BASES OF FOREIGN LANGUAGE TEACHING IN PRIMARY SCHOOL Sultonova Sevara Baxtiyor qizi	1749-53	10.5958/2249-7137.2020.00425.5
253.	INTERACTIVE METHODS FOR TEACHING RUSSIAN Batiraliyeva Shaxnoza Pulatovna	1754-59	10.5958/2249-7137.2020.00426.7
254.	TOLERANCE IS THE BASIS FOR CREATING A HUMANISTIC CULTURE IN THE WORLD Jumayeva Feruza Ruziyevna, Mardonova Feruza Baxronovna	1760-63	10.5958/2249-7137.2020.00427.9
255.	RESEARCH ACTIVITIES IN THE DEVELOPMENT OF PROFESSIONALISM AT TEACHERS Karimova Dildora Salimovna	1764-67	10.5958/2249-7137.2020.00428.0
256.	MOTIVATIONAL-VALUE DETERMINANTS THAT SHAPE LEADERSHIP ORDERS IN AN INDIVIDUAL DURING ADOLESCENCE Radjabova Farangiza Raimovna, Babakulova Mukaddas Norkabulovna	1768-74	10.5958/2249-7137.2020.00429.2
257.	ENVIRONMENTAL ISSUES IN UZBEKISTAN AT THE MODERN STAGE OF DEVELOPMENT Davletov Sanjarbek Rajabovich	1775-80	10.5958/2249-7137.2020.00366.3
258.	FEATURES OF ELECTRONIC LEARNING Fotima Anarbaeva, Gayrat Nurmatov	1781-83	10.5958/2249-7137.2020.00368.7

259.	<b>TASK CAUCHY AND CARLEMAN FUNCTION</b> Juraeva Nodira Yunusovna, Ashurova Zebiniso Raximovna, Juraeva Umidakhon Yunusalievna	1784-89	10.5958/2249-7137.2020.00369.9
260.	<b>AGAKHI'S ATTITUDE AS A MASTER TO HIS APPRENTICE IN THE LITERARY WORK</b> Xudayberganov Yodgorbek Satimboyevich	1790-94	10.5958/2249-7137.2020.00370.5
261.	<b>THE STATE OF THROMBOCYTIC LINK OF HEMOSTASIS IN CASE OF INSULIN RESISTANCE SYNDROME</b> Ismatova Mehriniso Nasritdinovna, Shadjanova Nigora Saidjanovna	1795-98	10.5958/2249-7137.2020.00439.5
262.	<b>AN INSIGHT INTO THE PHRASEOLOGICAL FEATURES OF ABDULLA QADIRI'S NOVEL "DAYS GONE BY" AND ITS TRANSLATION INTO ENGLISH</b> Masharipova Yulduz Otaxanovna	1799-07	10.5958/2249-7137.2020.00440.1
263.	<b>ANOMALIES IN THE DENTITION OF CHILDREN IN THE BUKHARA REGION</b> G.T. Eshonqulov	1808-10	10.5958/2249-7137.2020.00316.X
264.	<b>WHITE TREATMENT OF WHITE SPOT CRIES IN THE APPLICATION OF MODERN MEDICINE</b> O'.A.Fozilov	1811-13	10.5958/2249-7137.2020.00317.1
265.	<b>METHODS OF APPLICATION OF AUTO-TROMBOTSITAR MASS IN PARADONTIC DISEASES</b> Turaeva F.A	1814-17	10.5958/2249-7137.2020.00319.5
266.	<b>DEFINITIONS THE DIVISION FACTOR AT PURIFICATION OF OIL SLIME OF MECHANICAL IMPURITY</b> Hurmamatov A.M, Hametov Z.M	1818-22	10.5958/2249-7137.2020.00320.1

267.	<b>ANALYTICAL INDICATOR OF SALIVA IN CHILDREN WITH CEREBRAL PALSY</b> Yo.Q.Eronov, A.A.Rajabov	1823-25	10.5958/2249-7137.2020.00321.3
268.	<b>RESULTS OF PREPARATION OF OIL SLIME FOR PRIMARY PROCESSING</b> Hurmatov A.M, Hametov Z.M	1826-32	10.5958/2249-7137.2020.00322.5
269.	<b>THE FORMATION OF NATIONAL-IDEOLOGICAL CONSCIOUSNESS OF YOUNG STUDENTS AT THE STAGE OF DEVELOPMENT OF UZBEKISTAN</b> Xujaqulova Feruza Rahmatovna	1833-38	10.5958/2249-7137.2020.00430.9
270.	<b>INFORMATION TECHNOLOGY MODEL IN EDUCATION</b> Yuldoshev Akhmadjon Tulkinovich	1839-48	10.5958/2249-7137.2020.00431.0
271.	<b>DEVELOPMENT OF READING CULTURE IN STUDENTS AND ITS IMPACT ON ACADEMIC LEARNING</b> D. M. Malikova	1849-53	10.5958/2249-7137.2020.00432.2
272.	<b>PEDAGOGICAL MECHANISMS OF STABILIZATION OF A HEALTHY SPIRITUAL ENVIRONMENT IN AN UZBEK FAMILY</b> Davronova Dildora Saidovna	1854-58	10.5958/2249-7137.2020.00433.4
273.	<b>TOLERANT SCHOOLCHILDREN - THE FUTURE OF PROMISING UZBEKISTAN</b> Kushakova Gulnora Egamkulovna	1859-62	10.5958/2249-7137.2020.00434.6
274.	<b>COMEDY IN UZBEK CHILDREN'S LITERATURE IN INDEPENDENCE PERIOD</b> Jurayeva Gulnoza Axmatovna	1863-69	10.5958/2249-7137.2020.00497.8
275.	<b>OPPORTUNITIES AND TASKS OF DEVELOPING THE NOOSPHERE CONCEPT</b> Tangirov Nizom Abdurahmonovich	1870-75	10.5958/2249-7137.2020.00498.X
276.	<b>STATE POLICY IN WORKING WITH TALENTED YOUTH IN UZBEKISTAN</b> Khalimmetova Rokhatoy Davlatboevna	1876-79	10.5958/2249-7137.2020.00499.1

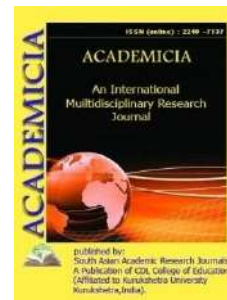
277.	COVERAGE OF POLITICAL, JUDICIAL AND LEGAL PROCESSES IN THE TURKESTAN ASSR IN SOVIET-ERA RESEARCH Abdulxay Gulchexra Urazaliyevna	1880-86	10.5958/2249-7137.2020.00500.5
278.	THE RESULTS OF LABORATORY STUDIES OF A DISK DEVICE MOUNTED ON THE FRONT OF THE BASE LEVELER Kuchkarov Jurat Jalilovich, Murodov Nusrat Murtazoevich, Turaev Behruz Mirzohidovich	1887-91	10.5958/2249-7137.2020.00323.7
279.	SCIENTIFIC SIGNIFICANCE OF CATALYSTS USED IN PETRO-CHEMICAL INDUSTRY Boytemirov Otabek Eshmurodovich, Murtazayev Feruzbek Ismatovich, Ne'matovBehruzjonUlug'beko'g'li, Sulaymanov Abbaz Nagmanovich	1892-95	10.5958/2249-7137.2020.00324.9
280.	THEORETICAL RESEARCH OF FIXING A SPHERICAL DISC IN ANGULAR VELOCITY OF IMPROVEMENT OF IRRIGATED LANDS Murodov Nusrat Murtazoevich, Kuchkarov Jurat Jalilovich, Kattayev Bobir Sobirovich, Saylixanova Maftuna Komiljonovna, Ibodov Islom Nizomiy o'g'li	1896-05	10.5958/2249-7137.2020.00325.0
281.	CURRENT ISSUES OF YOUTH COVERAGE IN THE THEATER Rakhmonova Kamolakhon Amanullayevna	1906-13	10.5958/2249-7137.2020.00326.2
282.	THE NOTION OF FEMINISM IN THE WORKS OF CHARLOTTE BRONTE Darvishova Gulchehra Kenjabayevna	1914-19	10.5958/2249-7137.2020.00327.4
283.	THERAPEUTIC AND PREVENTIVE MEASURES OF DENTAL DISEASES IN CHILDREN WITH DIABETES F.R. Kamalova	1920-25	10.5958/2249-7137.2020.00398.5

284.	<b>THE EVOLUTION OF MUSICAL PEDAGOGY OF THE KARAKALPAK PEOPLE OF THE HISTORIAN - THEORETICAL ASPECTS</b> Moyanov Ixlas Jiyeibayevich	1926-30	10.5958/2249-7137.2020.00435.8
285.	<b>FURTHER TRAINING OF TEACHERS AS A CONDITION FOR IMPROVING THE QUALITY OF EDUCATION</b> Yadgarova Gulbaxor Tillayevna, Narzieva Mastura Sunnatovna	1931-36	10.5958/2249-7137.2020.00436.X
286.	<b>THE PROBLEM OF THE FORMATION OF CREATIVE ABILITIES OF STUDENTS IN FOREIGN PSYCHOLOGY</b> Samarova Shoxista Rabidjanovna, Mirzayeva Mavluda Akramovna	1937-43	10.5958/2249-7137.2020.00437.1
287.	<b>PROBLEMS OF TEACHING MATHEMATICS IN PRIMARY SCHOOL AND SOME WAYS TO SOLVE THEM</b> Ruziyeva Zulaykho Samadovna	1944-47	10.5958/2249-7137.2020.00438.3
288.	<b>“CLINICAL-RESEARCH BASED AND MORPHOLOGICAL EVIDENCE OF FEATURES OF THE COURSE AND TREATMENT EFFECTIVENESS OF PERIODONTAL TISSUES AND ORAL MUCOSA IN ANIMALS UNDER THE IMPACT OF SODIUM HYPOCHLORITE”</b> F.I. Ibrahimova	1948-59	10.5958/2249-7137.2020.00399.7
289.	<b>DECORATIVE AND ECOLOGICAL PECULIARITIES OF CATALPA AND SOPHORA TREES IN GREENING</b> Ametova Sapargul Berdimuratovna	1960-64	10.5958/2249-7137.2020.00416.4
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293.	THE ROLE OF THE PRESS IN THE PROCESS OF HISTORICAL DEVELOPMENT OF UZBEKISTAN: CLASSIFICATION OF POPULAR MAGAZINES AND NEWSPAPERS. Tangrikulov Jamshid Erkinovich	1982-89	10.5958/2249-7137.2020.00420.6
294.	THE STUDY OF PHYSICAL AND MECHANICAL PROPERTIES OF CONSTRUCTION GYPSUM AND ITS STUDY ON THE CONSTRUCTION Turapov Farkhod Khursanovich, Nomazov Ikrom Orologli	1990-95	10.5958/2249-7137.2020.00501.7
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296.	CLASSICAL TEXT STUDY: HISTORY AND EXPERIENCE Tajibayeva Ozoda Taxirovna	2002-08	10.5958/2249-7137.2020.00504.2
297.	SOME COMMENTS ON THE HISTORY OF THE PENETRATION OF THE CHIGIL TRIBE INTO MOWAROUNNAHR S.M. Kuldashev	2009-13	10.5958/2249-7137.2020.00506.6
298.	POLITICAL DEVELOPMENT IN UZBEKISTAN Dr. Sahibzada Muhammad Usman	2014-24	10.5958/2249-7137.2020.00517.0

299.	<b>THE PECULIARITY OF LINGUISTIC TRADITIONS OF CHINESE STUDIES IN JAPAN (BU THE EXAMPLE OF NUMBERS)</b>  Mavlyanova Umida Hodjakbarovna	2025-32	<b>10.5958/2249-7137.2020.00518.2</b>
300.	<b>CIVIL SERVICE PROFESSIONALIZATION: PROBLEMATIC ASPECTS AND WAYS TO ACHIEVE SUCCESS (RUSSIAN EXPERIENCE)</b>  Yuldashev Anvar Ergashevich	2033-39	<b>10.5958/2249-7137.2020.00519.4</b>
301.	<b>FACTORS INFLUENCING THE CREATION OF A COMFORTABLE MICROCLIMATE AND ENVIRONMENTAL CONTROL OF ZONE BY LANDSCAPE DESIGN</b>  Axunova Nazokatxon Xayrulla qizi *(Akhunova Nazokatkhon)	2040-49	<b>10.5958/2249-7137.2020.00520.0</b>



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## AN ANALYSIS OF THE SECOND LANGUAGE LEARNERS IN LEARNING ENGLISH: A STUDY ON THE RURAL STUDENTS



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### ABSTRACT

*For the development of the nation, advancement and development of the rural areas are actually associated with a at most value. English could play a crucial role of the advancement of rural places. Speaking and knowing of English language is able to open brand new jobs for the individuals of rural areas and could aid them in leading to the development of the nation of ours? Teaching kids of rural areas in India is additionally an extremely crucial facet in our country's development. Language is actually among the medium of expressing our emotions, feelings, and ideas. In case we consider language in present world, English is actually among the most frequently used languages in world as well as English can be used to find out as a difficult language in the rural areas. This particular paper studies the attitude of learners towards language learning in a second language learning environment. This particular study was done utilizing a survey method. In the conclusion of the study, the collected data examined by using formulas created for attitude.*

**KEYWORDS:** English, Language, Attitude, Rural, Students.

### I. INTRODUCTION

Learning English language is viewed as an essential requirement at each stage of academic process. Generally, the 2 levels that are different, both school as well as college, in which English is teaches to students in various learning situations, appears to deliver 2 various ends. The language trained as well as learnt at these 2 levels is based on requirements that are diverse & things. For example of schools, the language teaching focuses on elements as marks, conclusion of syllabus as well as coaching or training for students to create exams. In colleges,

the language teaching lays focus on smooth skills, communication skills as well as employability skills to meet the demands of employers from industries and businesses.

In India, English isn't used just for the utilitarian objective but additionally for the inter-institutional and interpersonal communication. It really works when the Business Language also the Lingua Franca, this means it's necessary to hold out the company and additionally to speak with individuals of cultures that are different as India is a multi-lingual and multi-cultural nation. It's no more operating when the condition language of the best category or even the educated category of the society, quite it's operating as an instrument to bring success in life. The youth of India are actually aware that English can easily earn them great jobs with abundant salary in case they're very good in English.

Attitude is actually driven through the individual's beliefs about attributes or outcomes of executing the behavior (behavioral beliefs), weighted by evaluations of those results or perhaps characteristics. As a result, an individual that holds strong beliefs which favorably prized results will end up from executing the behavior will have a good attitude to the conduct. Alternatively, an individual that holds strong beliefs which adversely prized results will end up from the actions will have a bad attitude." Attitude principle could be seen from these 3 dimensions. Each one of those dimensions has various options to draw out language attitude benefits. Appropriately, the attitude idea has 3 parts i.e., behavioral, affective and cognitive. These 3 attitudinal areas are based upon the 3 theoretical methods of behaviorism, humanism as well as cognitivism respectively.

In the changing scenario of language teaching theories & methodologies, exactly where the learners, instead of the teachers, are actually gaining a main position, learners' attitude plays a crucial role in maximizing learning as well as teaching output. Learners' attitude can be described as a set of thoughts concerning language consumption as well as the condition of its of the society. The thoughts are neutral, bad, and good. They could nurture or perhaps impede the learning method safely and effectively. Even after syllabus, teaching materials, teacher training programmes have been transformed as well as made up to date from time to time, the general output of the competence of the students has never been enhanced. One reason for this is that the changes have usually been powerfully constrained by the western cultural assumptions as well as lack of understanding of the social contexts. Not a lot of research has been directed to the subject of the way the local educational/teaching environment has affected students' learning once the students aren't English major, but learning English as non majors as a result of professional requirements in addition to educational requirements. The idea of attitude, as a solid variable, applies in this particular circumstance.

## **II. SCENARIO OF RURAL AREAS**

The city kids are subjected to a great deal of modules and they've the opportunity of learning English via various methods. Special training can be purchased in the city schools to enhance the students' Listening, Speaking, Reading and Writing skills that are the fundamental skills for learning some language whereas the rural student have just minimal exposure to learn English. The training offered in schools, is solely theoretical as well as English and bookish is explained exclusively in the examination point of view. Hence, even after 12 years of learning English as a subject the student are reluctant to speak in English. This is applicable to city kids too; a lot of them are excellent in English but with regards to the use of talking in English hesitation prevails

much more among student. It's high time to encourage the student, right from the school of theirs by producing a comprehension about the benefits of English language. It's crucial that the instructors that teach English in rural areas must be dedicated and also have an honest approach to provide the skills of the student. The readily available resources must be totally tapped and so as to present an encouraging environment for learning as well as studying the language.

### • **Problems Faced By the Rural Students While Learning English**

To start with, the very first as well as the primary element is the Financial and socio-cultural experience of the household. As the majority of the parents are actually illiterate, they're unable to guide the wards of theirs as educated parents do. Hence, the students' overall performance lacks parental supervision as well as direction and that is really needed for education. The illiterate parents are actually not able to understand the benefits of training as well as they don't comprehend the significance of communication skills which plays a crucial role in their ward's profession.

The kids from rural areas that go to the school in the neighborhoods of theirs aren't subjected to the exact same kind of facilities and driven as the city bred kids. In cities, the kids get motivated through 2 ways: Integrative and instrumental inspiration. Learning a language just for incentives is actually crucial inspiration, on the additional hand integrative inspiration comes with the desire to be a part of the town and that is very powerful that pushes the kid to pick up the language with perfection. Concerning the syllabus, probably the most crucial factor would be in the majority of the schools English is presented as another topic. The significance of English as a communicative device isn't recognized. So the present strategies followed at rural schools aren't adequate to train the student to talk efficiently in English. For this reason, the students from rural area that take up skilled courses face a great deal of problems. Because they're bad adequate to speak in English, they miss countless possibilities.

### **III. REVIEW OF RELATED WORK**

Sinushamurthy et al., (2018) state that goal of this particular analysis was to figure out the students' anxiety, attitude and commitment for learning English depending on the socioeconomic status of theirs as well as English language achievement in National type Tamil facilities. Samples for this particular study comprised of 144 season five Indian student from 4 Tamil facilities. Data because of this study had been collected by questionnaire adapted from instruments. The results of this particular study showed that Indian student from rural and urban areas have a reasonable amount of nervousness in learning English. Student from both areas had been instrumentally driven as well as showed positive attitudes towards learning English. Nevertheless, bad correlations had been determined between English Language achievement as well as amount of inspiration in learning English or even in between day spoken languages at home with friends as well as the degree of English language achievement. The consequence of this particular study likewise illustrated that amount of commitment as well as attitude is positively correlated. To conclude, the samples of this particular study showed high levels of anxiety and also attitude and commitment for learning English. It's suggested that future research take far more samples and also include qualitative data to boost the reliability of the study.

Shameenahmad (2015) analyses the product of a survey on 238 undergraduate EFL student at a public faculty of Malaysia. The survey focused on the attitude of theirs towards English learning

and leads to that may have hindered the learning of theirs. For data collection, a nineteen thing questionnaire had been developed as well as administered on 238 students. Outcomes of the qualitative analysis show that the attitude towards English language learning and making use of the language in different domains of consumption is very good. The data also discovered that the majority of the student had bad thoughts or maybe fear concerning classroom directions in the learning experience of theirs. Student of various fields varied in attitudes towards English language learning in phrases of domains of emphasis as well as use of learning skills, which reveals that a single curriculum or maybe teaching methodology isn't sufficient. Many tips are made concerning the status, teaching materials, curriculum, and teaching methodology of English in Malaysia from this point of view.

Goktepe (2014) examined ninety first year internet business research undergraduates at a Turkish faculty as well as their determination and attitude towards learning English as a different language. The results showed that these learners learn English generally for instrumental reasons as well as integrative inspiration is actually dominant motivational orientation for the learners in certain degree.

In his investigation, Gajalakshmi (2013) took a look at the IX standard students' attitude towards learning English language. A standardized questionnaire was administered in the type of normative survey to 600 IX regular student (selected randomly from different high as well as greater secondary schools within Puducherry region) to gather the attitude of theirs towards learning English language. The collected data was statistically examined by SPSS ver 16. The results revealed that there's a tremendous difference depending on the gender, locality of the school, school type, management type. Hence it was concluded that much more classroom activities of the study of English improve student' attitude to learn English.

Yang (2012) conducted a brief research with twenty Faculty Malaya Master student to assess their determination and perceptions in L2. The primary goal of the analysis was finding out what can make some individuals acquire as well as learn English better compared to others. The results show that' learners that were positively and highly involved in the English proficiency of theirs had positive perceptions and very motivated towards learning English'.

Akram, Aatika as well as Rabia Yasmeen (2011) confirms that individuals of Faisalabad have better attitudes towards English compared to Punjabi language as English is actually related with the favorable features as the support, prestige, status, and job opportunities from the authorities. Due to these favorable characteristics, nearly all almost all of the individuals show good attitude towards English language as well as learning.

Rao, P. S. (2019a) says, "It is essential for everyone to learn the English language to face the challenges in the global market. Therefore, one must realize the importance of English in the contemporary world and make others realize and learn English language not only for communication but also for other purposes." Rao P. S. (2019b) further states that the interesting trend in the twenty-first century is that some of the biggest economies such as China, Japan, Russia, France and Brazil are focusing on English language after realizing the value of English at global level. Rao P.S. (2020) also asserts that the successful educating and learning is relies upon utilization of reasonable showing helps and educators capability. There are numerous techniques risen in the 21st century for educating and learning of English language. Training English language gets trying for educators at school instruction framework in India. It proposes using the



assets that are accessible for correcting the issues so as to meet the necessities of the current circumstance all around by the students.

#### **IV. OBJECTIVES OF THE STUDY**

1. To study the general concept of English language learning and rural areas
2. To analyze the attitude of English learners in rural areas.
3. To analyze the association between male and female learners

#### **V. RESEARCH METHODOLOGY**

- **Research design**

The method of this particular research was a survey research. Based on Singh, survey method in research is actually telling what's that's describing the issue or even occurrence. Adding to it, survey method is able to respond to a broad range of research questions, out of the as well as what to the why and how given. Due to that, the researcher believed survey method might reply as well as describe the attitude of the student in term of affective, cognitive and behavioral element. In doing the survey research, the researcher likewise needs to concern about the actions or the methods. Right now there is actually planning, defining the population, sampling, building the instrument, conducting the survey, and processing the data.

- **Population of study**

The population of this research was the students studying in the villages of rural parts in India. Population is the group of individuals having one characteristic that distinguishes them from other groups.

- **Sample size**

In this quantitative analysis, the sample comprised a total of forty five students; out of which there were twenty five male and twenty students that are female, whom were enrolled in a brief English Language program arranged by a rural Indian population or government. This specific program had a rigid policy of enrolling students whose ages ranged somewhere between seventeen to twenty five years. Vast majority of the participants had been in between the age bracket of 20 as well as 21. There was just one student that was twenty five years of age, and just 2 that had been seventeen years of age. Though the program had an enrollment of fifty students, five didn't take part in the study.

- **Data collection technique**

The technique of data collection that was applied in this research was questionnaire. It was applied in order to know the students attitude towards English language learning in term of emotional, behavioral and cognitive aspect.

#### **Instrument used for data collection**

This particular study aimed to take a look at the inductee students' language learning attitudes on 3 sub levels: behavioral, cognitive and emotional using Likert scale questionnaire adapted from: Eshghinejad (2016), Rermyindee, Chuaymankhong, Boonrangsri, and Vongchittipinyo (2004) as well as Gardner's attitude as well as determination test battery (1985). There had been thirty

statements related to attitudes with reference to behavioral (1 - 10), cognitive (11 - 20), and emotional (21 - 30) facets of perceptions.

- **Data analysis**

Right after collecting the data, the researcher analyzed the data. Firstly, counting the student's result in answering the questionnaire that has been put based on the Likert Scale. Right after counting the researcher placed the outcome into method below:

### **Hypothesis of the study**

H1: There is no significant difference between male and female students towards Behavioral attitude based on English language learning.

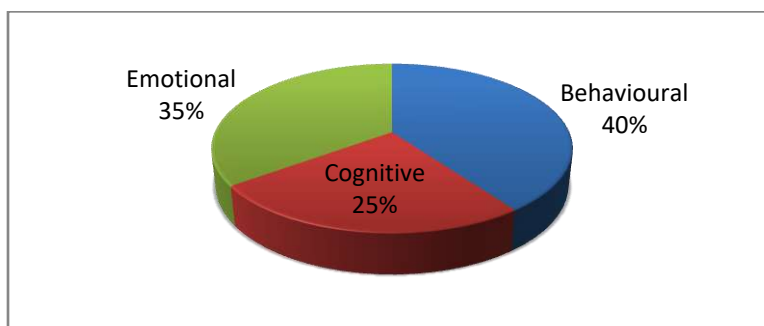
H2: There is no significant difference between male and female students towards Cognitive attitude based on English language learning.

H3: There is no significant difference between male and female students towards Cognitive attitude based on English language learning.

### **VI. DATA ANALYSIS**

The study was done in rural villages of India to quantify the students' attitude towards English language learning in term of affective, cognitive and behavioral element. The attitude of the student found out by utilizing questionnaire which was developed correctly for understanding the student's attitude in term of those 3 elements.

The student had been asked to reply to the questionnaire depending on the students' private thoughts, opinions as well as encounters about English language learning. Right after collecting as well as counting the questionnaire that's been answered by the student, the frequency of the student solution for each belief as well as the mean score of the students' attitude towards English Language Learning could be known. A Chart for the mean score of the students' attitude is actually provided as below:-



**Figure 1: The Mean Score of Students' Attitude**

By the bar chart earlier, it could be concluded that the student have a strong emotional as well as behavioral attitude, but the cognitive attitude of the student is simply get adequate score. Since, according to the calculation of every element, nearly every student has probably the lowest score for behavioral element instead of cognitive and affective element.

**TABLE 1 DEMOGRAPHIC PROFILE**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	25	55.6
Female	20	44.4
<b>Age</b>		
17	2	4.4
18	6	13.3
19	7	15.6
20	10	22.2
21	2	4.4
22	10	22.2
23	4	8.9
24	3	6.7
25	1	2.2
<b>Education</b>		
Inter	11	24.4
BA	10	22.2
BSC	5	11.1
BCOM	7	15.6
BBA	10	22.2
MA	1	2.2
MSC	1	2.2
<b>Total</b>	<b>45</b>	<b>100.0</b>

**STUDENTS' ATTITUDE****TABLE 2 GROUP STATISTICS FOR STUDENTS' ATTITUDE TOWARDS ENGLISH LANGUAGE LEARNING**

<b>GNR</b>		<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>
Behaviour	Male	25	3.61	0.49	0.10
	Female	20	3.76	0.43	0.10
Cognitive	Male	25	3.90	0.43	0.09
	Female	20	4.06	0.49	0.11
Emotion	Male	25	3.98	0.43	0.09
	Female	20	4.01	0.51	0.11

Table two displays the distinction between female and male students' behavioral, cognitive, and emotional attitude towards English language learning. From this particular perspective, the mean values of male students are actually 3.61 for behavior, 3.90 for cognitive, as well as 3.98 for emotional attitude with 0.49, 0.43, as well as 0.43 as standard deviation and 0.10, 0.09, as well as 0.09 as standard error respectively. To be able to check in case the mentioned differences are statistically significant, Independent Samples Test was run stating the condition of hypotheses.

**TABLE 3 T-TESTS BASED ON STUDENTS' ATTITUDE TOWARDS ENGLISH LANGUAGE LEARNING**

Levene's Test for Equality of Variances				t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
<b>Behavior</b>	Equal variances assumed	.122	.729	-1.021	43	.313	-.142	.139	-.423	.139
	Equal variances not assumed			-1.037	42.668	.306	-.142	.137	-.419	.134
<b>Cognitive</b>	Equal variances assumed	.074	.787	-1.158	43	.253	-.160	.138	-.439	.119
	Equal variances not assumed			-1.142	38.352	.261	-.160	.140	-.444	.124
<b>Emotion</b>	Equal variances assumed	1.481	.230	-.215	43	.831	-.030	.140	-.311	.251
	Equal variances not assumed			-.211	36.923	.834	-.03000	.14241	-.31857	.25857

In Table, the Levene's Test for Equality of Variances establishes that the variability in the 2 various genders of students is all about the same, as the sig values for those 3 kinds of attitude are actually greater compared to .05. This particular finding of the current study reveals that the 3 kinds of mindset towards learning English language don't vary excessive among both genders of students. Thus, the (2 Tailed) sig values are actually to be looked at out of the rows "Equal Variances Assumed" instead of the rows "Equal Variances Not Assumed," which show the results of t test for Equality of Means. From this particular perspective, the (2 Tailed) sig values for every kind of students' attitude are actually .313 with .142 as .139, and mean difference as standard error distinction for behavioural, .253 with .160 as mean impact, as well as .138 as standard error difference for cognitive, as well as .831 with .030 as mean difference, as well as .140 as standard error difference for emotional attitude. Because all 3 (2 Tailed) sig values are actually greater compared to .05, it's safe to claim minor distinction between the 2 genders for those 3 kinds of attitude. In addition, the distinction in the mean appreciates talked about in Table two may be claimed as based on chance instead of the manipulation of distinction of

genders of students. Being a result, every one of the hypotheses, in the current study, is actually accepted.

**TABLE 4 STATUS OF HYPOTHESIS**

No.	Hypotheses	Sig Value	Status
H1	There is no significant difference between male and female students towards Behavioral attitude based on English language learning	.313	Accepted
H2	There is no significant difference between male and female students towards Cognitive attitude based on English language learning	.253	Accepted
H3	There is no significant difference between male and female students towards Emotional attitude based on English language learning	.831	Accepted

The outcomes of the t test illustrate that there's no statistically significant distinction between females and males regarding the attitudes of theirs (behavioral, emotional and cognitive) towards the learning of English. It was discovered from the calculation of independent sample t test which showed that the estimated p worth for the 3 attitudes I e BH#.068, COG#.974 as well as EMO#.731 was higher compared to.05 level to ensure the hypothesis that there's no distinction between language learning attitudes (behavioral, emotional and cognitive) as well as gender of the English students' is actually accepted.

## VII. CONCLUSION

In the procedure of learning, attitudes of learners play a crucial role, as such; their learning is actually impacted by a variety of elements. This particular analysis attempted to take a look at the behavioral, cognitive and emotional elements which might leave an influence on learner's attitude towards learning English language and discovered that participants possessed positive attitudes towards it. Even with acknowledging the worth of English for society, other things produce a part of indecisiveness as well as tentativeness for the actions of the students that appear to be in a state of anxiety whether to choose the target language or perhaps not due to the two schooling devices being applied in the nation. By two schooling process the scientists are talking about the English and Urdu moderate of instruction being utilized at the educational sectors.

The willingness to get into something totally new with no apprehension is crucial to building a good attitude. Likewise, for proficiently learning English, or maybe some additional language, it's highly appropriate as well as significant to have an optimistic attitude towards that specific

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The willingness to get into something totally new with no apprehension is crucial to building a good attitude. Likewise, for proficiently learning English, or maybe some additional language, it's highly appropriate as well as significant to have an optimistic attitude towards that specific language. Learners' perceptions figure out the success or maybe failure of the procedure of the attainment of any skill; similarly for language learning since at the conclusion of the day, it's the inclination of a person towards something that makes a positive change. Attitudes are viewed as probably the most crucial element in productive foreign language learning. With this study, the scientists have attempted to uncover the participants' perceptions in 3 domains: behavioral, cognitive and emotional. The results have proven that the students predominantly had good attitudes towards learning English as a different language. Keeping in view the good attitudes of theirs, it could be deduced that the language learning of theirs is effectively carried out. As a complete, it's anticipated that students in India are actually dedicated to English language learning. This is depending on the reality that the students that were sometimes currently competent or perhaps were learning for proper training someplace viewed English Works certificate training course as a chance to enhance their English language abilities. This shows the commitment of theirs and a general good attitude towards learning the English language.

### VIII. EDUCATIONAL IMPLICATIONS

1. Teachers are able to make an invaluable contribution in creating a friendly connection with the student of theirs, to produce an optimistic attitude towards learning English language,
2. Positive mental classroom environment required for learning language, as well as the mistakes are believed to be as a normal part of the procedure of learning English language.
3. Teachers must encourage the student to find out far better English, by highlighting the value of it's as they require English for getting employment objective in future.
4. Parents and educators should motivate learners to read through supplies written in English such as magazines and newspapers.
5. Educators that qualify to teach English should have gotten a pertinent training as well as qualification in English. In case the above mentioned problem is actually taken care of learners will get adequate awareness which would help them to have self-confidence and they are going to be proficient in the planet.

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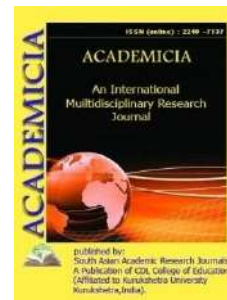
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## MODERN SOCIO-PEDAGOGICAL NECESSITY OF INCREASING COMMUNICATIVE COMPETENCE OF FUTURE PHYSICAL EDUCATION TEACHERS

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### ABSTRACT

*The article analyzes the current state of development of the communicative competence of future physical culture teachers, problems, shortcomings, and ways to overcome them. Also, the interpersonal, intergroup and collective, social forms of communication and their peculiarities in the professional-pedagogical culture of future physical culture teachers.*

**KEYWORDS:** Education System, The Content Of Education, Pedagogy, Physical Education, Physical Development, Physical Culture, Students, Professional-Pedagogical Culture, Communicative Competence, Speech Culture.

### I. INTRODUCTION

It is important to ensure the spiritual and physical well-being of young people in the world, the formation of healthy life and physical culture through the centuries-old socio-pedagogical phenomenon, physical training. Because sports is one of the factors that give everyone a great opportunity to develop a healthy lifestyle, regardless of their nationality, race or religion.

In foreign countries, special attention is paid to the integration of social and economic spheres, training of personnel in accordance with international qualification requirements, the formation of their physical culture in education, the formation of practice in improving the educational process of the institution and strengthening its scientific and methodological base. The use of quality teaching methods and best practices for learning, such as the methods of forming and

developing students' physical culture, balancing indicators, universal quality management, quality assurance, key performance indicators, and continuous education quality improvement.

## II. MATERIALS AND METHODS

One of the main tasks in the context of educational reforms in Uzbekistan is to improve the health and physical culture of the younger generation. The new model of education aims not only to develop students' knowledge, skills and abilities, but also to develop their physical culture, and, above all, to develop a holistic, physically fit person. Therefore, President Sh. Mirziyoyev notes this: "We will continue to attach great importance to the accelerated development of sports, encouraging and supporting athletes who have achieved good results in international competitions." [1]. However, in spite of clearly identified directions for improving the education system, there is an increase in the number of adolescents and students with poor physical and mental health in recent years.

The country's pedagogical science and education system has a strategic goal that is to create all the conditions for education to help preserve and develop, not to undermine, the health of schoolchildren and students. In this case, the social and pedagogical importance of building a healthy culture that helps students to realize their dreams in life is growing.

The strategy of actions for further development of the Republic of Uzbekistan for 2017-2021 is in line with improvement of the state youth policy, spiritual and intellectual development, independent thinking, devotion to the homeland, and harmonious development of life.

Decree of March 5, 2018 "On Measures for Radical Improvement of Public Administration System in Physical Education and Sport", the tasks set by President Mirziyoyev at the meeting on September 20, 2018, dedicated to the development of physical culture and sports, "The Concept of Development of Physical Culture and Mass Sports in the Republic of Uzbekistan for 2019-2023", approved on February 13, 2019, the objectives set out in the 5 youth initiatives and other regulatory and legal documents proposed on March 19, 2019, provide for the development of physical health and culture of the population, especially the youth.

The main goal and driving force of reforms in the Republic is the formation of human beings, their harmonious development and well-being, the creation of favourable conditions and mechanisms for the realization of the interests of the individual, and the change of outdated thinking and social behaviour patterns.

Students are a distinctive group that is more susceptible to various environmental diseases than other social groups. They are also characterized by varying levels of physical training. Students are considered to have varying levels of physical training and physical development.

The results of the analysis of the existing scientific and methodological literature show that in recent years there has been an increase in the number of students with different levels of physical training.

This trend is typical of many universities in Uzbekistan. Most students are not fully prepared to handle the loads provided by standard curricula. It is difficult to carry out training programs developed by students of this type within the training regimes (according to the physiologically-based sandboxes of the given age groups). This is due to the discrepancy between the physical preparation of a significant number of students and the normative tests performed by them. The

fact that many students do not have the necessary motivation for physical education exacerbates the situation. These students are often shown to be inactive in practical exercises, not in elementary exercises, avoiding physical loads, as well as persistence in achieving the results required for optimal functioning of all systems of the body. Activation of the physical activity of such students remains an important issue. The methodology and organization of the process of teaching these students are unique. This results in the need to develop a new methodology for teaching students about physical activity and physical activity to varying degrees.

In recent years, there has been a widespread introduction of new innovative processes in the education system. At the same time, innovation is reflected in the combination of educational initiatives and innovations, and together they lead to global or small global change.

Several studies have found that higher education institutions do not pay enough attention to teaching physical culture and sports and that the process of training uses innovative technological tools. There is a fundamental contradiction between the typical system of teacher training and its individual, creative activity.

The development of new methods and approaches to the organization of the educational process, which encourages and stimulates the students' active involvement in the acquisition of professional knowledge, skills and skills, is crucial in improving the system of training specialists in the field of physical culture education.

To date, scientific and methodological developments in the field of physical culture and sport in educational institutions are not sufficiently developed.

Traditional teaching methods are no longer able to provide students with the knowledge, skills and abilities required to equip them with modern teaching methods. In this regard, at the current stage of education reform, it is necessary to develop new methods and tools of teaching and to integrate them into the educational process.

Introduction of new active forms of education into the educational process is one of the main bases for its improvement. The development of modern teaching methods is the most promising direction of training, improvement and professional development of the teaching staff.

The transition to the new paradigm of education in the Republic requires not only innovative approaches to student self-development but also improvement of methodological foundations of this process. In particular, "Creating healthy lifestyles in our society, creating conditions for the regular training of the population, especially the younger generation in physical culture and mass sports, strengthening youth's confidence in their will, strength and capabilities through sporting events, courage and patriotism; systematic organization of work on the development of devotion to the motherland, as well as a selection of talented athletes among young people and further development of physical culture and mass sports. Large-scale work is being carried out "[2]. In higher education institutions it is important to improve the theoretical and practical content of students' knowledge, to develop the professional knowledge, skills and abilities needed in the teaching profession, to develop creative educational technologies.

The future physical culture is the quality of teachers' professional training, above all, their willingness to engage in pedagogical communication, the ability to carry out specific professional activities to address teaching and methodological, spiritual and educational tasks. It

is based on the specific knowledge, skills and abilities of future teachers, and above all, the culture of pedagogical communication.

Future physical culture requires teachers to communicate communication skills, students' ability to present information accurately and accurately, to be able to give advice and suggestions to colleagues, to be transparent in pricing, to express wishes, to use appropriate speech and speech tools, and to communicate effectively. satisfaction, aesthetic, ethical, communicative needs.

- These requirements are, above all, the cultural and communicative qualities that are most important in professional and pedagogical activities - emotional culture, students' beliefs and their impact on them; motivation;

- Professional development; knowledge of theoretical knowledge and communication structure and technology (creative approach to them);

- To know the psychology of the interviewee; pedagogical collaboration and interpersonal interaction; occupation of the pedagogical board;

- Pedagogical communication techniques; It is reflected in the expression culture of speech and non-speech means of communication.

Characteristics of the pedagogical professional communication culture of a future physical culture teacher are as follows:

- in developing their physical qualities and abilities to their optimum level;
- Attention to the beauty, plastic freedom and health of the human body (through active physical activity);
- the perception of specific forms of physical and sports achievements, such as aesthetic events;

Aesthetics in sports are of high value, and this sporting event "reflects the value of an individual in certain emotional integrity, promotes comprehensive development of the individual, broadening the boundaries of his freedom, individuality" and reveals his hidden intellectual and creative potential.

Future physical culture teachers should be able to communicate professionally, physically and spiritually, and have the ability to engage students in sports in the future. Sport and aesthetics, sports and ethics, sports and communication, sports and culture, sports culture and personality development - Pedagogical culture in practice - are complementary and inseparable concepts of understanding, understanding and integrating the future physical culture teacher. In the process of forming a future physical culture teacher, it is important to see the beauty in sports, that is, their physical appearance, their excitement and excitement in their pedagogical activity, their impressions and their unforgettable impressions.

"The communicative component of pedagogical communication is the coordination of the positions and tasks of the dialogue participants. In the early stages of learning, students do not have the knowledge and experience needed to interact, interact with teachers and classmates. In this process, the teacher becomes a carrier of historical experience. Today, there is a need for teachers to enrich the experience of providing information to students. This requires the activation of teachers' knowledge and experience in building pedagogical communication with



students. Pedagogical communication takes many forms. This is directly related to the role of the teacher in the learning process, his personal qualities, and his level of knowledge. In pedagogy and psychology resources, pedagogical communication is analyzed in relation to the way teachers work. There are several classifications of the pedagogical method in pedagogical science. Pedagogical attitudes are often interpreted in the form of pedagogical communication. An important aspect of pedagogical communication is the ability to organize the educational process with a student-centred approach [3]”.

### III. CONCLUSION

The emphasis should be placed on the interpersonal, intergroup and collective social forms of communication in the future pedagogical culture of teachers of physical culture.

1. Interpersonal - evaluation and description of each other by interlocutors based on perception, knowledge, understanding, and empathy.
2. Intergroup - Social group communication. Taking into account the specificity of intergroup perceptions, the subject and objects of communication, group interactions, and the type and content of inter-group activities are taken into account.
3. Community-based, community-based communication is built on a cohesive, value-oriented unit of community members.

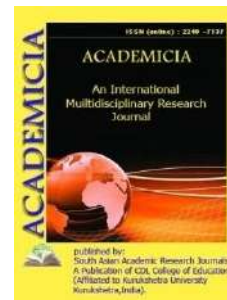
In conclusion, today it is necessary to consider the development of communicative competences of students in the teaching of physical culture and sports in higher education institutions, to take into account the development of new skills and methods of teaching.

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## **EFFECTIVE TOOLS AND SOLUTIONS FOR TEACHING “DRAWING-GEOMETRY AND ENGINEERING GRAPHICS”**

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### **ABSTRACT**

*In this article, one of the important factors in increasing the effectiveness of the process of studying the subject "Drawing Geometry" is the widespread use of the opportunities of new innovative pedagogical technologies. At present, various forms of determining students' knowledge are used in the educational process. In particular, control works in the form of tests are used during the intermediate, current and final tests. The article discusses the benefits and solutions of the most effective methods of visual control of this test.*

**KEYWORDS:** *Efficiency, Information Technology, Innovation, Intellectual, Methodological, Pedagogical, Software Methodology.*

### **INTRODUCTION**

One of the important factors in increasing the effectiveness of the process of learning science is the widespread use of the opportunities of new innovative pedagogical technologies.

At present, various forms of determining student knowledge are used in the educational process. In particular, control works in the form of tests are used during the intermediate, current and final tests.

#### IV. MATERIALS AND METHODS

Drawing geometry is one of the fields of geometry, which deals with the study of the geometric basis of the construction of images of objects in the plane, the methods of solving spatial geometric problems through images. Descriptive geometry is one of the mathematical sciences. The generality of methods in mathematics is also characteristic of this science. Drawing geometry is the theoretical basis for solving technical drawing problems.

The part of descriptive geometry of the subject "Descriptive Geometry and Engineering Graphics" in the curriculum is taught mainly in the 1st semester of the academic semester in most areas.[1; 2] The number of tests compiled from this section was more than 200 and was initially tested in the Mytest system. [3;4] The questions included in it were unofficial and did not allow to reveal the full essence of science. In the Mytest program there is an opportunity to ask questions in the form of pictures. However, their capabilities are limited, which is why the level of knowledge detection is insufficient.

The solution of the above limitations in the Isrping software complex has provided an opportunity to take advantage of the latest advances in information and communication technologies.[5; 6] Thus, versions of test programs on the subject "ChG and MG" created in the software complex Isrping Quizmaker were developed. New pedagogical technologies have been introduced, and the "Learning" and "Testing" programs, which include 12 different forms of test questions, have been introduced into the educational process.[7; 8]

The program includes test questions "correct-incorrect", "1 correct choice", "many correct choices", "fill in the blanks", "compatibility", "arrangement", "enter the number", "missing word", "summary answers"., The presence of such types as "vocabulary", "active space" allowed to effectively use the questions in the form of graphics.[9; 10]

In the "Learn" version of the test, immediately after selecting the correct answer, a message will appear stating that the answer is correct or incorrect. It contains the messages "correct", "incorrect" and "partially correct". In the "Learn" version of the test, all the answers come in sequence. The variation option is disabled, and the student has the opportunity to explore questions on topics that are consistent with the sequence in the science plan [1; 11].

Versions of the test program that work in different environments have been developed. While all versions of the program run on computers, including its Web version, it can run on the Internet, a local area network. The EXE version is designed to work on a student's personal computer. The most convenient version for the student is the Android version, which allows you to work on smartphones. A package of drivers required for using the Android version and instructions for installing them have been prepared and will be attached [3; 12].

According to the working curriculum of the disciplines taught at the department, it is planned to conduct 2 intermediate examinations in all areas. Correspondingly, the "Learning" programs for each midterm exam were given to the students to prepare them before the midterm examinations.

Each intermediate control has to answer 20 out of 100 questions. In the final control, the number of questions is 20, which covers the entire course, ie the student has to answer 20 out of 200 questions.

In the past, theoretical and practical questions were asked in written tests in midterm examinations. Practical questions were answered by students by drawing diagrams. When theoretical answers were given in writing, they were mostly "copied" and copied directly from a book or telephone. As a result, the student's grade did not match his or her real knowledge.

With the introduction of the test program, the participation of the "human factor" in determining the student's grade was reduced, which was determined by computer.

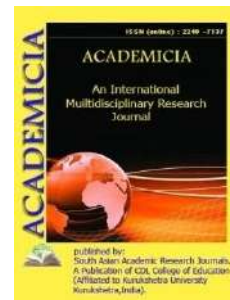
The diversity of the types of tests presented in the program has aroused the interest of many. The questions on the computer, with their game-like appeal, increased the learner's attention to science.

In the methodologically correct groups, there was an increase in students' residual knowledge of the subject. Because it is known from science that almost all the drawings included in the science plan are reflected in the program and their level of visual memory is much higher than verbal memory.

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## THE RECTIFICATION OF CURVE FLAT ARCH

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### ABSTRACT

*This article deals with the straightening of flat curve lines lying on a plane. To straighten the curve, a box curve of a flat arch is built according to its width AB and the height of the OS. The hollow roof box curve consists of four circular arcs. To straighten the arch, you had to define the length of each circle arc. The authors of the article applied the method of small chords. As the name itself shows, the method is that a broken line is inscribed into the flattened flat curve, the links of which represent small chords of the curve. Thus, the straightening and determination of the length of box flat curves of flat vaults find application in the construction of arches of bridges, entrances to buildings and metro, etc.*

**KEYWORDS:** Arcs, box curve of flat arch, curve, deployment, line, plane, point, the rectification of curve, segment, straightening.

### I. INTRODUCTION

The rectification of curves refers to unclosed box curves. They are used in the construction of vaults and arches of bridges, building entrances, various slabs, such as the subway, etc. Below the construction of box curves of flat and steep vaults is dismantled.

## II. MATERIALS AND METHODS

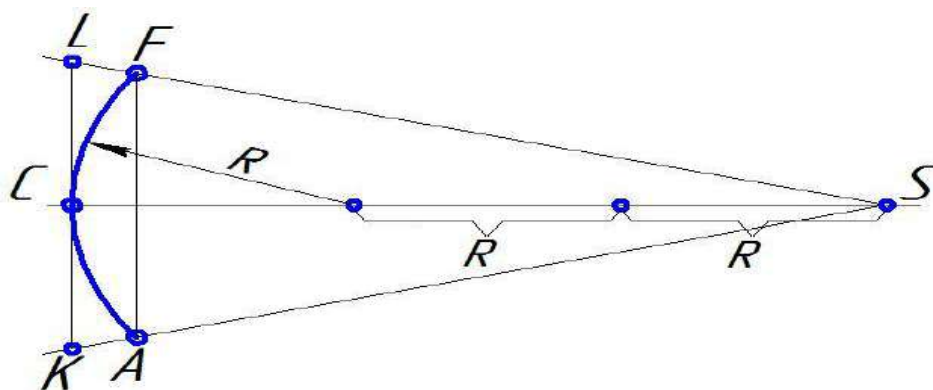
Flat and steep arches are distinguished by the ratio of their width  $AB$  and height  $OS$ . At the flat arch

$$\frac{AB}{2} > OC \quad (1)$$

and the cool one has

$$\frac{AB}{2} < OC \quad (2)$$

To measure the value of the box curves (more precisely circles), an approximate method is used, e.g. the length of the arc of the circle  $ASV$  is measured with a segment of  $CL$  tangentially (Fig-1), cut off by the rays  $SA$  and  $SB$ . The  $S$  point lies on the continuation of the direct  $CO$  at a distance  $CS=3R$ . The accuracy of this construction ( $\text{at} < 60^\circ$ ) is quite sufficient for practical purposes.

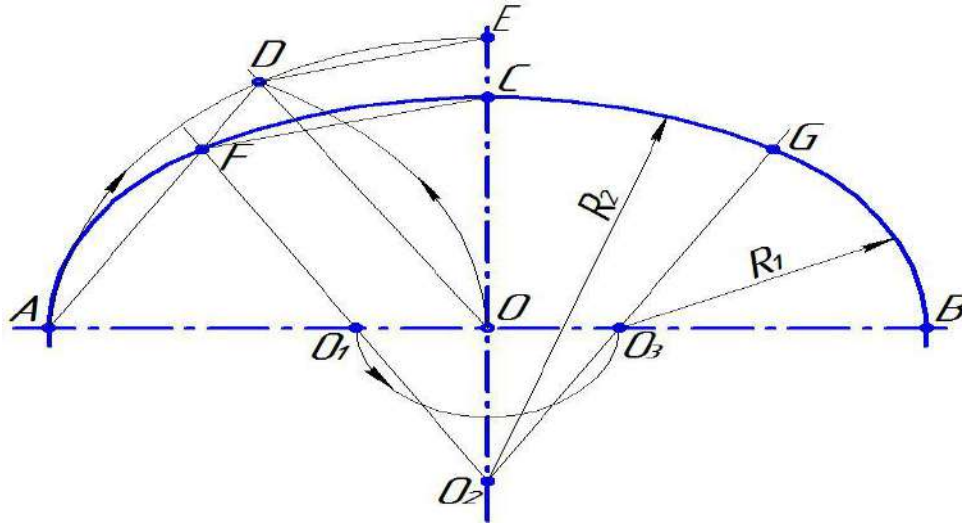


**Figure-1.**

With graphical deployment techniques, you always have to straighten curves of lines lying on a plane. For this purpose, the method of small chords is used, as the name itself shows, the method is that a broken line, the links of which are not large chords of the curve. If a curve needs to be straightened, its chords are successively placed on some straight line and the whole resulting segment is taken as the length of the curve flat arc.[1, p.79.]

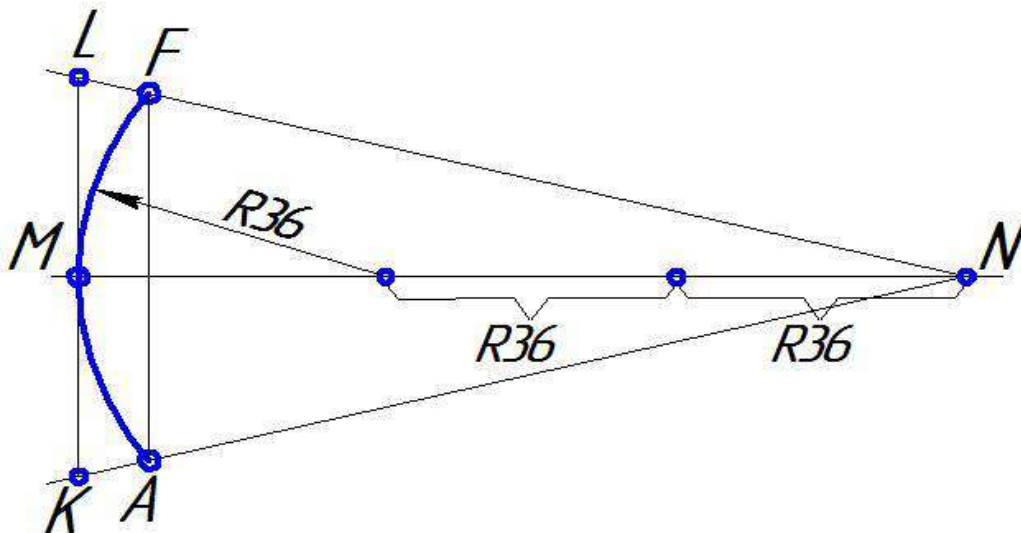
Let's consider straightening the box curve of the hollow arch. At first, we shall construct a curve of the hollow arch on its width equal to  $AB=100\text{ mm}$  and height of  $OS=40\text{ mm}$  (Fig. 2). The width of the vault - segment  $AB$  - is placed on a horizontal line and a perpendicular line is drawn through its middle - point  $O$ . At this line from point  $O$ , the arc  $AE$  of the circle of radius  $OA$  is described and marked with point  $D$  using an arc of the same radius  $OA$  but centred at point  $A$ . Point  $D$  is connected straight between points  $A$ ,  $E$  and  $O$ . A straight  $CF \parallel DE$  is then passed through point  $C$  until it intersects with a straight  $AD$  at point  $F$ . Straight  $FO_2 \parallel DO$  is passed through point  $F$  until it intersects with segment  $AB$  at point  $O_1$  and straight  $OS$  at point  $O_2$ . The  $O_3$  point is obtained using an arc of the circle of the  $OO_1$  radius. The resulting  $O_1$  points,  $O_2$ , and  $O_3$  are the centres of the arcs that make up the curve. From centres  $O_1$  and  $O_3$  describe the arc of radius  $R_1 = O_3B$ , from centre  $O_2$  - the arc of radius  $R_2 = O_2C$ . The  $O_1$  points,  $O_2$ , and  $O_3$  are the centres of the arcs of the  $R_1$  and  $R_2$  radius by which you can draw the contour of the rectification of curve.[1, p.147;2, p.22]





**Figure-2.**

The box rectification of curve flat arch consists of four arcs of a circle. When straightening the vault, first determine the length of each arc of the circle. You can see from the drawing that arcs  $AF=GB$  and  $FC=CG$ . For this purpose, it is enough to define only arcs  $AF$  and  $FC$ . When arc  $AF$  is flattened, the circumference of radius  $R36$  (Figure 3) is perpendicular through the middle of chord  $AF$  until it intersects the arc at point  $M$ . To the right from the arc centre of circle-point  $O$  - Two lines equal to the radius of  $R36$  arc are placed in a perpendicular direction, and point  $N$  straight  $AN$  and  $BN$  are obtained before their intersection with a tangent to arc at point  $M$ , line  $KL = AF = GB = 36$  is obtained. This segment with sufficient approximation is equal to the arc length  $AF$ . Similarly, define arc  $FC = CG = 34$ . When defined, the actual dimensions of the  $FC$  arc are similarly defined as shown in Figure 3, which is 32 mm. Arc  $FC = CG$ , if so  $CG = 32$  mm.[3;4; 5, p. 46; 6, p. 80; 7, p. 36;]



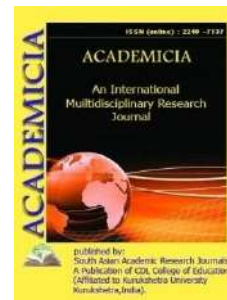
**Figure-3.**

The arc of the ACS should be made with sufficient accuracy equal to the length of the box rectification of curve flat arch. If the curve is to be flattened, the arc length is sequentially set to a certain straight line and the resulting segment is taken as the arc length of the curve. [8, p. 11; 9, p. 9; 10, p. 7.]

If we summarize each length of an arch of  $ACB$ , then it is equal to the sum of  $AF+FC+CG+GB=36+34+34+36=140\text{ mm}$ . By the image, straightening and determination of the length of the box curves of shallow vaults, the use in the construction of vaults and arches, bridges, entrances to buildings of various floors, for example, metro and. etc.

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## METHODS OF DEVELOPING STUDENTS' DESIGN COMPETENCIES IN THE DISCIPLINE "ENGINEERING AND COMPUTER GRAPHICS"

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### ABSTRACT

*The article discusses the development of the subject "Engineering and Computer Graphics", the problems of higher education institutions in the teaching of "Engineering and Computer Graphics" today, solutions to these problems and the development of design competencies of future engineers and teachers through computer graphics and the use of KOMPAS 3D V16 .*

**KEYWORDS:** *Information, Technology, KOMPAS 3D V16 Graphics Program, Design, Animation, Methodology, Intellectual, Pedagogical, Methodical, Professional, Ability.*

### I. INTRODUCTION

"Engineering and computer graphics" is used as a tool for drawing working drawings of details, drawing and modeling details, design, animation. The design system of engineers-educators is characterized not only by the fact that the drawings are drawn electronically, but also by computer graphics, and computer technology has its own database and the ability to use effective methods of geometric modeling of objects. That is, it forms a methodology for the development of design competencies of future engineers-teachers through computer graphics. Although "Engineering and Computer Graphics" has not been formed as a science for a long time, one of the main reasons for its rapid development is the fact that it is possible to achieve high quality, accurate and high results in a short time. Today, the subject of "Engineering and Computer Graphics" remains convenient and effective not only for the field of informatics and information technology, but also for other large-scale specialties. For example: mechanical engineering, energy, ground transport systems and their operation (road transport), technology of primary processing of natural fiber, technology of processing of light industry products and structures (sewing), construction of buildings and structures, construction of engineering and communications, urban planning , architecture, organization of architectural design of rural areas

and other developed areas are being studied as a much-needed field. In the discipline of "Engineering and Computer Graphics" drawings, working drawings and practical problems are designed using a computer. The subject of "Engineering and Computer Graphics" is the next stage of the science of graphic geometry and engineering graphics, engineering drawing and sketch, that is, before the study of this science, it is obvious that before studying this science, drawing geometry and engineering graphics, engineering drawing and sketch, engineering graphics it is impossible to master this science without mastering it. Компас 3D V16 graphics program, the most advanced and popular in the study of "Engineering and Computer Graphics" by Askon Russia, is based on graphic geometry and engineering graphics. is not considered absolutely correct.

## II. LITERATURE REVIEW

Several scientists have conducted research on the design of the teaching process of "Engineering and Computer Graphics" in universities, as well as in all disciplines. According to the results of these studies, the science of engineering and computer graphics is interrelated with sciences such as drawing, graphic geometry and engineering graphics and can be considered as their next stage.

We can cite the results of E.I. Ruziev's scientific research. E.I. Ruziev has developed his own integrated course "Graphics" in this area and recommended teaching methods. It describes in detail the problems of teaching the subject "Computer Graphics" and its connection with other disciplines, the graphic requirements that a computer science teacher must have. R.V. Korneev, N.V. Kharkov (2017) in the teaching of the subject "Engineering Computer Graphics" showed the results of their research on the use of KOMPAS 3D V16 graphics software in the design work for future engineers-educators. E.M. Kudryavtsev (2000) conducted research on modeling, design, calculation of mechanical systems from the graphics program KOMPAS 3D V16 and proved it in his scientific results. V.P. Bolshakov, A.V. Chagina (2016) conducted research on the practical and theoretical implementation of design using new methods in teaching the subject "Engineering and Computer Graphics". Today, the subject "Engineering and Computer Graphics" is taught using graphics programs AutoCAD, ADT, Google Sketch up Pro 2016 v16, Autodesk 3ds Max. One of the most effective and convenient graphics programs in the design for future engineers-educators is KOMPAS 3D V16 graphics program.

## III. MATERIALS AND METHODS

The study, analysis of the state of teaching the subject "Engineering and Computer Graphics" in higher education institutions, the identification of existing problems in teaching and the requirements for the development of spatial imagination of students in this subject were studied.

The methodological system of teaching science has been improved on the basis of the competence of developing the creative activity of future engineers-teachers, in the design and design of the methodological system of teaching the subject "Engineering and Computer Graphics".

In teaching the subject "Engineering and Computer Graphics" developed methods for developing students' design activity using the graphics program KOMPAS 3D V16, as well as technology for designing a methodical system of the educational process of the subject "Engineering and Computer Graphics".

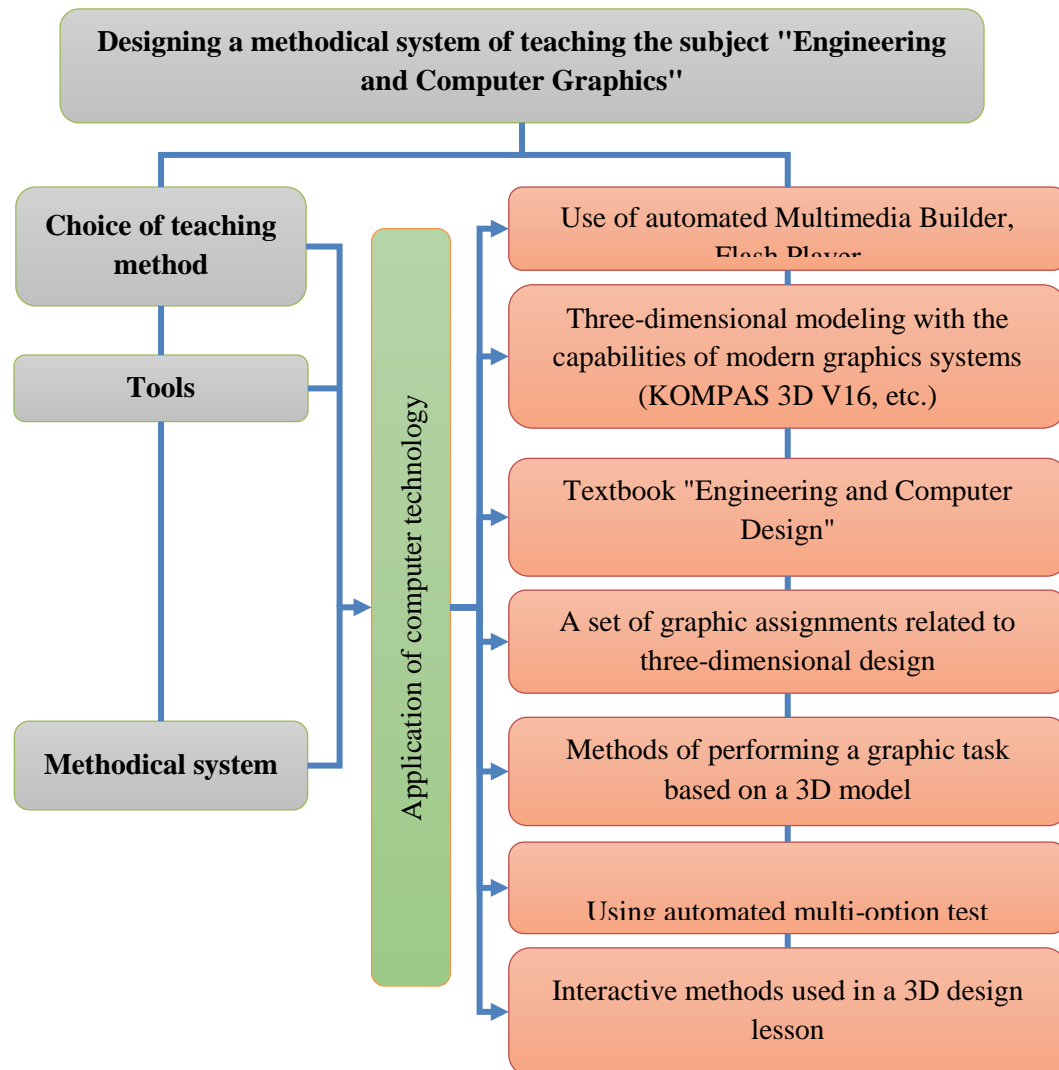
#### IV. RESULT AND DISCUSSION

The main requirement for the development of students' activity in design in the discipline of "Engineering and Computer Graphics" is the use of spatial imagination and the best method of its formation. Development and use of automated software "Multimedia Builder, Flash player", the development of spatial imagination of students using the graphics program KOMPAS 3D V16. Based on the criteria for the development of spatial imagination of students in the subject "Engineering and Computer Graphics" and a model for the development of creative activity of students using three-dimensional modeling in the teaching of "Engineering and Computer Graphics". (Fig. 1).

**Choice of teaching method** - At the beginning of the lesson, the teacher conducts a "Questionnaire-questionnaire" with the help of an automated program, which includes questions from students about their interest in science, basic knowledge, attitude to science. The results of this control allow the teacher to choose the method of teaching in this group and the optimal approach to teaching activities.

**Tools** - 2D and 3D modeling and design with graphic program capabilities, used in the development of students' spatial imagination and thinking skills in the subject "Engineering and Computer Graphics" and the formation of skills in working with graphics programs. Modern graphics software systems used in teaching the subject "Engineering and Computer Graphics" mainly include KOMPAS 3D V16.

**Methodical system** – a set of all pedagogical and methodological developments (electronic manual based on two and three-dimensional modeling, textbook, multimedia electronic textbook, a set of graphic tasks based on three-dimensional modeling, interactive methods used in the course) is used in the meaningful organization of teaching the subject "Engineering and Computer Graphics".



**Figure 1.** Technology of designing a methodical system of the educational process of the discipline “Engineering and Computer Graphics”

**A set of graphic assignments for three-dimensional design** - is designed to allow students to complete graphic assignments related to each topic throughout the learning process based on the design and is a key resource in developing students' independent and creative activities.

**Methods of performing graphic tasks on the computer** - a methodological tool used to develop students' creative activity in performing graphic tasks in practical classes. This ensures that students learn several of the methods of performing graphic tasks on the basis of three-dimensional design, as well as master the capabilities of graphics programs as perfectly as possible.

**Using automated multi-option test assignments** - a type of electronic control developed on the basis of graphical software capabilities and the rules of science.

**Interactive methods used in the lesson on 3D modeling** - is selected based on the characteristics of the topic. For example: mental attack, boomerang, problematic design, etc.



The above technology is developed on the basis of prioritizing the virtuality and features of the active, reflexive, integrative components of the development of motivational activity in students. The content of the subject "Engineering and Computer Graphics" in higher education institutions and the technology of designing didactic tools provide opportunities for building complex objects, algorithmic processes, spatial graphical representation of logical movements and students' acquisition of graphic knowledge and skills in the field.

## V. CONCLUSION

**First**, the theoretical and practical significance of the use of computer technology in the methodological organization of the teaching process of "Engineering and Computer Graphics" and the development of methodological bases for the introduction and organization of electronic assessment system in the educational process.

**Second**, the introduction of a two-part program (teacher and demand programs) designed to automatically monitor students' interest in science and knowledge in the learning process, as well as a software system for control through the "Multimedia builder" will be effective.

**Third**, students' design competencies will be developed if a methodology for developing students' spatial imagination using KOMPAS 3D V16 graphics software is developed.

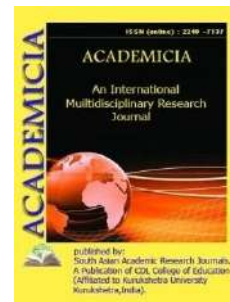
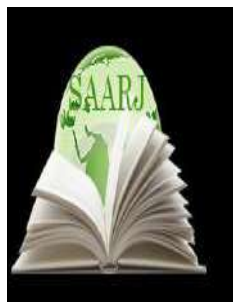
**Fourth**, on the subject of "Engineering and Computer Graphics" developed a "Multimedia e-learning manual" and a method of using it to increase the effectiveness of the lesson, showing what requirements it meets and what to focus on when creating it.

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## THE STUDY OF PHOTOELECTRIC AND PHOTOGRAPHIC CHARACTERISTICS OF SEMICONDUCTOR PHOTOGRAPHIC SYSTEM IONISATION TYPE

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### ABSTRACT

*The article deals with the results of the research studies of the current-voltage, photovoltaic and semiconductor ampere characteristics of photographic systems ionization type. The light source used illuminator OI-24 type. Having changed the intensity of the radiation incident on the input of the system began carrying out a set of grid calibrated filters. The working range of the spectrum of radiation and eliminating backlight were provided with a set of interference filters and semiconductor.*

**KEYWORDS:** *Semiconductor Photographic Systems, Semiconductor Electrode, Lux-Ampere Characteristic, the Current-Voltage Characteristics Of The Photovoltaic Characteristic Ionization Chamber, Discharge Gap, The Resistance Of The Semiconductor, A Transparent Electrode.*

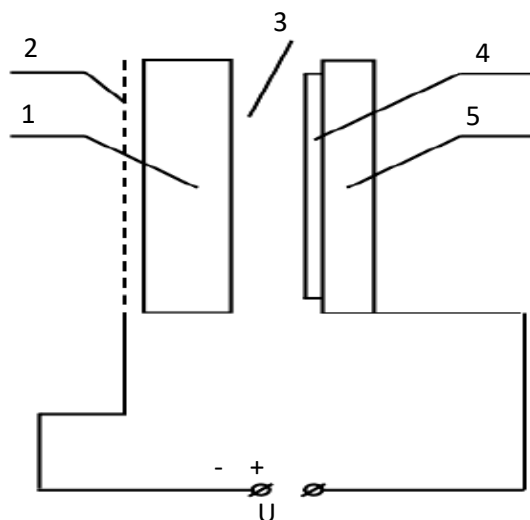
## I. INTRODUCTION

The ionization system operates through the current. High sensitivity is achieved in the system if the input signal (light) causes considerable photocurrent in a predetermined spectral region. Therefore, the spectral and lux-ampere characteristics of photographic systems are some of the defining parameters of photo detectors [1-3].

Semiconductor photographic type ionization system in the form as proposed in the prior art is based on a) the effect of stabilizing the gas discharge in the cell with the distributed resistive electrode and b) the effect of the current control of the gas discharge in size and intensity over time. When this electrode is made of photosensitive semiconductor material with the same properties over the entire area. Such photographic system reached a certain degree of technical perfection and is now widely used for various imaging purposes, in particular in the infrared spectral region [4-6].

## II. MATERIALS AND METHODS

Schematic diagram of the semiconductor ionization photographic system is shown in Figure 1. The system is composed of a semiconductor photosensitive plate (1) provided with the semitransparent electrode (2). The inner surface of the plate is separated from the surface of the recording layer (4) by a gas gap (3). The recording layer (4) is located on a transparent conductive counter electrode (5), made for example from a glass plate coated with a conductive film  $\text{SnO}_2$ . When connected to the breakdown voltage of the gas discharge, wherein the cell is present in the discharge of the semiconductor distributed resistance, contributing to damping the current instabilities. Resistance semiconductor completely determines the value of the current density on the cross-sectional area of the semiconductor lighting and can control the amount and distribution of power in the gas gap.



**Figure 1.** Schematic diagram of the semiconductor photographic ionization type.

The main aim of research in this paper is to establish the link between sensitometric characteristics of the system and the parameters of the elements included in the system, and on this basis to determine the optimal operating conditions of photographic systems. This was done

by measuring the characterization system as a whole and the characteristics of the individual elements. He carried out a number of studies of the current-voltage and lux-ampere characteristics of the device and photo detector separately. Current-voltage characteristics (CVC) is conducting a study of the gas discharge between metal electrodes in conditions close to the conditions of discharge flow in the systems studied. The influence of the parameters of the gas-discharge gap and source on the intensity of the glow of gas and luminescent screen. A series of studies to investigate the resolution of the systems operating in the frequency converter operation. For photographic sensitometric characteristics of systems research was carried out for the technical options, which are used photo emulsion materials.

The experiments were performed as used direct current power and pulsed mode. The power supply allows you to change the voltage in the range of  $0 \div 2,5 \cdot 10^3$  V. The pulse generator has a pulse duration of  $5 \div 2 \cdot 10^{-3}$  microseconds with an amplitude of up to  $4 \cdot 10^3$  V. In constant the current mode to record current-voltage characteristics and the dependence of the luminescence intensity of luminescence screen and ionized gas discharge gap as a function of the applied voltage. The intensity of the luminescence in both cases was determined using a photomultiplier (Type 19A). Linearity work PMT provides neutral filters, installed in front of its front window. The light source lamp type OI-24. Changing the intensity of the radiation incident on the input of the system, to recruit grid calibrated filters. The operating range of the spectrum of radiation and the removal of background illumination is provided by a set of interference filters and semiconductor.

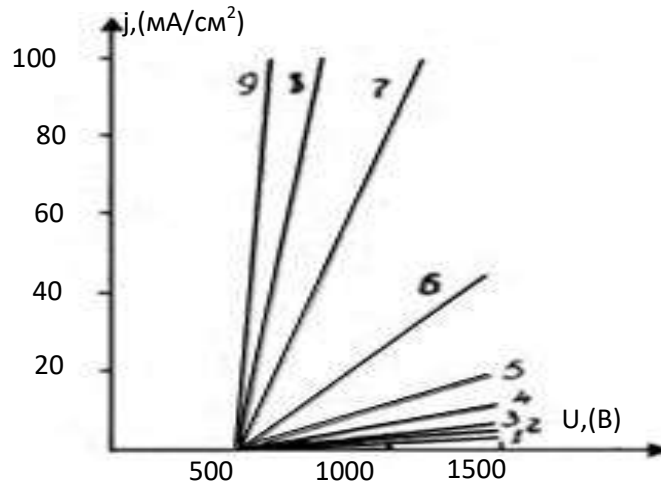
### III. The experimental results

**3.1. Current-voltage characteristics.** Research CVC is an important step in determining the relationship between the photoelectric characteristics of the optical detector (OD) and OD system - the gas gap in the study of the influence of the parameters of the discharge gap but the properties of the system as a whole.

The results showed that electrical processes occurring in these systems, almost independent of the temperature conditions of the experiments. Therefore, based on purely technical considerations, the most comprehensive series of studies carried out for systems operating at room temperature. The bulk of the results obtained in converter operation using a semi-insulating OD ( $\rho = 10^7 \div 10^9$  ohm·cm) made of gallium arsenide.

Figure 2 shows a family of current-voltage characteristics of the system at constant gas pressure P and the length of the discharge gap d (76 mm. Hg and 100  $\mu$ m, respectively). Curve parameter is the light intensity OD J. The light source used illuminator OI-24.

It can be seen that the small value of the current U system is virtually nonexistent. When you reach a certain critical voltage  $U_{ac}$  (in this case  $U_{ac} = 500$  V) appears the current growing linearly with further increase in the current-voltage characteristic steepness U. After disruptive field increases with increasing light intensity.

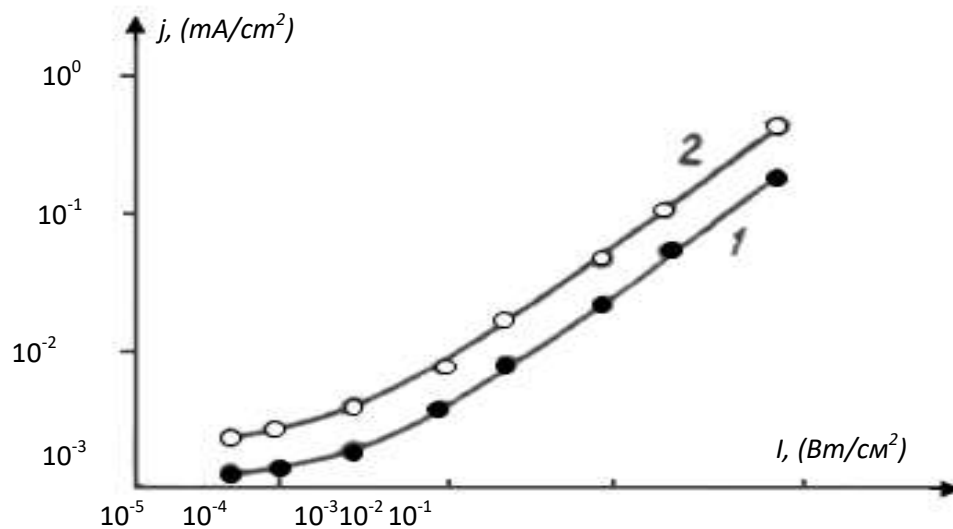


**Figure 2.** CVC system under different light intensities.

$d = 100 \mu\text{m}$ ;  $p = 76 \text{ mm. Hg}$ .  $J, \text{ W / cm}^2$ : 1 - 0;

2 -  $2,4 \cdot 10^{-5}$ ; 3 -  $3,7 \cdot 10^{-5}$ ; 4 -  $6 \cdot 10^{-5}$ ; 5 -  $1,8 \cdot 10^{-4}$ ; 6 -  $5,2 \cdot 10^{-4}$ ; 7 -  $1,3 \cdot 10^{-3}$ ; 8 -  $1,1 \cdot 10^{-2}$ ; 9 -  $4,6 \cdot 10^{-2}$ .

Figure 3 shows the reconstructed from the previous figure of lux current characteristic (LCC) for two values of the applied voltage. It can be seen that the change in voltage results in parallel shift characteristics. This is due to the linearity of the current-voltage curves for  $U > U_{ac}$ .



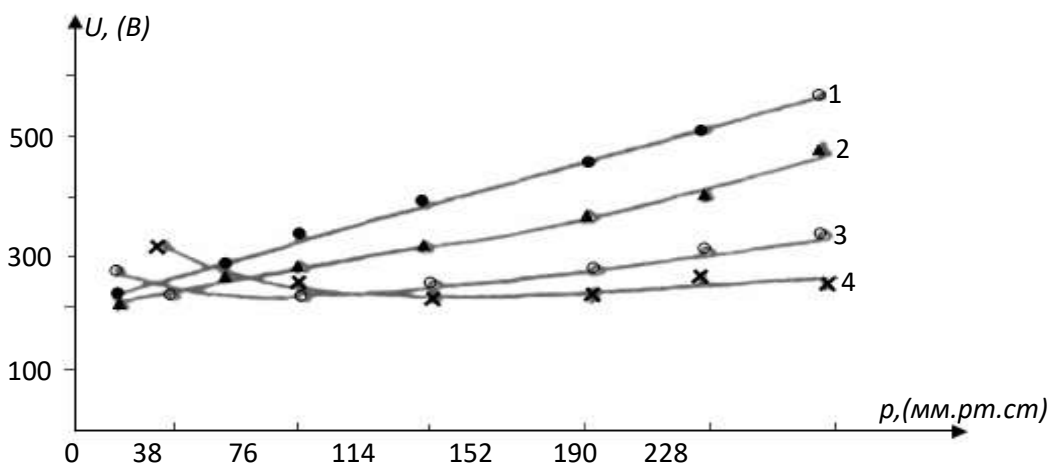
**Figure 3.** LCC system for two values of the applied voltage  $U, \text{ V}$ ; 1 - 800; 2 – 900.

Figure. 4 shows the effect of changing the length of the discharge gap in the form of the CVC system for some fixed values of P and I.

N	$j_s (mA/cm^2)$	YES	%	NO	%
1	Find a friend who	0	0%	6	100%
2	Making plans	1	17%	5	83%
3	Games	5	83%	1	17%
4	Drawing activities	3	50%	3	50%
5	Role-Plays	6	100%	0	0%
6	Dramatizations	3	50%	3	50%
7	Hands-on Activities				
8	Vocabulary practice (word cards)	6	100%	0	0%
9	Sentence strips	4	67%	2	33%
10	Graphic organizers	4	67%	2	33%
11	Manipulatives	2	33%	4	67%
12	Projects	4	67%	2	33%
13	Authentic Materials				
14	Videos	2	33%	4	67%
15	Photos	6	100%	0	0%
16	Conversations	6	100%	0	0%
17	Audiovisuals	3	50%	3	50%
18	Visuals	3	50%	3	50%
19	Realia	4	67%	2	33%
20	Strategies to provide meaningful input				
21	Body language	6	100%	0	0%
22	Modeling	6	100%	0	0%

**Figure 4.** CVC system for different thicknesses of discharge gap,  $p = 76$  mm. Hg.  $J=1,1 \cdot 10^{-2}$  W /  $cm^2d$ ,  $\mu m$ : 1-100; 2-50; 3-30.

The slope of the current-voltage characteristic remains constant and change only the value of  $d$  changes  $U_{ac}$ . The data in figure 2 and 4 were obtained for the gaps filled with air. Experiments have shown that when you change the composition of the gas and  $p$  and  $d$  ( $p = 76$  mm. Hg and 30-100  $\mu m$ , respectively), I only have the value  $U_{ac}$ , and the slope of the CVC in after disruptive region remained unchanged

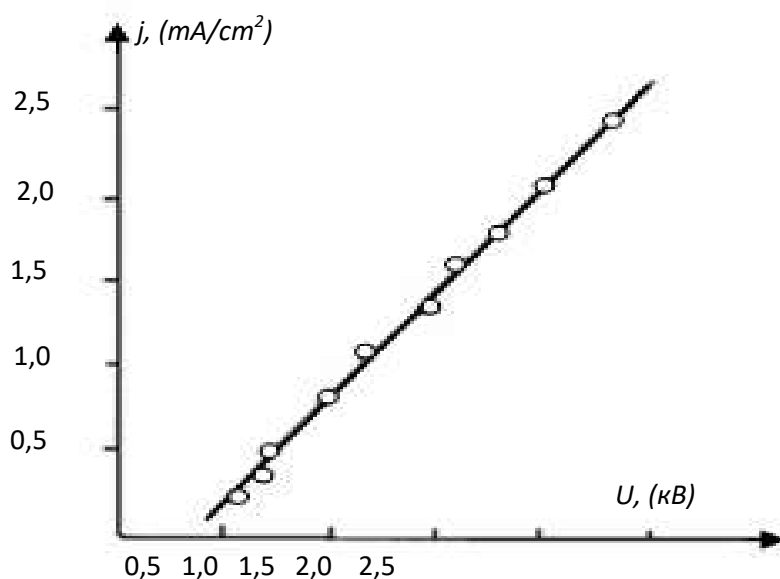


**Figure. 5.** Changes in the breakdown voltage, depending on the parameters of the discharge gas discharge air gap  $d$ ,  $\mu m$ : 1 – 150; 2 – 100; 3 – 30; 4 – 20.

Figure 5 shows the effect of changing parameters in the discharge gap breakdown voltage. For large values of  $d$  (curves 1, 2)  $U_{ac}$  growing in the investigated range of pressures. It should be noted that in the case of different gases breakdown voltage varied slightly.

For comparison of the photovoltaic characteristics of the system with the properties of OD last removed from the system and its surface previously facing towards the discharge gap, an ohmic contact is deposited. Further measurements were CVC at the same light intensity as in the study of the entire system. The experiments found that in the range of resistivity OD  $\rho = 5 \cdot 10^6 \div 5 \cdot 10^8 \text{ ohm} \cdot \text{cm}$  (determined by the intensity of light) within the experimental accuracy of the steepness of the current-voltage characteristics at  $U > U_{ac}$  determined by the resistance of the semiconductor. When high resistivity role of edge effects, i. e. A large proportion of the total system current is transferred along the edges of the gas-discharge gap. In this case one correspondence between the slope and the CVC system OD offline.

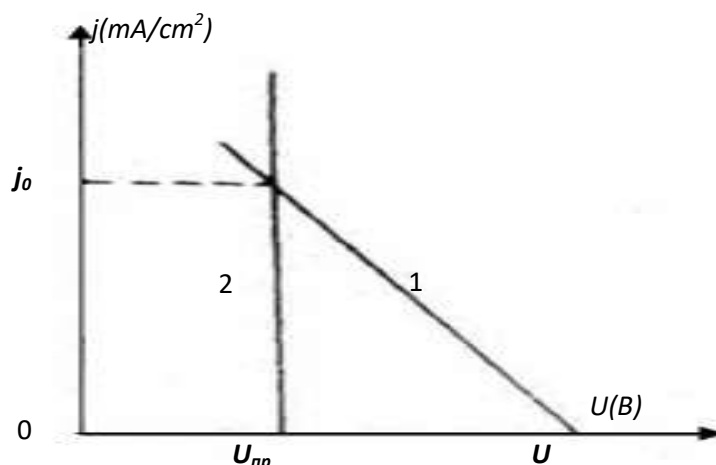
Study the CVC system in a pulse mode shown that these characteristics are linear up to a very significant current density. Figure 6 shows one of these dependencies, taken at supply voltage pulse 180mks.



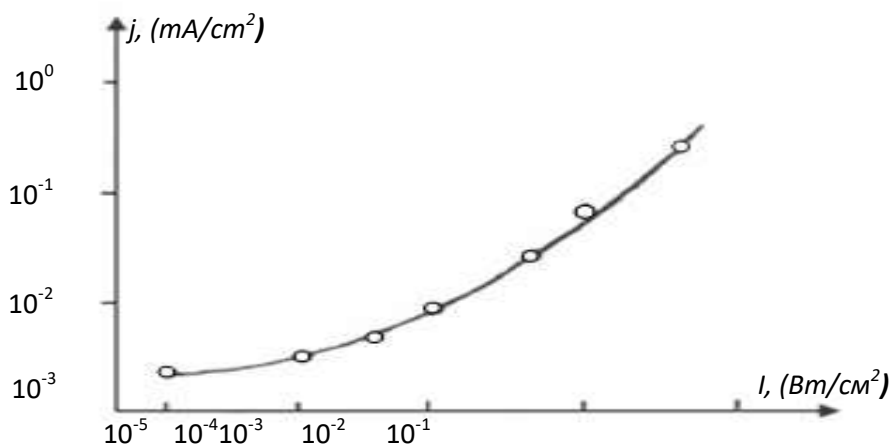
**Figure 6.** The current-voltage characteristics in a pulse mode.  $d = 60 \mu\text{m}$ ,  $p = 76 \text{ mm}$ . Hg  $\tau_{\text{imp}} = 180 \mu\text{s}$

From the above results, it follows that a wide range of current differential impedance system OD - discharge gap coincides with the resistance of the semiconductor used and the presence of the plasma in contact investigated our case does not influence the transverse conductivity of OD. Generally in the system can occur positive feedback due to the fact that the glow of ionized gas and the surface of the semiconductor electron bombardment ion flow will increase (in addition to the external lighting) conduction of OD.





**Figure 7.** The graph for explaining the process of the discharge current control period.



**Figure 8.** LCC semi-insulating phase transition from GaAs.  $U = 200V$ .

Thus, after a breakdown field differential resistance of the discharge gap is zero, i.e. Gas CVC vertical. The process of discharge current control can be simplified to present figure 7. The current density is determined by the precision of the meeting load curve I (the slope is determined by the resistance OD) with CVC discharge gap (curve 2). It follows from the above that the LCC system at  $U > U_{ac}$  must match the corresponding character of AF. This is confirmed by a comparison of figure 3 and figure 8 for the semi-insulating gallium arsenide OD and comparing relevant relationships for OD.

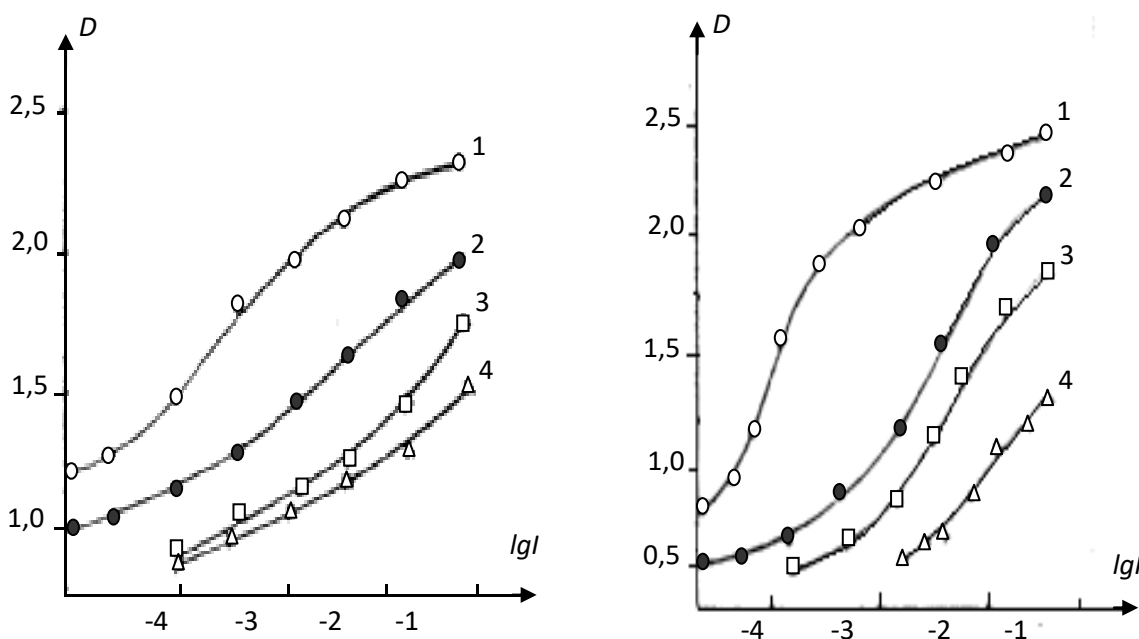
### 3.2 Photographic characteristics.

Because our systems for determination of the main characteristics of the sensitometric advisable to use a characteristic curve expressing the relationship between the logarithm of the number of lighting  $\lg H$  and an optical density of blackening  $D$ , the ultimate goal was the construction of research sensitometric  $D$  ( $\lg H$ ) characteristics. The construction of the experimental

characteristic curves is given mainly on the results of measuring the optical density of blackening (weakening) of the test portion of the image. However, there is a possibility of construction of the characteristic curve, and other methods, such as the known dependence of the blackening density of the recording film of the logarithm of the amount of electricity that caused the photographic effect of the well-known LCC OD, you can use the conversion chart input intensity  $I$  in the optical density  $D$ . The most complete study photographic characteristics were carried out for two variants of the image on the recording layers of emulsion, which recorded the glow of ionized gas and the luminescent screen.

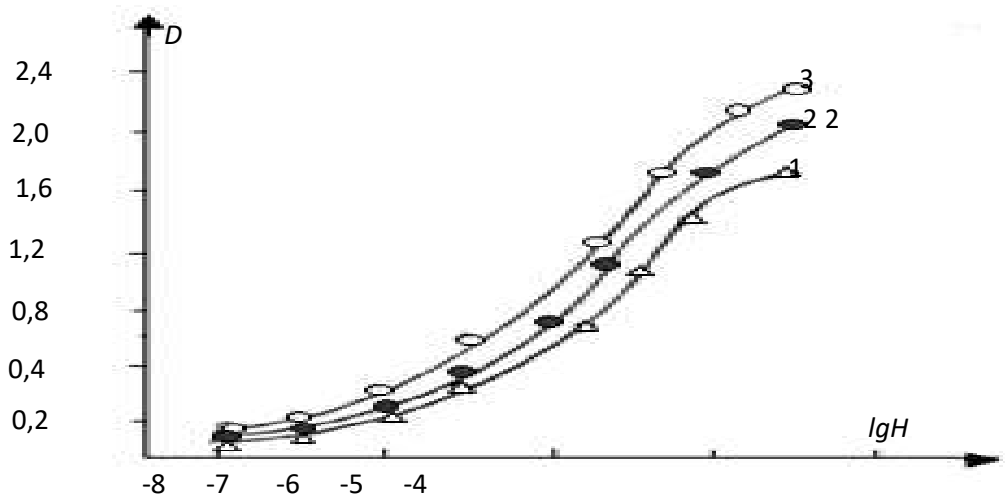
The following are experimental results obtained for the photographic system using gallium arsenide (research carried out at room temperature) and silicon photo detectors. This was studied according to the optical density of the blackening of emulsion films different from the time of exposure at a fixed light AF and blackening density depending on the light intensity at a fixed exposure time. Determination of the optical density of the films was carried out in transmitted light micro photometer MF-4.

Figure 9a and figure 9b shows the dependence of the blackening density on the intensity of the radiation incident on the phase transition at different exposure times obtained for GaAs OD during the image recording using a transparent electrode (a) and using a fibre optic light guide with a phosphor screen (b).



**Figure 9.** The dependence of the density of blackening of the light intensity at different exposure time  $1-5 \cdot 10^{-4}$  s;  $2 \cdot 10^{-4}$  s;  $3 \cdot 5 \cdot 10^{-5}$  s;  $4 \cdot 2 \cdot 10^{-5}$  s, obtained for gallium arsenide OD transparent electrode (a) and use a light guide with the phosphor screen (B),  $p = 76$  mm.Hg.,  $d = 50$   $\mu$ m,  $U = 1,8$  kV.

These data indicate that both methods used in the image recording on the film reach a high enough energy sensitivity. However, in the case of registration of the ionized gas emission threshold light intensity is lower than when using the luminescent screen.



**Figure 10.** Characteristic curves photo process when shooting on film RF-3 with GaAs OD for three values of the applied voltage  $U$ , kV:  
1 – 1,4; 2 – 1,6; 3 – 1,3;  $p = 76$  mm. Hg,  $d = 30$   $\mu$ m.

This is especially noticeable at short exposure times. It should be noted that in a system with the phosphor screen, we used the type of phosphor having a rise time and fall glow of a few milliseconds. Under these conditions, the light output of the phosphor is superlinearly diminished if the holding time, which leads to reducing the system sensitivity at short exposure times. With increasing exposure time-sensitivity of the system using both methods of recording levelled.

The use of a faster phosphor will increase the sensitivity of photosystem fluorescent screen.

Ha, figure 10 shows the dependence of the density of blackening of the exposure values for different amplitudes of the applied voltage, obtained by image registration with the use of a mesh electrode on the film of the RF-3. It is seen that with increasing voltage sensitivity photo process growing. This fact confirms the validity of the formula for determining the maximum power of sensitivity, it can easily be explained based on data for the study of the efficiency of conversion of the input signal to an output converter images using

Figure 11 shows the characteristic curves plotted for different values of gas pressure in the gap. Characteristically, at a constant value,  $lgH$  blackening density increases with decreasing gas pressure and further, it decreases the pressure subsides. These results are consistent with data on the distribution of shares of the power consumed by the discharge of the gas through various channels.

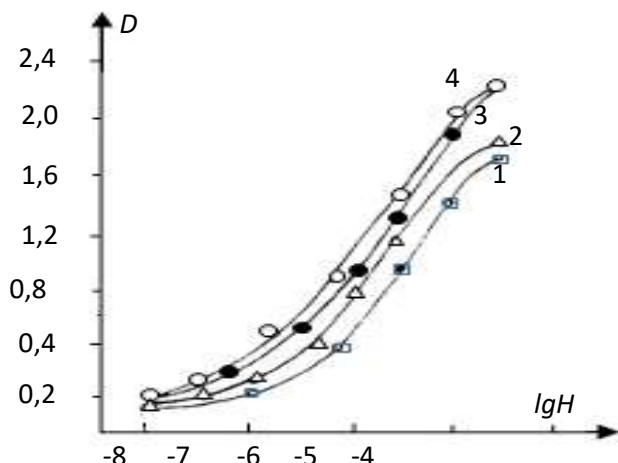


Figure 11. Characteristic curves photo process measured for different values of the gas pressure in the gap p. mm. Hg. 1 - 228; 2 - 138; 3 - 76; 4 - 38,  $U = 1,3$  kV,  $d = 60$   $\mu\text{m}$ .

At the low intensity of incoming light shutter speed should be increased. At the same time, the role of the dark current system, veils recording film. Thus, the presence of the dark current in the system limits the exposure to  $t_e \leq 102$ . Comparison of the data shows that increasing the thickness of the gas gap increases the sensitivity of the energy system. This is due to an increase in the conversion efficiency of the incoming radiation to the intensity of emission of the gas at high d.

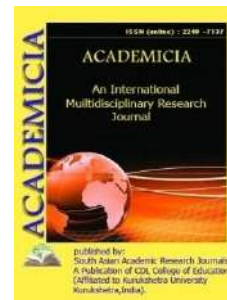
#### IV. CONCLUSION

A detailed study of photographic performance experimental samples ionization photographic systems and studied the influence of various factors on them. Revealed a great opportunity to further improve the photographic characteristics. The achieved level of photographic performance on the prototyping laboratory samples is characterized by the following data: the sensitivity of the order of 5-10 units. ( $5 \cdot 10^{-7} - 10^{-8} \text{ cm}^2 / \text{J}$ ), latitude  $L \sim 1,5$  and resolution  $R \sim 15 - 20 \text{ mm}^{-1}$ , the boundary wavelength of  $4,5 \mu\text{m}$ .

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## USE OF GRAPHICS COMPUTER SOFTWARE IN THE STUDY OF THE SUBJECT "DRAWING AND ENGINEERING GRAPHICS"

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### ABSTRACT

*The article is devoted to the study of the processes taking place in higher education in the field of research of engineering graphics of graduates. We evaluate the knowledge of graphics software and its ability to be easily used in computer graphics applications as a necessity for today's engineers. We are trying to solve a controversial problem with students trained in computer-assisted document writing skills. Increasing the need to study graphic packages by students in all specialties is justified. The paper demonstrates the findings of a comparative analysis of different methods of teaching graphics at A Higher School. The impact and capabilities of technology in education have been studied through theoretical material in the lecture course and practical studies.*

**KEYWORDS:** *Engineering, Graphic Editors, Autocad, Kompas Graphics, Engineering Graphics.*

### I. INTRODUCTION

The presence of microprocessor engineering and the appearance of graphic editors such as AutoCAD, Kompas Graphics, etc., stipulated the appearance of courses "Computer graphics",



"Engineering and computer graphics" in the training schedules. Along with the two programs of study of graphics for the courses "Descriptive geometry" and "Engineering graphics", which appeared earlier, these academic subjects have become a very serious addiction, qualitatively changing the concept of teaching the subjects discussed in the article.

## II. DISCUSSION

So far, there are two approaches to how engineering course sections are presented, two approaches to schedule training. The first is a traditional learning sequence from drawing geometry to engineering graphics and down to computer graphics. The second involves the study of the first two sections at once, which is carried out using computational means.

The article provides a comparative analysis of both approaches and provides methodological recommendations for adding automated design elements to each approach. The transition to engineering graphics training should be organized through teaching students all the possibilities of one of the graphic editors. This will make it easier for students to work with engineering graphics tools such as line types, font types, material identification codes on sections and sections, etc. It seems useful to solve all these issues in classroom classes using computers, as any computer program implementing graphic designs contains built-in primitive libraries necessary for automated drawing. In this case, the teacher's task is to explain the typical requirements for their use. This raises an important methodological question: Should a student, and to what extent, possess the skill of building the aforementioned graphic primitives on paper? There are two mutually opposing opinions on this issue.

Those who support the idea that students should learn graphing skills on paper while studying do not take into account the fact that in most secondary schools the subject of "drawing" does not even exist as an elective. Thus, this means that students should learn drawing skills "from scratch", as the secondary school did not provide enough knowledge in this area for new educational programs. There is no time for this in university curricula. This drawback in the programs of secondary schools is also a psychological barrier for first-year students. Training in graphic design skills occurs simultaneously with the study of complex subject-descriptive geometry. Representation of three-dimensional objects on a flat diagram for many freshmen who do not know the basics of projection drawing is an incomprehensible set of graphic primitives.

Apparently, one should not expect a return to the curriculum of the Soviet high school. On the contrary, the requirements for the competencies of graduates of the Higher School tend only to tighten [2]. We believe that the only way out of these two mutually contradictory circumstances is to strengthen the methodological component in training using technical teaching aids. The latter allows using the project methodology to increase the percentage of students studying lecture material and make the teacher's work more effective during practical hours.

The need for the student to develop skills in graphic construction of the image of parts is associated with sketching, a necessary stage in any design work. It would also be methodologically incorrect to exclude such training from the training process. A sketch, like a drawing, is a certain abstraction of the image of a real object using several conventions. The student can learn this faster and better with the help of the teacher. In addition, when drawing up sketches, it is possible to study several issues on compliance with standards. To complete the task without outside help, students must know the types of lines, cuts and cuts and be able to perform pencil sketches of all parts of the assembly.[1; 3]

Sketch details should be prepared simultaneously through a graphical editor so that the student can approach the process of designing the component assembly as a confident user of one of the programs. The task of designing a sketch for assembling a part should not include more than 4 or 5 parts, half of which may have a simple axisymmetric shape. It is impractical to give the basic part as a design assignment for students of technical specialties. A thorough discussion of dimensional analysis problems is also considered excessive. It is enough to determine the geometry of the part, observing the only rule that dimensional chains in the drawings do not close.

In the conditions of constantly decreasing classroom time, it is advisable to take into account one more set of questions. The following are the most reasoned. Can the requirement acquire computer design skills for students of technological specialties be considered justified? Is it possible to limit only to classroom hours of working at a computer? These and many other issues must be addressed differently each time. Everything that was proposed for discussion in this article relates only to the training of students with specialties that do not include separate courses in “computer graphics” and “engineering and computer graphics”. The educational process for students of mechanical specialties or specialties related to information technology may be more significant.[4; 5]

The need to form a unified information educational system in higher education institutions attaches particular importance to teaching students the computer design of graphic objects. In this environment, as you know, in addition to the quality indicators of student performance, all work performed over the entire period of study should be presented. It is clear that these will be not only text documents, but also graphic works of the course design in technical or even special subjects. And without a graphic package, it is impossible to prepare for the fulfilment of the mandatory requirement - the placement of graduation qualification work on the university website.

### III. CONCLUSION

It is especially necessary to note that learning to work with any graphic package is not an end in itself. A computer with its program is just a tool, although it seems very advanced compared to other programs.

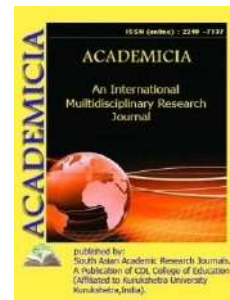
Drawing supplies, but it's just a tool. For a student who is going to become an expert in the future, you need to know the technology for creating design documentation and know about the capabilities of graphic editors. Conclusions:

- the study and use of graphic computer programs in the educational process is an absolute necessity;
- the capabilities of these programs make it possible to make the presentation of theoretical material more understandable;
- In the educational process, it is necessary to maintain the acquisition by students of the skills to build parts according to technical sketches.

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## THE ADVANTAGES OF USING INNOVATIVE TECHNOLOGIES IN IMPROVING THE QUALITY OF EDUCATION

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### ABSTRACT

*The article deals with the benefits of using innovative technologies to improve the quality of education. In order to develop scientific methodological recommendations, methods of observation, testing, sociometric, mathematical-statistical processing and analysis of scientific results and evidence have been used. Social and pedagogical peculiarities of the use of innovative technologies in teaching pedagogical sciences are shown. Effective criteria for the use of innovative technologies in improving the quality of education have been studied, and methodological recommendations and methodological guidelines on the problem have been developed. Learning using innovative technologies to improve the quality of education positively affects the learning of all four components of educational content (knowledge, skills, qualifications, creative activities). They give readers the opportunity to independently build, express, find solutions and solve problems, that is, situations that are very important for specific subjects. The study was based on the fact that on the example of teaching sciences theoretical knowledge can be used by methodically based innovative educational technologies, able to quickly solve the problems of fully communicating theoretical knowledge to students and independently applying the knowledge obtained from them in practice.*

**KEYWORDS:** *Technology of Test Training, Educational Technologies, Guidelines, Modular Education, Innovative Technologies, Quality Of Education, Technologies Of Cooperation.*

### I. INTRODUCTION

In the traditional learning system, the learner receives knowledge under the pedagogical influence, and the student's activities will not be active in creative nature. Every day it is confirmed that education based on education, including interactive technologies that create a new

pedagogical, innovative, competent situation in the teaching of various subjects, gives much higher efficiency than traditional education. Every day it becomes clear that teaching using interactive methods affects the development of cognitive abilities, creative abilities and practical skills of students and the organization of their independent thinking.

Learning using innovative technologies to improve the quality of education positively affects the learning of all four components of educational content (knowledge, skills, qualifications, creative activities). They give readers the opportunity to independently build, express, find solutions and solve problems, that is, situations that are very important for specific subjects. The study was based on the fact that on the example of teaching sciences theoretical knowledge can be used by methodically based innovative educational technologies, able to quickly solve the problems of fully communicating theoretical knowledge to students and independently applying the knowledge obtained from them in practice. Where do innovative technologies have an effect? When and how to use it? To what extent do we use innovative technologies to organize lessons today? What is the attitude of the teacher and student to the task using innovative technologies? Thus, the relevance of this study is that: the need to create conditions for improving innovative technologies and tools for teaching pedagogical sciences; Social order to solve the problem of increasing the efficiency of teaching pedagogical sciences and cognitive activity of students is based on the relevance of the topic.[1; 2.]

In the field of methodology of innovative research in education today the research of R. Mavlonov, N. Muslimov, Yu. Yuldasheva, innovative approach to education based on pedagogical technologies N. N. Azizkhajayev, U. Tolipov, U. Nishaniliyev, B. Ziyamuhamedov, etc. Problems of intensification of the approach in the education of F. Y. Izlikev. M. Ochilov, B. Rakhimov. The study by N. Muslimov deals in detail with the structure of vocational and pedagogical activity and its important components.[5; 6; 7.] During the years of independence, a very close approach to innovation was found in the works of our scientists, such as S. Ochilov, O. Muslimova, M. Ochilov, U. Makhkamov. In addition to work directly related to pedagogical activities, work on creative development issues played a significant role in innovation. In the works of M.I.Mmutov, V.A. Slastenina, etc. Great interest in problems of creativity, criticism of extensive collection of knowledge, creative work of students and teachers on reading., "Explosion" diversification in the education system has led to the relevance of another block of innovative tasks related to standardization of education and improvement of its quality. In the following years N. Shodiev, E.Seithalilov, Sh.Kurbanov, O.Tolipov, U. Inoyatov, R. Sh. Akhliddinov, L.Golish, S.Volkov, O.Rashidov, associate their research with the development of state educational standards. In order to justify the system of use of innovative technologies in improving the quality of education and to develop scientific and methodological recommendations, familiarization with the literature on the use of innovative technologies in improving the quality of education, Determining the problem of using innovative technologies in improving the quality of education, determining the current state of using innovative technologies in improving the quality of education, The identification of factors and criteria for the use of innovative technologies in improving the quality of education and the organization of testing are the main objectives of the study.

## II. MATERIALS AND METHODS

When determining advantages of the use of innovative technologies in improvement of quality of education methods of monitoring, skilled and test, test, sociometric, mathematical-statistical processing and the analysis of scientific results and proofs were used. Our country pays great attention to the education of young people, their education, health and a number of other spheres, and such efforts are based on the guarantee that future heirs will be truly strong. Russian Methodists E.F. Bugrimenko and G.A. Zukermana [4.] they divide the game technology into 2 types, which are implemented in the course of training.

1. Entertaining games.
2. The training games.

The requirements for didactic games are somewhat more serious. They serve an educational purpose directly. These games have some advantage in children's mental leaping, encouraging them to know, logical thinking. Will contribute at the same time to the formation and the development in the pupil of qualities of diligence, resourcefulness, resourcefulness, resourcefulness and intelligence. These games are organized by a teacher specifically for educational purposes. New abstract concepts the reader must achieve the emotional perception of the image. Thus, the teacher should know to what extent he used didactic and entertaining types of games in the lesson, know the norm, place and time. The use of didactic game objects in the lesson eliminates difficulties in learning educational material. Visual aids, interesting questions, humorous tasks, surprises related to the type of activity related to vision and hearing, ensure the efficiency of the reader's mental activity. The lesson uses not only game technologies, but also innovative and integrative methods of education, expansion of the child's thinking, provision of knowledge to the child based on cognitive and life events. They serve to address issues such as meeting their aspirations for innovation, achieving more knowledge, skills and skills to be provided during the year, developing a child's creative, demanding, responsive, thinking skills. The Innovative Method of Education is a method of innovative education characterized by introducing innovation, using unconventional methods and teaching methods, introducing new methods and methods, meaning "innovative" English "in" - "new" vacation "-" introduction. "Innovative teaching methods produce positive results in the practice of pedagogical processes compared to the traditional managed education system. The reason is that, according to the content of learning managed by traditional methods, students passively participate in the learning process. Listening to the teacher's lecture and hearing what he said, he plays the role of an informant receiver. All students take an active part in the innovative and non-traditional method of education. In particular, the basics of innovative methods of teaching "mental attack" are the answers to one of the students to the question asked by the teacher. "Modified learning" is a lecture in which the form is changed. The teacher conducts a lesson in the form of communication with students through question-and-answer, discussion. "Improvisation" - description without preparation. To questions or tasks asked by the teacher, without preparation, from mouth to mouth, suddenly pupils answer in their own way. "Multimedia" - "lessons with video programs." A method of conducting a lesson using software, voice, visual, television, video devices on a specific topic. "Analysis of a specific situation or state" - analysis of any life event, situation, an event to make the correct conclusion. "Critical thinking" - Charters express their thoughts with a critical approach, without repeating each other in the questions asked by the



teacher. The purpose of implementation of innovative technology is the comprehensive judgment of the reader, disclosure of each its aspect and identification in it various abilities and also improvement of such abilities and qualities as thinking, thinking, speech development of the child. It increases the focus on deepening and advancing reforms in modern education, convinced that they will be implemented in practice. One of the most important aspects is to ensure that the student does not miss the lesson, that the educational process achieves this goal fully in the student's mind, especially to increase knowledge, enrichment, logical thinking, and search, serious approach to each issue, to be attentive and attentive. In addition, the reader will need a convenient and comprehensive method and methodology to implement the above at a time when the lesson is attended not only by the listener or receiver but also by the direct participant, the free person, the independent thinker, the critic, the real Contemporary. For this purpose, we want to consider the application of didactic games in the lessons of pedagogy. It is known that didactic games in the form generally serve as the tutorial, drawing the attention of children, are held at the interesting, interesting, clear level. Even children in need of special assistance, that is, students with a low level of learning, who receive education, who are difficult to learn scientific theories, try to perform every task, and in the game activity, there is an opportunity to learn easier, faster. Because of the interest in performing didactic materials, tasks are increasing, they begin directly with this situation. Didactic games include the visibility of education, teacher speech, and the movement of children. As a result, there is a uniqueness of perception, vision, hearing, skin sensations. This ensures the growth and development in the child not only of the activity of the senses but also of the process of thinking in them. Contributes to the growing ability of logical thinking in the reader. The use of didactic games will undoubtedly make it easier for students to learn the basics of science. Therefore, we believe that it is necessary to organize a lesson on the basis of game classes, to bring to the lesson the technology of the game directly on a permanent basis, so that the knowledge to be mastered is easily and easily mastered, in order to deepen reading thinking. Still, in the lesson, there are several goals from the application of game technology and carrying out game classes, which directly serve as a program for the formation of reading personality.[8] These are: - didactic goals; - educational goals.

Didactic goals: - Strengthening and thorough mastery of the knowledge system through game classes;

- Exchange of experience in the development of gaming sessions;
- Organization and solution of various issues and problems.

Educational goals:

- Training in creative thinking, approach to the problem;
- give instructions when performing gaming practice;
- The ability to behave in the process of communicating with people, to form skills of self-control;
- Absorption of important educational tools in the formation of the personality of the student.

In order to implement these goals, the educational process should be organized directly at the level of the Moroccan, interesting multifilm or performance. When developing and organizing game classes, it is necessary to pay attention to the following and ensure the introduction of new qualities in the learning process.

- Development of the formation of active joint or private activities of the student through the organization of game classes;

- Achieving changes in the growth and development of the reader, demonstrating the various modes and options of the game.

Assuming that gaming technologies will bring the following new qualities to the educational process, we considered it necessary to abandon traditions and be based on the principles of novelty and unconventionality of the new century.

- The introduction of a model demonstrating the educational process, that is, a new method for the content of educational material;
- Determine what form of activity leads the reader in the game model;
- The game is directly through the game, but in fact, approaching the educational process and the transformation of the educational activities of students;
- ensuring the unity of the implementation of educational and educational goals;
- Organization and management of activities by the teacher and implementation by students;
- Widespread use of data and knowledge systems.

Game training should perform the following tasks:

- give students a holistic view of a particular learning activity that they must master in the game;
- Mastery of individual and group decision-making on entry into educational activities and mastering a subject based on social experience;
- Development of theoretical and practical thinking while mastering knowledge and solving problems;
- The formation and creation of conditions for the active development of educational activities and the process of mastering knowledge.

The application and introduction of didactic games in the lesson differ from traditional methods in a number of qualities expressing an unconventional approach to the educational process. That is, thanks to the organization of the educational process directly on the basis of interesting games, ensuring the joint movement of participants in the educational process, a group approach to the issue, an active movement and the development of logical thinking of students are formed. The advantage of organizing a problematic educational process in pedagogical classes. Effective teaching technology in the current high school is problem-based learning. Its task is to promote an active cognitive process and the formation of a research method of thinking. Problem learning is consistent with the goals of creative, active personality education. Problem-based learning is advanced learning technology. The technology of instruction in the current efficiency high school is problem education. Its task is to promote an active cognitive process and the formation of a research method of thinking.

The thought process in problem education covers theoretical and practical aspects, such as the activity of inventing educational science, namely its new features and relationships. In solving a problem in problem education, an essential element of the problem situation is the unknown, consisting of knowledge that is missing from the student. Uncertainty in problem situations is characterized by two main indicators:

- 1) The level of innovation (in relation to the acquired knowledge and existing methods of action);
- 2) The degree of assimilation of the acquired knowledge or ways of action (relative to the achieved level of generalization). These two indicators are important in determining the degree

of complexity of a problem issue. The student's need for knowledge in the educational process consists in feeling the need for certain practical or theoretical knowledge, conditions and methods of activity on the way to achieving the goal. The need for knowledge is a necessary part of the problem situation and requires reasonable activity to the mastered knowledge in search of novelty. It plays an important role in the child's self-control in the process of thinking. The need for knowledge is a necessary condition for managing the learning process in training.[9.]

The advantage of using test technologies in knowledge control is that in the process of education of young people specific goals and tasks have been developed to determine the qualities of spiritual and intellectual development. Monitoring and evaluating the knowledge and mental abilities of students and students are important on a state scale. At the same time, the process of monitoring and evaluation affects the enrichment of the reader's knowledge, the development and education of his personality. When controlling knowledge, it is necessary to constantly monitor what points and grades leave an impression on the reader and student, how they relate to the achievements and shortcomings of their comrades in the study. The Student and Student Knowledge Monitoring and Evaluation System are introduced regularly during the school year, and sometimes prevents random checks and opens up opportunities for orderly, ongoing evaluation. Regulatory tests have the following advantages:

- Test questions involve testing many abilities; - although it is useful to determine the overall level achieved by learners in studying a large amount of complex material with different arcs;
- Provides an opportunity to select the most talented students.

The lack of regulatory tests is striking if the educator does not determine to what extent he is willing to move on to the next boss-CIC.

When testing by criteria, the results are unchanged, comparable to permanent standards. For example, a driving licence is a requirement for the extradition of Christ that must be matched to an existing standard of knowledge. It cannot be compared to the abilities of a worker in another sphere. Standardized tests are based on a program with specific requirements of the standard and are designed to determine the knowledge, skills and skills of the learner. They have types of diagnostics that determine and determine the achieved level, abilities (as well as interests). Tests that determine the level achieved are standardized tests that awaken the amount of knowledge learned by learners in a particular area. [10] The use of such tests for the whole group or individually, in the calculation of results can be used a different system of points. Diagnostic tests are used individually to identify problems in education.

Specialized disciplines make the most extensive use of closed tests, open tests, Compliance tests, and correct sequence tests.

Open tasks. If the student can answer freely, the test task will have an open forum.

It is assumed that the Shooting Men respond briefly and unambiguously, consisting of one, two words. This should be described in the ticket attached to the test. Space required for the answer is left on the blank of the form.

For example, the "concept of test" was first used in the year. Closed tasks. Such a task will consist of approval and several answers, one of these answers will be correct, the rest-correct but wrong. The number of responses offered can range from two to five or more.

Didactic requirements to the preparation of test tasks: the sphere of professional activity is the sphere of application of professional knowledge, skills and skills, the name of which is adapted to the names of economic spheres. All prepared test tasks are not unambiguously valid. For test questions to be ideal, a number of requirements must be met when drafting them. These include the feasibility of training material of test tasks content; material importance; scientific accuracy; sequence; viscosity and harmony; Stratification by the degree of assimilation; efficiency (kumulyativnost); Language sensitivity and accuracy; unambiguity; strictly certain time; compactness; the standard of complexity; No additional signs of a correct response; variability; The relationship between form and content. Now let 's take a quick look at these requirements:

**1. Compliance of the educational purpose.** The content of test tasks should be oriented to educational purposes. The set of learning objectives has a hierarchical structure. Therefore, without realizing a relatively close goal. The overall (relative) goal cannot be achieved. Each test question should ensure the realization of a certain educational goal.

**2. Importance of material.** Test questions include the most important, basic parts of the training material. The number of jobs in a test is usually limited.

Therefore, all topics that are directly addressed may not be fully covered. The student 's conclusion from the general state to the private (deductive) and vice versa, the conclusion of some facts from the general (inductive) shows how much he assimilates the application of theoretical provisions in exceptional cases, and the knowledge of details-his ability to explain theoretical foundations.

**3. Scientific accuracy.** The test includes truthful data that can be justified through abstract, knowledge. Controversial opinions in science are not recommended to be included in test questions. The nature of test assignments basically requires a pre-known, accurate answer.

**4. Sequence.** The tasks in the test must be linked by essentially general knowledge relating to a certain science. Consistency manifests itself in that the same job response correlates (correlatively) with the results of the general test.

**5. Viscosity and harmony.** It is important that the total number of tasks in the test is distributed according to the topic and parts. At the same time, it is necessary to fully cover all aspects of the science studied.

**6. Stratification by the degree of learning.** It is necessary to draw up test tasks in which the degree of learning of a certain component of the educational material is different (knowledge, description of what is remembered, productive and creative thinking). Cognitive level test jobs are based on restoring previously learned data. Memory capacity will be important. When testing at the reproductive level, the reader thinks independently on the basis of the data obtained earlier, and when performing the task relies on previously known rules and algorithms (directions) in science. In this case, it follows the path of recreating, implementing the memorable. Test tasks for productive creative thinking test the ability of the subject to apply certain general methods independently to certain conditions specified in the task. Fruitful creative thought activity is carried out not on the basis of ready-made rules and algorithms, but according to certain rules, which were created or recreated in the process of activity in new conditions. Compiling test assignments based on the above requirements requires teachers to have knowledge of test compilation theory. For this purpose, it is necessary to learn from testing courses and to learn the

corresponding literature on your own. Criteria for assessing students' knowledge, skills and skills have been developed in the testing. The teacher must learn to know them well and practice them in the learning light.

For this purpose:

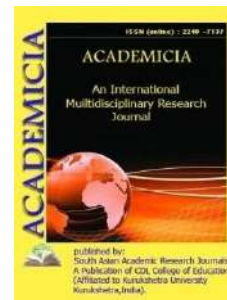
1. It is necessary to tell students about the system of evaluation of test results, to show on the example of answers of students what knowledge is evaluated medium, good and excellent.
2. When evaluating, you must analyze the test result and specify what to pay attention to when repeating this material.
3. When evaluating, it is important to encourage pupils, but not always to encourage one or two readers in a naughty way.

It should be noted that the responses of each student on the results of the test should be objectively analyzed.

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## USING GAMING TECHNOLOGIES IN ENGINEERING GRAPHICS LESSONS

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### ABSTRACT

*This article discusses the challenges of using gaming technology in engineering graphics science. According to the results of the study, the level of theoretical knowledge of students in the field of engineering graphics about methods of using game technologies will increase, their interest in the study of engineering graphics science will increase, skills of creative thinking, spatial imagination and independent analysis will lead to conclusions. Experience such as parish is expanding. The data of modern literature on methods of using game technologies in the field of engineering graphics have been studied. The benefits of using gaming technology were emphasized, and recommendations were made to increase students' spatial awareness and improve their drawing skills. The task of education today is to teach students competently, independently in the context of the information and educational environment, based on various game technologies, to use information technologies competently, to organize training based on new technologies. General secondary education also includes primary education. At this stage, students receive regular knowledge of the basics of science, the need for knowledge, the acquisition of basic educational, scientific and cultural knowledge, spiritual and moral qualities based on national and universal values, hard work, creative thinking. Pedagogical conditions are created for an informed attitude to the environment, as well as the formation of skills of choice of profession.*

**KEYWORDS:** *Engineering Graphics, Graphics, Creative Thinking, Spatial Imagination, Pedagogical Technologies.*



## I. INTRODUCTION

The future of a society is determined by the extent to which the education system, which is an integral part of it, is developed. Today's task of education is to teach students the rational use of information technologies in the information and educational environment, on the basis of various game technologies, and to organize training on the basis of new technologies independently. General secondary education also covers primary education. At this stage, pedagogical conditions are being created to provide students with systematic knowledge of the basics of science, the need for them to acquire knowledge, master basic educational and scientific knowledge and universal knowledge, to form spiritual and moral qualities based on national and universal values, diligence, creative thinking, conscious attitude to the environment, as well as skills for choosing a profession.

## II. Materials and Methods

General secondary education is compulsory; this form of education creates the need for students to acquire a systematic knowledge of the basics of science, to assimilate knowledge in them, to have a conscious attitude towards basic educational and scientific values, spiritual and moral qualities, work skills, creative thoughts and the environment, and to choose a profession.

The purpose of the organization of education is to provide the young generation with deep knowledge and develop their abilities and abilities. At present, the Government pays special attention to identifying and supporting educated, talented young students. Pupils have a lot of training to do in order to master theoretical knowledge and practical skills of drawing, as well as to improve themselves [1].

Learning to read a drawing means developing the ability of students to describe the subject in the drawing, to give a clear verbal description of its structure and components, to make a complete analysis. At a performance of the task on the reading of the drawing of a subject at pupils and the given drawing of anybody or model, it will be necessary to develop skills and to expand reserves of spatial imagination, ability to present visually the geometrical form of geometrical bodies or real subjects familiar to them. In case of insufficient development of the ability to imagine something graphically complete and correct it will be difficult to depict something. Indeed, looking through the drawing, studying the length, width, and height of the object described in it, as well as the component and conditional signs of its elements, we read a clear image and drawing of the object in front of our eyes. Thus, under drawing reading it is understood knowledge of the external and internal structure of an object, knowledge of its sizes, ways of processing, depending on the executed images. They show that the spatial imagination when reading a drawing is the most important indicator, so when the spatial imagination is read low, they find it difficult to read the drawing, and their interest in drawing fades. Therefore, we will need to pay full attention to drawing lessons at school and make every effort to increase the spatial imagination of students. Only then will we prepare the youth for the future phase of education. A modern teacher must be the future creator, author, developer, researcher, user and promoter of new pedagogical technologies.[2]

The school curriculum has now been modified and each subject has been given special attention, including the importance of drawing, and different methods have been developed and applied to enhance the spatial imagination of students. In particular, the use of creative games in teaching plotting will create a basis for expanding the spatial representations of the younger generation,

real mastering of graphic knowledge, improving the efficiency of perception and comprehensive improvement of creative activity. The educational goal of the game will be aimed at educating students in independence, will, certain approaches, views, cooperation in the formation of spiritual, aesthetic and attitudinal worldview, ability to communicate, communicativeness [3]. The games will be held in the following main areas:

- the didactic goal is set as a game task;
- educational activities are subject to the rules of the game;
- educational material is used as a game tool;
- the training process includes elements of competition turned into a didactic game;
- Successful completion of the didactic task is linked to the results of the game.

The game is a type of activity that focuses on learning, shaping social experiences and improving behaviour. The purpose, functions and application of games are different. [3]

The game is defined as an activity in situations aimed at learning and recreating the social experience in which the self-control of the individual is formed and improved. According to D.N.Unidze, the game is a form of internal mental behaviour. L.S.Vygotsky describes the game as the internal social world of the child, a means of mastering social orders. A.N. Leontyev sees personal freedom in a game to realize unrealizable interests (interests) in imagination. American philosopher, psychologist, and educator John Dewey founded an experimental school in Chicago in 1885, based on the concept of "learning through action," which is a key feature of practical learning. The main principles of this system are:

- Take into account the interests of students;
- Reading of activities (education of thought and action);
- Knowledge and knowledge - as a result of overcoming difficulties;
- Creative work and collaboration.

At the same time, the author takes into account that the student can learn lessons through interest, movement, free creative work. Professors Ruziev, Riksiboyev, Associate Professors I.Rakhmonov, M.S.Isayev, A.Abdurakhmonov, A.Ashirbayev, senior teachers L.A.Kuzina, Z.Mirzaliyev and others carried out many studies in this field. In his book "Didactic Games from Drawing," written by Assistant Professor I. Rahmonov, he was one of the first to cite several didactic games for use in the educational process. This book has not lost its importance and is used in educational institutions.

Nowadays, with the constant growth of educational technologies, the students' attitude towards reading is changing, which reduces the chances to master all this knowledge.

It is desirable to use available knowledge to increase students' interest in reading, to teach them strategies to restore existing knowledge to increase their spatial perception. [4; 5]

In general, the game does not choose age, it can be played by everyone, from babies to the elderly. But people only play games that match their age. Psychologists say that the possibility of entering the game does not depend on the age of the person, but the game is unique for each age group. For example, young students are more likely to play active, creative games, while adults are more likely to play games that require more mental activity. Each game is a product of folk pedagogy, and teachers can effectively use some elements of these games in the classroom.

These include action, creativity, role-playing, business games, conferences, games and more that are part of didactic games. These games include team games, individual games as well as games designed for learning material. [6; 7]

They are divided into educational games, games to determine knowledge, games to consolidate the acquired knowledge and skills, games of a creative nature and others. Using and conducting creative games in drawing lessons is of great educational importance. The main purpose and objective of such games are to develop and activate the spatial imagination of students. Observations show that teachers pay more attention to the graphic drawing field and pay less attention to reading the drawing. That's why more than half of drawing lessons are with graphic works. From a psychological point of view, the same adversely affects the human brain and causes fatigue. In practice, you can notice that in the first 10-15 minutes of one lesson students remember 9 out of 10 words out of 10, that is, they learn 90%, in the next 5 minutes do not get new knowledge and work with old knowledge, in the next 20-25 minutes they remember 6 out of 10 words, that is, they learn 60%. Based on the results of these studies, creative drawing games can be conducted within 5-6 minutes after 15-20 minutes of classes in order to replace and activate the work of students and attract attention to the topic. Sensation in games, excessive excitement is a natural phenomenon for readers. The reason is that the students behave freely in games and have very high demands on themselves, trying to get out of difficult situations on their own. Then students who act in their way, confident in themselves, will be able to cope with any difficulties, adversity. Therefore, it is natural that when conducting creative games in drawing lessons, they superficially perceive the bright images or models in the drawings and resemble other household items. In order to use these characteristics of readers, it is necessary to achieve a lasting perception of them by comparing models or details with things from life. Only then will it be possible to increase their spatial imagination.

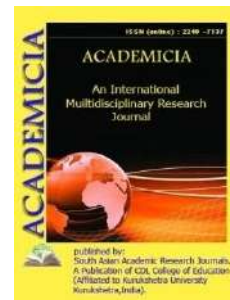
### III. CONCLUSION

At present, the education system has a rich treasury of teaching methods. If we can make the right use of pedagogical technology in the development of education, we can achieve the desired result confidently and briefly. The continuous development of research in the field of educational technologies and the emergence of new opportunities, the successful implementation of educational tasks require responsible updating of teaching methods, creative use of folk pedagogy, especially the pedagogy of the peoples of the National East. But it should also be noted that, as we mentioned earlier, new technologies are being created depending on changes in time, the development of education. It is better to use more modern technologies that are being created, but we must not forget about the old technologies, that is, we must support them (old technologies) in the process of the lesson, using the best, quality, sharp methods. It is worth noting that we have seen good results in determining the level of knowledge of students, the level of absorption of science through various methods.

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## TRANSITION PHOTOELECTRIC PROCESSES IN A SUPERFLUID GAS-DISCHARGE CELL WITH SEMICONDUCTOR ELECTRODES

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### ABSTRACT

*In this paper, transient photoelectric processes in a hyperfine gas-discharge cell were investigated. The issues of delay of the gas discharge breakdown in the pulsed mode of the cell operation and the electrostatic phenomena of the transient processes are considered. It is established that the breakdown delay time depends on the semiconductor illumination intensity, the duration and magnitude of the voltage pulse, and also the state of the surface charge, that is, the field strength of the surface charges.*

**KEYWORDS:** *Gas-Discharge Cell, Photo Detector, Breakdown Delay, Surface Charge, Watt Ampere Characteristic, Kinetics Of Pulse Current, Intensity Of Glow Discharge.*

## I. INTRODUCTION

An ultrathin gas discharge cell (20–100  $\mu\text{m}$ ), consisting of a photosensitive semiconductor electrode and located through a gas discharge gap of a fiber-optic washer with a conductive transparent coating of  $\text{SnO}_2$ , is the main element of a semiconductor photographic ionization chamber (PFIC) [1-4]. The kinetics of the current in such a cell and the kinetics of the glow of the discharge have already been partially investigated in [5]. It was found that the statistical spread of the breakdown delay at a negligible resistance of the electrodes corresponds to a distribution function of exponential type, while the spread at a sufficiently large value of the resistance of the semiconductor electrode is described by a function close to the random error function [6].

Indeed, the semiconductor electrode is the highest resistance element of the electric circuit of an ultrathin gas discharge cell, and therefore it will determine the value of the passing stationary current of the PFIC, which is equal to the photocurrent in the semiconductor [7].

In the case of transients, for example, when an external voltage is connected or an “instantaneous” change in the conductivity of the semiconductor, the surface charge may be in complete discrepancy with the conductivity current, which causes electrostatic phenomena. A significant role in the current transmission is played by the surface electric charge, which is localized at the semiconductor – gas discharge interface, self-consistent in magnitude with the current density and largely determines the stationary current-voltage characteristic of the PFIC. However, until now transient photoelectric processes in an ultrathin gas discharge cell have not been sufficiently studied. Data on the effect after breakdown of statistical spread and breakdown delay time, as well as the magnitude of the surface charge on the photoelectric characteristics of an ultrathin gas discharge cell, are not available in a wide scientific publication.

The aim of this work is to identify patterns of transient processes occurring in an ultra-thin PFIC gas discharge cell, taking into account the delay in the breakdown of a gas discharge and the distribution of the surface charge on a semiconductor photo detector.

This report presents the results of a study of a gas discharge cell with a thickness of 40  $\mu\text{m}$  and 100  $\mu\text{m}$  at an air pressure of 0.2 atm with electrodes of chromium-compensated gallium arsenide at room temperature with a dark specific resistance of  $\sim 10^8 \text{ Ohm} \cdot \text{cm}$  and silicon doped with platinum at  $T = 80 \text{ K}$  with a dark resistivity of  $\sim 10^9 \text{ Ohm} \cdot \text{cm}$  in conditions of very small through currents or their absence, when the effects of an electrostatic nature are most pronounced.

## II. Experimental setup and research methods.

To carry out the experimental work, the PFIC was used, the circuit diagram of the ultrathin gas discharge cell of which is shown in Fig. 1. The main DC power supply  $U_1$  was connected between the photo detector and the fiber-optic washer; in addition, a high-voltage thyatron pulsed generator  $U_2$  with a pulse duration of  $t_v = 0.5 \div 30 \mu\text{s}$  and a leading edge duration can be connected in series or directly to the gas discharge cell  $\tau_\phi = 50 \text{ ns}$ . The maximum value of the pulse voltage was  $U_2 = 1.6 \text{ kV}$ , with an output impedance of 100 Ohms. For registration of direct current, a two-coordinate self-cleaning laboratory complex of the LKD4-003 type was used, and for registration of a current pulse, a two-beam oscilloscope of type C1-91 was used, which recorded the voltage drop across the load resistance  $R_H$ .



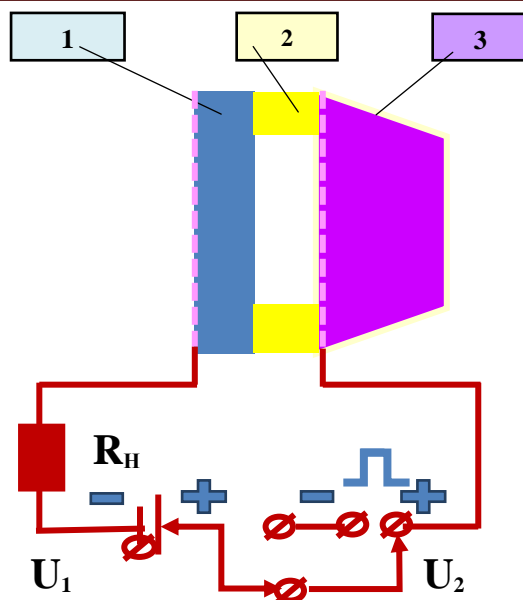


Fig. 1. Schematic diagram of an ultra-thin gas discharge cell. 1 - infrared photosensitive semiconductor plate with a transparent electrode, 2 - mica plate with a hole in the center, 3 - fiber optic washer with  $\text{SnO}_2$ .

In the present work, we developed an averaging method based on a change in the optical density of the image of the current waveform photographed from the screen of the oscilloscope to film. The essence of the method is that, since the photographic effect of the cell's gas discharge on the recording medium is determined by the average amount of electricity, we were interested not only in the current values in each individual pulse, but also in the average current values for the period. Therefore, the experimental task was to determine the average current averaged for each moment in time over the total number of pulses during the exposure time.

Indeed, assuming that the optical density of blackening is proportional to the number of pulses for each moment in time, we can assume that the average current value at a given moment in time is determined by the following relation:

$$i_t = i_{tmax} \frac{n}{N} = i_{tmax} \frac{D}{D_{max}} \quad (1)$$

where  $n$  - is the number of current pulses for a given moment in time;  $N$  is the total number of voltage pulses;  $D$  is the optical density on the waveform corresponding to the number of pulses for a given moment in time ( $D \sim n$ );  $D_{max}$  is the maximum optical density on the waveform corresponding to the total number of pulses ( $D_{max} \sim N$ ).

Thus, by conducting densitometry of waveforms, it is possible to obtain an averaged shape of the current pulse. The method for obtaining the average current kinetics from densitometry of waveforms is schematically explained in Fig. 2, a, where the optical density on the waveform is conventionally shown by lines of different thicknesses, and the smooth dash-dot curve in Fig. 2, b shows the obtained average current kinetics. The oscillogram was recorded on aerial film-42 with a Zenit-E camera with a Helios lens and an additional adapter ring. The densitometry of the



photographs was carried out on an IFO-451 type microdensitometer with a slit width providing a resolution of 20 lines / mm. In all measurements, the radiation power was measured with an LETI type thermal column with a sensitivity of 0.72 V / W.

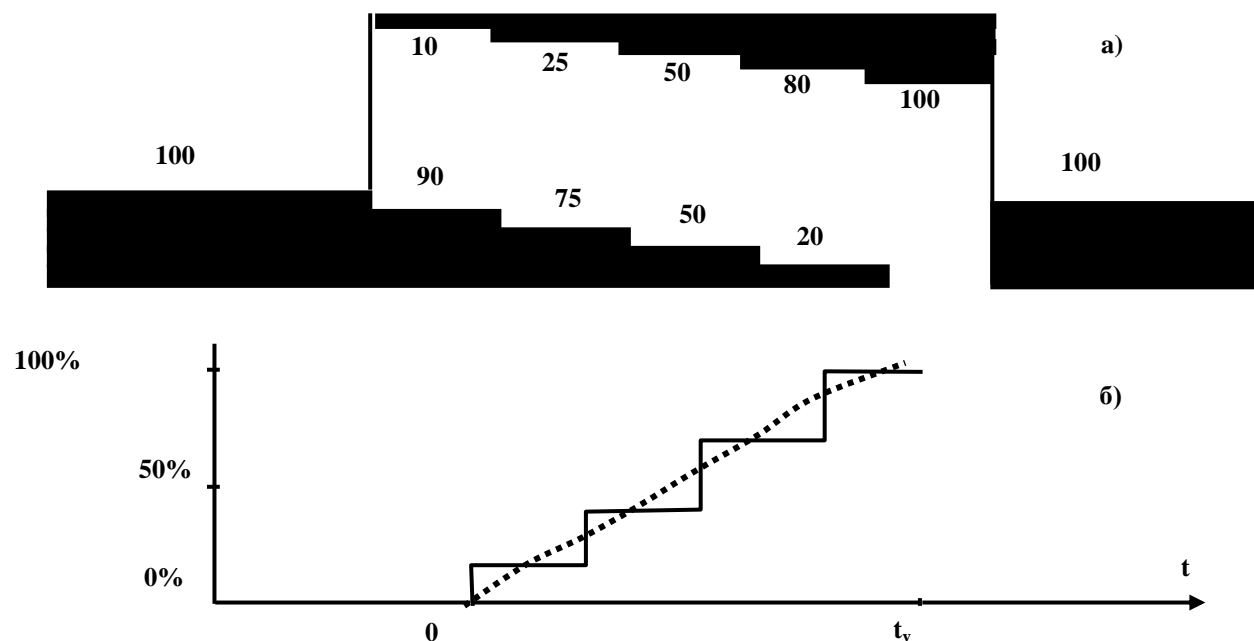


Fig. 2. a). Schematically - the distribution of the optical density of blackening on the waveform of the current pulse,

b) The time dependence of the average current obtained from the waveform (a).

### III. The experimental results.

#### A. Breakdown kinetics in an ultrathin gas discharge cell with a semiconductor electrode made of high-resistance gallium arsenide compensated by chromium.

To study the kinetics of the current and the breakdown delay, the densitometric current waveforms of the ultrathin gas discharge cell were processed by the densitometric method described above. In this case, between the semiconductor photodetector of gallium arsenide compensated by chromium and a fiber optic washer, a pulse voltage of the order of 1.6 kV was applied from a high-voltage thyatron generator. The residual air pressure was 0.2 atm,

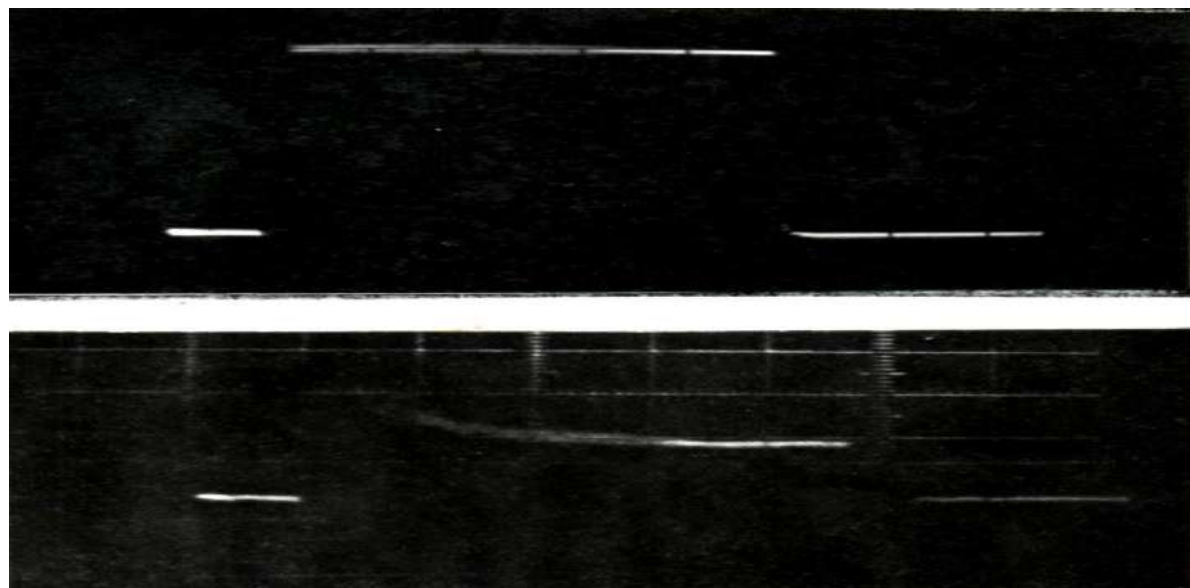


Fig. 3. Oscillograms of voltage (A) and current (B) in a gas discharge cell with a semiconductor electrode of gallium arsenide compensated by chromium.

The thickness of the gas gap in one experiment was 40  $\mu\text{m}$ , and in the other 100  $\mu\text{m}$ , the illumination was carried out with white light on OI-24, the power of which was measured by a thermal column.

Figure 3 shows a typical waveform of voltage and current when a single voltage pulse is applied to the cell. As can be seen from the figure, after the first capacitive current surge (bias current) after a certain delay time, depending on the illumination of the semiconductor, a second current surge is observed at the time of the breakdown of the gas-discharge gap, passing into the horizontal section of the steady-state through current flow. Thus, the second surge in current is associated with a transient in the electric circuit (Fig. 1), which begins at the moment of breakdown of the gas gap.

Figure 4 shows the dependences of the breakdown delay time on the light intensity for two values of the gap thickness. The breakdown delay decreases with increasing illumination of the photo detector and with increasing thickness of the discharge gap.

The obtained photocurrent curves made it possible to construct the dependences of the average current in the pulse on the light intensity for various values of the voltage pulse duration.

## **B. 2. Electrostatic phenomena in an ultrathin gas discharge cell with a platinum-doped silicon semiconductor electrode.**

To study transients of an electrostatic nature, DC sources and a high-voltage pulsed thyatron generator were connected in series to an ultrathin gas discharge cell. In this case, the photo detector of the cell is platinum doped silicon [8], which is cooled to  $T = 80\text{ K}$ , the gas-discharge gap is 40  $\mu\text{m}$  thick, and the residual air pressure is 0.2 atm.

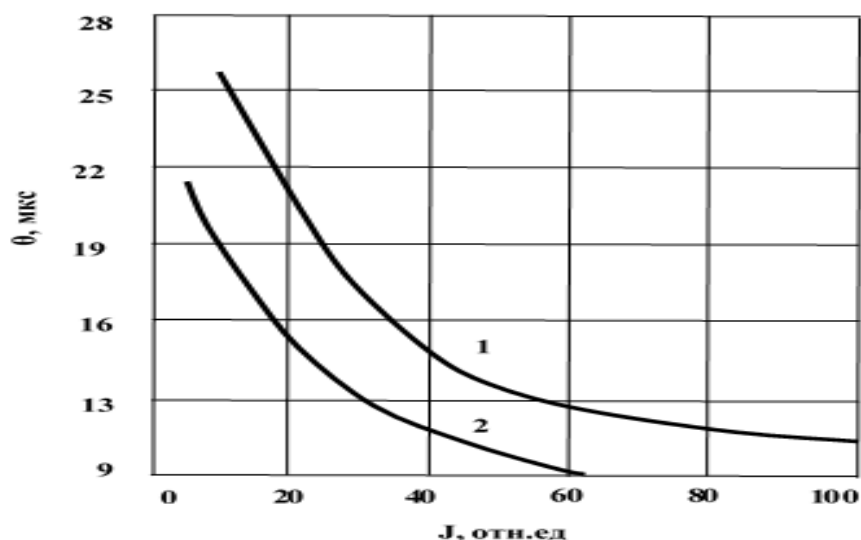


Fig. 4. The dependence of the breakdown delay time on the intensity of illumination of the semiconductor at various values of the thickness of the gap. The thickness of the gap: 1 - 40 microns, 2 - 100 microns.

To enhance the glow of the discharge, an electro-optical converter of the EP-16 type was used (Production in Russia). When a constant voltage of 550 V is applied to the cell, a stationary discharge is ignited and a uniform glow is observed at a current density of  $10^{-8} \div 10^{-7} \text{ A / cm}^2$ . If, in addition to the cell, a short (25  $\mu\text{s}$ ) voltage pulse of 1.6 kV of the same polarity is applied, the discharge glow disappears and then gradually recovers. The pattern of recovery of the discharge glow at different instants of time after a voltage pulse is shown in Fig. 5.

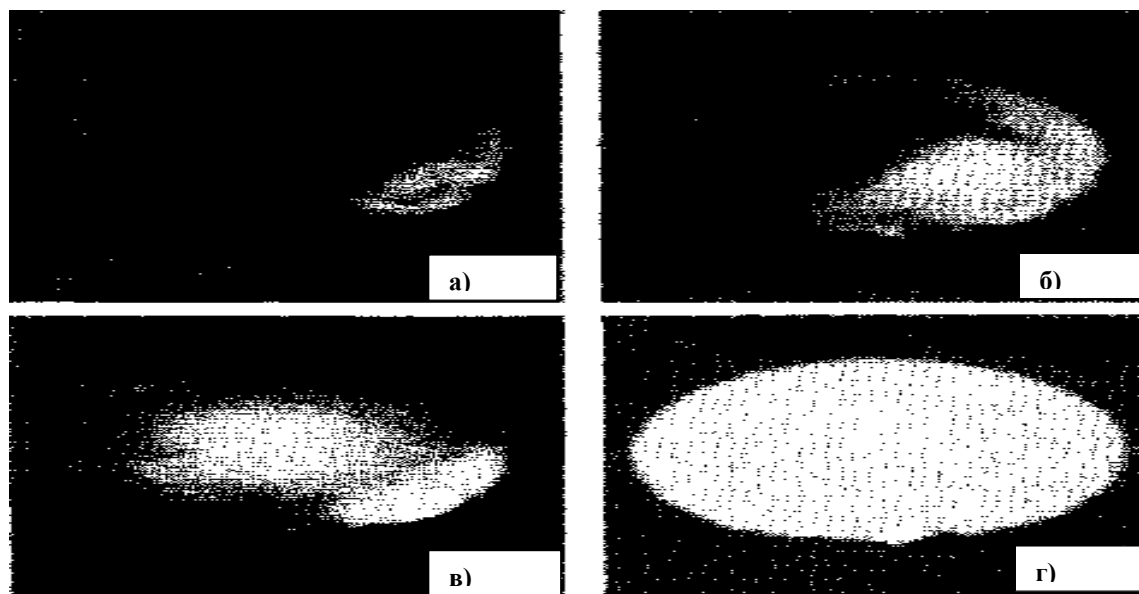


Fig. 5. The picture of the glow of the discharge at different points in time after the voltage pulse: a) after 4 s; б) - 8s; в) - 12s; г) - 20s.

In a purer form, electrostatic phenomena are observed in the absence of a constant through current in the following formulation of the experiment.

A short (25  $\mu$ s) rectangular voltage pulse of 1.6 kV is applied to the cell, causing a breakdown of the gas gap and, accordingly, a flash of uniform luminosity over the area. After a certain period of time  $\Theta$ , a second voltage pulse of the same polarity is applied. Moreover, if at the moment  $\Theta$  the total field in the gap is equal to the difference between the external field  $E_{im}$  and the field of surface charges  $E_{zaryad}$ , during relaxation it reaches the breakdown strength  $E_{pr}$ , a discharge flash is observed. Just for this case, the time  $\Theta$  is fixed. If a discharge flash is not observed, then the time of the threshold breakdown time  $\Theta$  in these parameters is longer, and for this case, the moment of supply of the second pulse must be delayed. Thus, the selection of random errors determines the true value of  $\Theta$ . Figure 6 shows the experimentally obtained dependence of the threshold value of the breakdown time  $\Theta$  on the illumination of the semiconductor J, increasing its conductivity (the illumination intensity was measured by a thermal column), and Fig. 9 shows the experimentally obtained dependence of the glow intensity of the discharge I (the photomultiplier FEU-19A was measured discharge glow intensity) from the threshold breakdown time  $\Theta$  for the dark current (curve 1) and for infrared radiation with a wavelength of 3.6  $\mu$ m at a power of  $\sim 10^{-9}$  W / cm<sup>2</sup> (curve 2).

#### IV. RESULTS AND DISCUSSION

Before discussing the results, we consider it appropriate to consider the issue of the breakdown of the gas gap from the point of view of theoretical analysis. The calculation of the time dependence of the voltage at the gas-discharge gap U (t) before breakdown can be performed similarly to the problem of charging a two-layer capacitor [9], one of the layers of which is a semiconductor, has a permittivity  $\varepsilon_1$ , thickness  $d_1$  and conductivity  $\sigma_1$ , and the second layer has a gas gap has a dielectric constant  $\varepsilon_2 = 1$ , thickness  $d_2$  and conductivity  $\sigma_2 = 0$ :

$$U(t) = \frac{U_0}{R \frac{1}{4\pi d_2} \left( \frac{1}{\tau_2} - \frac{1}{\tau_1} \right)} \left[ \left( \frac{4\pi\sigma_1\tau_1}{\varepsilon_1} - 1 \right) \exp - \frac{t}{\tau_1} - \left( \frac{4\pi\sigma_1\tau_2}{\varepsilon_1 d_1} - 1 \right) \cdot \exp - \frac{t}{\tau_2} - \frac{4\pi\sigma_1}{\varepsilon_1} (\tau_1 - \tau_2) \right],$$

(2)

$$\text{где } \tau_1 = \frac{R\varepsilon_1/16\pi^2 d_1 d_2}{\frac{\varepsilon_1}{\pi d_1} + \frac{1}{\pi d_2}}; \quad \tau_2 = \frac{d_1}{\sigma_1} \left( \frac{\varepsilon_1}{\pi d_1} + \frac{1}{\pi d_2} \right);$$

$U_0$  is the supplied voltage; R is the internal resistance of the voltage source. If the internal resistance of the generator is negligible, the applied voltage at the initial time is redistributed inversely with the capacitances:

$$\frac{U}{U_0 - U} = \frac{U}{\varepsilon_1 d_2}. \quad (3)$$

Then, with a time constant  $\tau_2$ , all the voltage passes to the discharge gap. Thus, the breakdown of the gap occurs under conditions of increasing voltage on it. Since  $\sigma_1$  depends on lighting, the breakdown delay value is determined by the time  $\Theta = \tau_2 = f(\sigma_1)$ . Another factor determining the breakdown delay is the natural statistical spread of the breakdown time, which is the only reason for the breakdown delay in a cell with equipotential electrodes. Therefore, the total delay time is determined by two components: the delay time of the discharge gap capacitance through the

illuminated semiconductor and the time of the statistical breakdown delay at a given voltage in the gap. The study of the breakdown delay in the PFIK gas discharge cell is of practical importance.

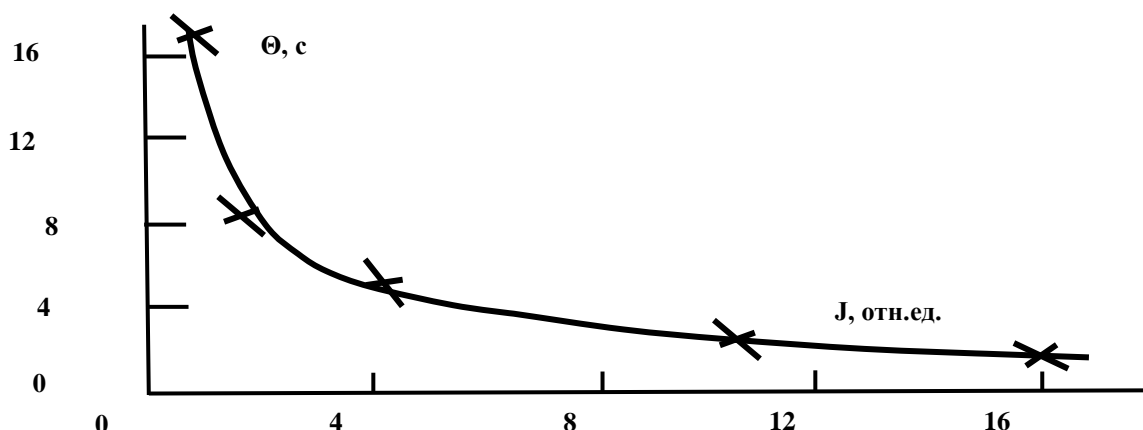


Fig. 6. Threshold time dependency breakdown  $\Theta$  from semiconductor J. illumination

Therefore, based on this task, experience was set. First, the kinetics of the current in the gas discharge cell were constructed by the densitometric method from the current waveform. As can be seen from the curves in Fig. 4 that during the voltage pulse, the relaxation curves of the average current come to a stationary value, the value of which depends on the illumination. Breakdown delay, defined as the time the current reaches half the steady-state value, and the spread of the breakdown delay time (slope of the curve) decreases with increasing illumination. In addition, the average current value at a gas discharge gap thickness of 100  $\mu\text{m}$  is more than three times greater than at a thickness of 40  $\mu\text{m}$ . Apparently, this is the best case for pulsed PFIC operation. The curves shown in Fig. 6, the dependence of the average current in the pulse on the light intensity (current-voltage characteristics of the PFIC) demonstrates a characteristic feature of the curves, that is, the “threshold” form of these dependences, which is a consequence of the breakdown delay effect. With an increase in the duration of the voltage pulse, the threshold value of the illumination intensity decreases below which the conduction current in the PFIC, and hence the discharge glow, are absent. We also note that, starting from the threshold value, the photocurrent increases sharply with increasing light intensity. The obtained “threshold” dependences of the average current with regulation of the threshold value are of considerable interest, being, in principle, a method of background discrimination.

Now we turn to a discussion of the results of studying the electro-statistical phenomenon occurring on the surface of a semiconductor photodetector in an ultra-thin PFIK gas discharge cell. It should be noted here that the ultrathin gas discharge cell in the PFIC operates in two modes: 1. Standby mode, when a DC power source is connected to the cell, as if it is waiting for light information to be registered; 2. Pulse gate mode, in this mode of operation, against a constant background of radiation of the detected object, a pulse high voltage is applied to the cell. To identify patterns of transient processes in an ultrathin gas-discharge cell, we simultaneously used both modes of supplying voltage to the cell. When a DC voltage of sufficient magnitude for breakdown is applied to the cell, then against the background of a constant radiation intensity of the object, a uniform discharge glow is observed on the PFIC

screen. If, in addition to the cell, a high pulse voltage is applied, in our case 1.6 kV, then the glow of the discharge goes out. After this discharge, that is, the image of the object is established after a certain time. As can be seen from fig. 6, this time  $\Theta$  depend on the radiation intensity of the object. In turn, this value also depends on the intensity of the discharge glow (Fig. 9). This last result led us to the idea that the intensity of the discharge  $I$  is proportional to the square of the electric field

$$E_{np}^2 = (E_{umh} - E_{zaryad})^2$$

acting at the time of the breakdown and has a threshold character of this dependence qualitatively corresponding to the theoretical relation

$$I = \left\{ \alpha (E_{umh} - E_{np}) \left[ 1 - \left( E_{zaryad} \exp\left(-\frac{t}{\tau}\right) / (E_{umh} - E_{np}) \right) \right] \right\}^{1/2} \quad (4)$$

here  $E_{imp}$  is the field strength of the supplied voltage pulse,  $E_{charge}$  is the field strength of surface charges,  $\tau$  is the Maxwell time in the semiconductor, and  $\alpha$  is a constant coefficient.

It should be noted that the spread in the luminescence intensity and in the moment of ignition of the discharge increases as it approaches the threshold time, which is apparently due to the inhomogeneity of the semiconductor conductivity and the dispersion of the breakdown delay (Fig. 5). [12; 13]

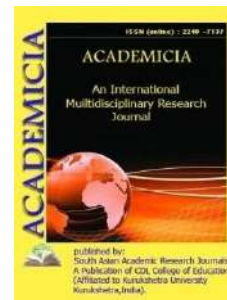
Electrostatic phenomena of this type are determined by the peculiarity of transients in ionization devices and, on the other hand, can serve as an effective tool for studying the physics of a gas discharge with distributed electrode resistance.

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## **COVID-19 -: AN INVISIBLE SILENT KILLER: ITS EFFECT AND POTENTIAL THREATS TO THE WORLD**

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### **ABSTRACT**

*Covid-19, an outbreak of global pandemic causing massive destruction to the world resulting in high rate of distress and loss of life. With each passing day, the quantum of death and the economic loss keeps on rising throughout the world. This study is an attempt to access the effect of this invisible silent killer on the humanity and the economy and to access its potential threats to international peace. Here we get to know that how covid-19 has killed more than 3 million people and causes 9 trillions loss to global economy And its Bio weapon connection is also indicating towards future Bio warfare. It maybe even possible that we are facing it right now and its evidences may come to notice later on.*

**KEYWORDS:** *Pandemic, Infectious, Lockdown, Economic, Destruction, Bio weapon*

### **INTRODUCTION**

We saw many major epidemics whether its Ebola in 2013-14 or SARS in 2003. But the very recent Covid-19 has proved to be most terrifying pandemic spread all over the world till the date of writing this paper. Covid-19 is an infectious disease which had its origin in Wuhan, capital of China's Hubai province, during Dec. 2019. It found to be spread through contact with infectious person. During the initial period of this pandemic breakout the infectious persons were showing the common symptoms including fever, dry cough, and shortness of breath followed by some other symptoms such as fatigue, sore throat etc. But after 4 months of this virus attack many asymptomatic causes comes to notice where even patients showing none of the above mentioned symptoms are tested positive. Its incubation period is 2 to 14 days. After a sudden outbreak from china, it spread like wild fire to Italy, Spain, America and rest of the world. The major reason that makes this disease a matter of distress for the whole world is that there is no vaccine and antiviral medicine to prevent and treat Covid-19 till date of writing this paper as notified by

WHO (world health Organization). In the absence of medicine and other medical treatment , social distancing, global lockdown and other containment measures become the only means to combat this global crisis.

## OBJECTIVES

The Objectives of this study is to access the Following:

- Effects of a Global pandemic COVID-19 over the world
- Its potential threats to international peace

## RESEARCH METHODOLOGY

The current study is an attempt to outline the effects and threats of a severe kind of global crisis named COVID-19. It is completely Descriptive in nature and a review of previously done researches in this area. The data used in this study is gathered from secondary sources such as newspaper, journals, Govt. Publications and other online resources.

## COVID-19-: A Mystery Virus

The origination of this deadly virus is a mystery in itself. As some state it as accidental outbreak caused due to eating wild animals meat mainly the Bat. Whereas other state it as a Biological weapon used to become a global leader. However its transmission between human being is through the direct contact with the infected person and the droplets generated from cough, sneeze and speaking by infected person or by touching a contaminated surfaces and then touching the eyes, mouth, and nose without washing or sanitizing the hands. China being the epic centre claim this virus to be spread out of wild animal ( i.e. BAT ) from Wuhan 's seafood market. But Dr. Francis Boyle ( creator of Bio weapon Act ), US president and many other claims this virus to be a Bio weapon of china that could have been created in Wuhan Institute of virology ( one of the top most lab of china studying the deadly pathogens ) where china is supposed to be researching over bat since 2018. The reasons supporting this allegation is that the doctor who for the first time alert the govt. and bring this matter to public notice was found dead in china. Another reason in support is China's lack of transparency regarding numbers of cases of deaths in their country. Beside all the above facts the emergence of this virus is still a matter of debate.

## EFFECT OF COVID-19

The seriousness of this global pandemic is visible from the following effects it causes at global level-:

### Immediate Effects-:

- It puts a check on the fast moving global economy by the way of global lockdown, shutdown business large and small and force millions of people to get confined at their homes.
- Due to lockdown, production disrupted that affect a large numbers of developing countries having deeply integrated global supply chain network.
- Sudden and unexpected announcement of lockdown by governments create internal disturbance, results in fear among people, panic buying and migration from one place to another.
- Millions of workers in different countries are facing the threat of loosing their jobs

- Service sectors, particularly place of direct contact with others such as retail trade, leisure and hospitality, recreation and transport facilities etc. get highly effected due to restricted inward and outward mobility.
- Governments, in order to protect their economies from this economic downfall, are rolling out large stimulus packages which could result in deep global economic recession.

### Effect on the humanity:-

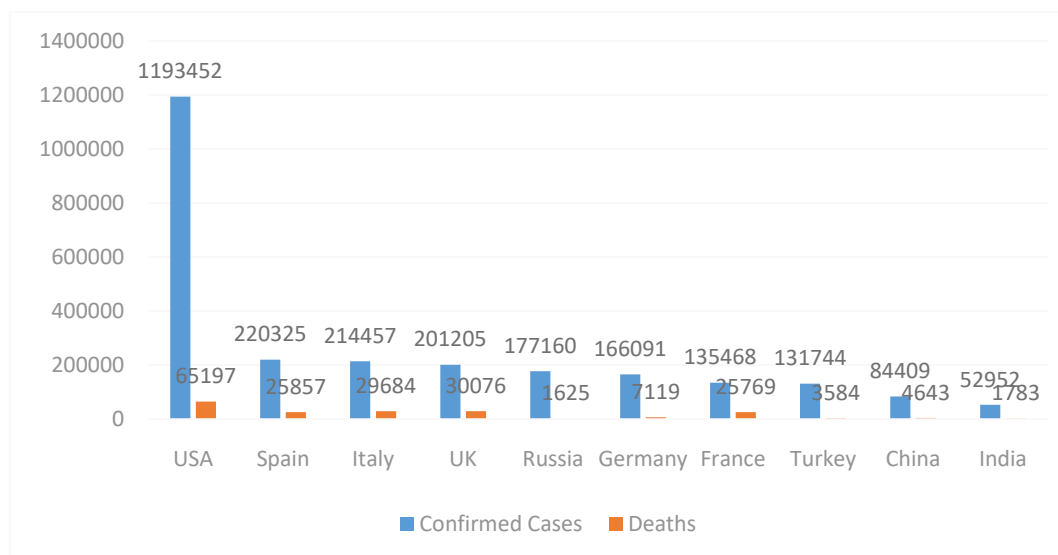
COVID-19, a global pandemic being a biggest hit to humanity, put millions of people to death all around the world. It affects all the segments of society but particularly detrimental to older persons and persons with weak immunity, and those suffering from any severe disease like hypertension or diabetes. Number of confirmed cases and death toll “(Table 1)”(World health organization (2020)) is increasing in multiples all around the world with each passing day.

**TABLE 1: REGION WISE SITUATION REPORT OF COVID-19 CONFIRMED CASES AND DEATHS (AS TO 10 :00 AM, 7 MAY 2020)**

Reporting Area (region wise)	Confirmed Cases	Deaths
European Region	1626037	150238
Region of the Americas	1542829	84804
Western Pacific Region	156184	6361
Eastern Mediterranean Region	229198	8465
South-East Asia Region	81808	2936
African Region	35470	1228
<b>Global Total</b>	<b>3672238</b>	<b>254045</b>

In a quite short period of 4 months, this disease have been spread through out the world “(Figure 1)” (World health organization (2020)). Hardly there is any country that have been survive from the effect of COVID-19

Figure 1: Ten Countries with maximum number of confirmed cases and death (including China and India ). Data as of 7 May 2020.



### Effect on Global economy :-

Covid-19 causes a major hit to the Growth of the global economy. Due to frequent shutdown of major industries, and restricted economic and business activities all over the world, the global economy is expected to have major downfall. Many countries are facing health crisis, financial crisis, economic downfall and collapse in commodity prices.

“As per one of the report of DESA ( Department of Economic And Social Affairs ) COVID -19 has disrupted the global supply chain and international trade as nearly 100 plus countries closes their national boundaries and also restrict any kind of internal movement in their countries by imposing lockdown and curfew. The World economy is projected to be contracted by 1 percent in 2020” (Corona virus impact on global economy, 2020, April 2)

IMF( International Monetary Fund ) in one of his report (world economic outlook, 2020, April) projects the world's economy in 2020 to face a worst recession with 3 percent fall in GDP that is far worst than the global crisis of 2009 which was 0.1 percent . However IMF has also projected a partial global growth of 5.8 percent in 2021 but still its quite less than the level projected for 2021, before the virus hit. “The cumulative loss to global GDP over 2020 and 2021 due to COVID-19 pandemic could be around 9 trillion dollars that is much more greater than economies of Japan and Germany,combined” (Gopinath, 2020, April 14). It is for the first time since great depression both advanced and developing economies facing worst recession with a growth projection of -6.1 percent and -1.0 percent (-2.2 percent if excluded China ) respectively in 2020. A major decline in output, Import, Export and Consumer prices is expected “(Figure 2)” (World Economic Outlook, April, 2020). Income Per Capita is also expected to reduce for nearly hundred plus countries.

Figure 2: Percentage Change in Output, Import, Export and Consumer prices of Advanced and Emerging Economies.(Projections for 2020)



### Effect on Employment:-

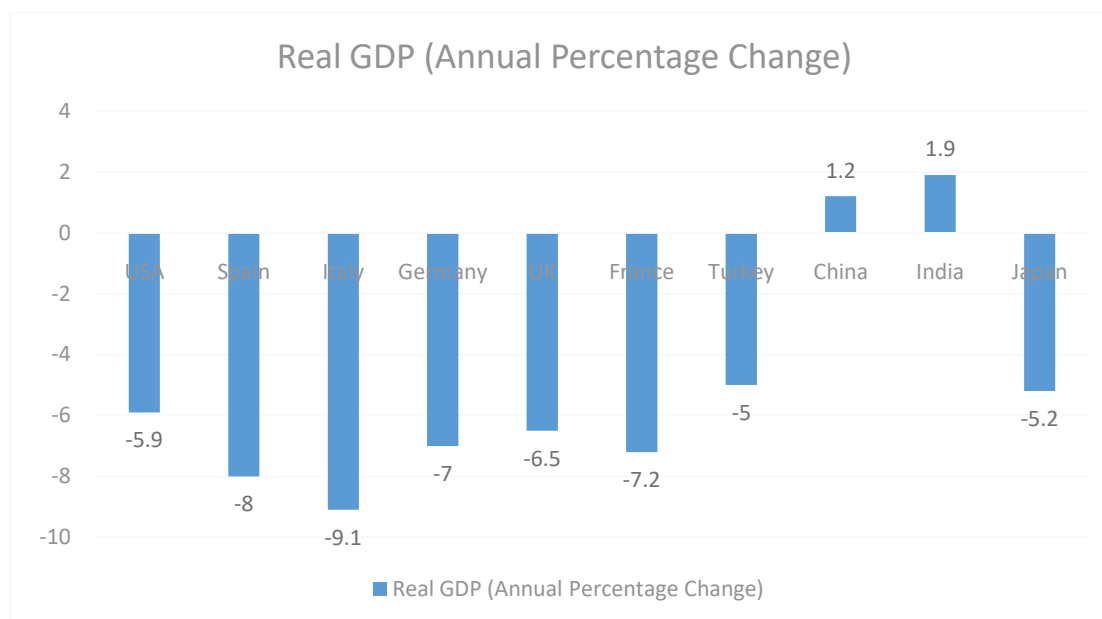
Due to globally adopted containment measures such as complete and partial lockdown and social distancing, employment and labour market has been affected directly. “International labour organization (ILO) projects nearly 3.3 billion of global workforce to get directly affected. As per their nowcasting model, around 6.7 percent ( i.e. equal to 195 million full time workers , assuming 48 hours working week ) decline in global working hours is estimated in second

quarter of 2020. Labour intensive sectors such as accommodation and food services, real estate, business and administration activities, manufacturing, wholesale and retail trade, repair of motor vehicles and motorcycles etc. that employs almost 38 percent of the global workforce is at high risk. Depending upon the country context, workers are facing the threat of wages and salary reduction, declining working hours and layoffs” (International Labour Organization (2020), page 2-5).

### COVID -19 -: A game changer

Undoubtedly, COVID -19 causes an irreparable loss to humanity and a long lasting damage to the economy, resulting in death and distress all around the world. A couple of months before when the countries, whether developing or developed, were competing each other in the race of growth and development . But due to this sudden outbreak of deadly virus their focus has been shifted from development of country to prevention of country. Now the race is on for economic recovery and to see which country bounces back faster. According to IMF the top leading countries of the world will face a great depression with negative growth rate “(Figure 3)” (World Economic Outlook, 2020, April). But China is expected to have a positive growth rate of 1.2 percent followed by India with 1.9 percent. Whereas the growth rate of the so called superpower of the world , US is expected to get shrunk by -5.9 percent, Russia with -5.5 percent, Italy with -9.1 percent and Spain with -8.0 percent .

Figure 3 : Real GDP (Annual Percentage Change, Projections for 2020)



### COVID-19-: A THREAT TO INTERNATIONAL PEACE

Due to this sudden pandemic attack global economy faces a severe economic crisis. Countries highly depend upon tourism are suffering a lot. Many major industries all over the world are facing financial crunch as their production shut, No transportation took place, no business activity took place during the period of lockdown. They are at a stage of non existence and looking for financial assistance from others which have a potential threat of being takeover.

However some players of the development race are looking for favourable investment opportunity to capture the global market through FDI. A recent example of this is China's Central Bank's investment in HDFC ( Housing Development Financial Corporation of India ). "China's central bank ( People's Bank of China ) has bought 1.01 percent stake in HDFC which is India's one of the biggest housing mortgage lender. HDFC in turn owns 19.43 percent stake In HDFC Bank and 52.7 percent in HDFC assets managing company and 51.45 percent in HDFC life insurance company. HDFC Bank further own 96 percent stake in HDB financial services and 98 percent in HDFC securities" ( Mascarenhas, 2020, April). Indian Govt. Immediately after this incidence change their FDI norms, taking into concern the matter of transfer of internal control to foreign countries by way of acquisition and takeover. China whereas regarded it as an act contravening the WTO norms.

However many countries looking into the seriousness of the matter, believe this to be a Bio weapon used to become a global leader, take immediate action and change their FDI norms. But it further have the potential threat of trade war between the countries.

Far away from a longstanding trade war between US and China, a very dangerous war of words has been broken out between both the countries. "US president repeatedly blaming China for this global attack of a micro nano virus by renaming COVID-19 as 'Chinese virus', 'Kung Flu' and replacing 'Corona with China' " (Mellisa & Liu, 2020, Apr.12). These incidence also posses a threat of lack of cooperation , mutual differences and conflict between both the countries.

## CONCLUSION

Humanity all around the world is being trapped in a war between human And imperceptible virus. Each infected person carrying the corona virus infection work as a human bomb which in turn affect multiples of people in their contact. Its not just the humanity but covid-19 has also catastrophe the world economy. Being a silent killer Covid-19 results in immense human suffering, massive destruction to global economy, fear and chaos. It put millions of people to death and around 9 trillion dollars loss to global economy and create fear of loss of job among people and leave them to starve. Its Bio weapon connection create international conflicts and chaos among different nations who are competing each other in their development race. However if this fact prove to be true in near future then it might be an emerging threat to global peace as well leading the world towards a biological destruction result of which would be far more greater than any previous world war and natural epidemic.

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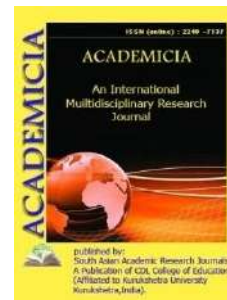


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## STUDY OF THE HEPATOPROTECTIVE ACTION OF RUTAN

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### ABSTRACT

*In this work, the pharmacological action of Rutan on the biliary function of the liver in white rats is evaluated in experimental acute hepatitis. At the beginning of the work, toxic damage to the liver was simulated in white rats by subcutaneous administration with carbon tetrachloride. After that, the drug rutane was administered at a dose of 25 mg / kg for 5 days. The results of the studies showed that on the 6th day after the toxic damage, an increased level of ALT, a decreased level of the de Ritis coefficient and the level of total protein in the blood serum were observed. On histological sections of the liver of white rats, foci of fatty degeneration and necrosis of hepatocytes were observed causing a violation of the structural organization of the organ. Under the influence of rutan, the survival rate of rats with toxic hepatitis increased and the state of blood biochemical parameters (ALT, AST, total protein) improved. The experiment revealed that the drug rutan is promising in the prevention and treatment of diseases of the hepatobiliary system.*

**KEYWORDS:** Interferon Inducers, Rutan, Toxic Hepatitis, ALT, AST.

### INTRODUCTION

Diseases of the hepatobiliary system around the world is one of the global medical and social problems. According to WHO statistics, about 2 billion people in the world have different liver pathologies [1.3]. Moreover, among the causes of disability and death, a significant place is occupied by such liver diseases as cirrhosis, chronic hepatitis, liver failure, hepatocellular cancer,

etc. [2]. In 2015, viral hepatitis caused 1.34 million deaths worldwide. The number of deaths caused by viral hepatitis is increasing year after year.

Despite the successes achieved in the treatment of diseases of the hepatobiliary system with pharmacological agents, the rates of development of complications from pathology remain high [3, 5]. Although there is a large arsenal of means and methods of treatment, the search for effective ways to correct structural and functional disorders of the liver in diseases of chemical etiology does not stop. At the same time, along with synthetic, an important place is occupied by natural compounds with antioxidant properties

Among the drugs that have been intensively developed over the past decade, antiviral drugs have come to the fore. An important achievement was the development and widespread use of interferon inducers (IFN) in the treatment of a number of pathologies such as respiratory viral infections, herpes viral infections, viral hepatitis, neuroinfection, chlamydia, etc. [6, 9, 10].

IFN inducers have a universally wide range of antiviral activity and pronounced immunomodulatory effects. Moreover, their activity coincides with the activity of exogenous IFN. It is important to emphasize that their combined use with other drugs often leads to a synergistic effect [7,8].

It has been established that one of the properties of IFN inducers is the formation of persistent long-term antiviral resistance in the body after their administration, since even a single administration of IFN inducers in therapeutic doses leads to prolonged production of IFN. It is noteworthy that domestic scientists created and introduced effective IFN inducers based on polyphenolic compounds of plant origin: Megosin, Celagripp, Rutan [11, 13].

The use of IFN inducers in the treatment of viral hepatitis requires a deep and comprehensive study of their effect on the functional state of hepatocytes. The results of experimental studies in recent years indicate that the inducer of IFN Celagripp has a distinct choleric effect. Moreover, it is effective in restoring the functional state of the liver with its acute toxic lesions of various etiologies.

In terms of the search and introduction into clinical practice of effective hepatitis treatment agents, our attention was drawn to the Rutan drug, an IFN inducer created by employees of the Institute of Organic Chemistry of the Academy of Sciences of Uzbekistan, on the basis of biologically active compounds isolated from the tanniniferous plant *Rhus coriaria* L. [12]. This drug is recommended in the treatment of acute viral infections. However, being an inducer of IFN, it, like Celagripp, can be effective in correcting violations of the functional state of the liver during its pathologies [11, 14].

The purpose of this work is to evaluate the pharmacological action of Rutan on the biliary function of the liver in experimental acute hepatitis.

## **MATERIALS AND METHODS**

In white rats, toxic liver damage was first modeled by subcutaneous administration with tetra chloromethane according to a therapeutic regimen. After that, the compound rutane was administered at a dose of 25 mg / kg for 5 days. In the control group, in which toxic damage to the liver was simulated in a similar way, in which treatment with silibor was performed.

Results. The results of the studies showed that on the 6th day after the toxic damage, an increased level of ALT, a decreased level of the de Ritis coefficient and the level of total protein in the blood serum were observed. On histological sections of the liver, foci of fatty degeneration and necrosis of hepatocytes were observed, causing a violation of the structural organization of the organ. Rutan representing a two-fragment drug conjugate compared to silibor

Of the 5 compounds studied, the leading compounds were identified by the effect on blood biochemical parameters, changed as a result of acute toxic damage with carbon tetrachloride during the prophylactic administration schedule. The best effect of this scheme had rutan. Under his influence, a decrease in total and indirect bilirubin and a manifestation of a tendency to a decrease in direct bilirubin and hepatocyte cytolysis markers (ALT, AST) were observed.

Under the influence of the studied drug, an improvement in biochemical parameters and structural-morphological organization of the liver was observed. The advantage of rutan at a dose of 25 mg / kg compared with silibor was revealed, since the survival of rats with toxic hepatitis increased and the biochemical parameters (ALT, AST, total protein) improved, in contrast to the comparison drugs. Given the low toxicity and high pharmacological activity, it can be assumed that Rutan is promising in the prevention and treatment of diseases of the hepatobiliary system.

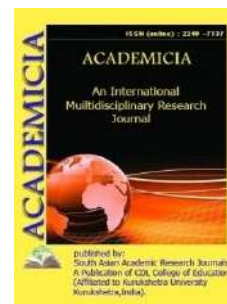
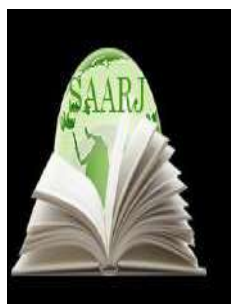
## CONCLUSION

Rutan, in contrast to comparison drugs, has low toxicity. Under the influence of rutan at a dose of 25 mg / kg, the survival rate of white rats with toxic hepatitis increased and the state of blood biochemical parameters (ALT, AST, total protein) improved. It was revealed that the drug rutan is promising in the prevention and treatment of diseases of the hepatobiliary system.

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## APPLICATION OF THE LAWS OF PHYSICS IN PREPARATION OF PROFESSIONAL DANCERS

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### ABSTRACT

*This article discusses the theoretical and practical relationship of the laws of physics and choreographic art. The formation of scientific knowledge and generalized skills in the preparation of ballet dancers. Landing is an important part of the jump, since the laws of physics establish that momentum must be scattered. A heavy landing could destroy the whole illusion of lightness, and perhaps injure the dancer. The secret to the decision is a special floor designed to absorb shock that dissipates momentum. The ability to coordinate the movements of body parts in time and space to music. Even the impeccable legs of future ballerinas will be powerless without a good school and the painstaking work of competent teachers. Skillful possession of aplomb, as a rule, requires from the performer many years of intensive training. In the exercise with the repeated repetition of various exercises and other movements, the elementary technique of maintaining a stable position is worked out. The stronger and stronger the muscles of the legs, the lower the center of gravity of the performer and the more stable his position.*

**KEYWORDS:** Ballet, Exercise, Stable Equilibrium, Gravitational Force, Law Of Conservation Of Momentum, Mastery Of A Ballet Dancer.

### INTRODUCTION

The art of ballet is one of the most famous theatrical performances, the basis of which is dance. The weightless, aspiring movements of artists seem to argue with the laws of nature itself. How would we not like to believe in the mystery of choreographic art, the question arises, what exactly helps us understand the language of dance, revealing the incredible ideas of choreographers. The audience admires the beauty of the ballet dancers performed movements,



not suspecting what kind of work he should achieve an impeccable performance. So how does this happen?

Professional dancers must have good physical and natural data. Ballerinas should have an ideal eversion, a high rise, excellent flexibility, a big step. The ability to coordinate the movements of body parts in time and space to music. Even the impeccable legs of future ballerinas will be powerless without a good school and the painstaking work of competent teachers. And of course the presence of talent and hard work. Classical dance is a titanic work when you need to go a long and thorny path “from simple to complex” and achieve professional mastery.

Exercise is the study of elementary movements, from which the most complex forms of classical dance are then composed. It helps to master the exact technique of performing skills, it is necessary for the continuous strengthening and improvement of the dancer's skills.

Only with years of persistent, everyday training, the muscles of ballet dancers become strong and hardy, like iron rods capable of supporting body weight on a patch of shoes of pointe shoes with an area of not more than 2 square centimeters.

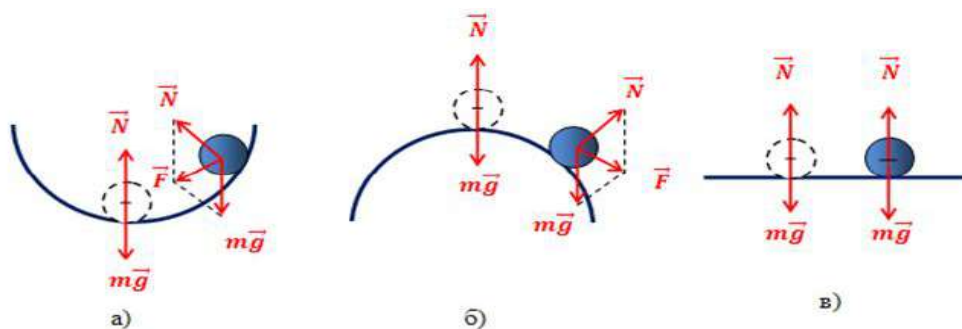
The issues of stability and balance are very important for the work of ballet dancers. Since they create the fundamental core in the work of the performer. Knowledge of the laws of physics helps to reveal the dancing possibilities of each performer.

In physics, the law of equilibrium is a state of the body in which it is at rest relative to the selected reference frame. There are types of stable, unstable and indifferent balance, which play an important role in choreography.

**a)** A stable equilibrium is an equilibrium in which a body, taken out of equilibrium and left to its own devices, returns to its previous position.

**b)** An unstable equilibrium is an equilibrium in which a body, taken out of equilibrium and left to its own devices, will deviate even more from the equilibrium position.

**c)** Indifferent equilibrium is an equilibrium in which a body, taken out of equilibrium and left to its own devices, does not change its position (state).



Confidently standing on the feet, and often even on one, helps knowledge and maintaining a stable balance (a). Let's look at it, where  $N$  is the support force vector,  $mg$  is the gravity vector, and  $F$  is the total vector of 2 forces.

Here, the vertical projection of the center of gravity should be inside the area of the support. If the center of gravity of the performer is shifted, then the person has to step over and take a new pose. The dependence also acts here: the higher the center of gravity, the greater the difficulty is maintaining a stable position.

Back in 1806, the famous French choreographer Jean-Etienne Despros defined aplomb (equilibrium) as a specific type of dynamic equilibrium, which is fundamental for all positions and movements in classical ballet. They begin to develop aplomb by staging the body, legs, arms, head and showing movements at the working machine. The main characteristic of a good body aplomb is stability. The core of aplomb is the spine, which controls muscle sensations. Good vision, the functioning of the vestibular apparatus, coordination, overall good physical development and a healthy nervous system also play an important role.

Skillful possession of aplomb, as a rule, requires from the performer many years of intensive training. In the exercise with the repeated repetition of various exercises and other movements, the elementary technique of maintaining a stable position is worked out. The stronger and stronger the muscles of the legs, the lower the center of gravity of the performer and the more stable his position. In this case, the area of the support increases, since the body mass is in the lower part and the likelihood of a vertical projection of gravity getting there also increases.

For example, complex exercises during the transition from one foot to another, from pose to pose in jumping, in rotations and supports require exact compliance with stability, both in static positions and in transitional dynamic states. Therefore, to fix this or that pose - "stop the beautiful moment" can a dancer with mastery of dance stability. Strength and skill to keep balance is always required for dancers.

Supporting a ballerina is one of the most beautiful elements of ballet numbers and also directly depends on maintaining balance. The ballet dancer raises, holds and carries his partner. Therefore, observing stability in the performance of various supports, the ballet dancer needs to ensure that the common center of gravity is always exactly above his feet. Strength and the ability to maintain balance are always necessary - this is the law of physics, the very little secret of any movement on which the whole element rests.

In the technique of spins in dance and jumping, slightly different laws apply. The law of conservation of angular momentum of the body (the law of conservation of angular momentum) is one of the fundamental conservation laws. For example, we can analyze the dance rotations in the middle of the hall. When performing rotations, the angular momentum characterizes the number of rotational movements and at what speed the rotation occurs. Rotation is the circular motion of a body about a fixed axis. The axis is the straight line around which rotation occurs.

Impulse, it is also a force - a short-term application of force in a certain direction. Focus is a point that is held during a turn by a look. There are basic principles for the execution of rotation.

1. This is the axis of balance. The center should always be assembled, the body is upright and taut in order to maintain balance.

2. Preparation. The dancer helps himself to rotate his hands, making a swing. The sequence of movement of the body - head - body. The body begins to move, then the head, which instantly returns to the same point (focus), and the body completes the rotation. A prerequisite, an ideal vertical and stable balance.

A jump in the ballet gives the dance the qualities necessary for it: lightness, airiness, flight - and therefore it is an important and integral part of it. Preparing for jumping takes a huge amount of time in order to strengthen the muscles and build leg strength. When jumping, the working muscles contract for a short time to the maximum, while two main forces act: the repulsion force from the support and the body's gravity. Therefore, the height of the jump is directly dependent on them. It is necessary that the individual links of the body at the time of separation from the support were in a state of immobility relative to each other. Performing the grand jet, ballet dancers seem to fly over the stage, but in fact the center of gravity describes the parabola, like any object during the fall is guided exclusively by gravitational force. But the dancer's body changes configuration during the flight.

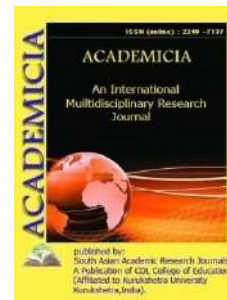
Jumping, the ballerina bends her knees (plié) and stretches the leg from her toes to the heel. Such a maneuver makes the landing almost imperceptible and creates a feeling of weightlessness of the performer. Landing is an important part of the jump, since the laws of physics establish that momentum must be scattered. A heavy landing could destroy the whole illusion of lightness, and perhaps injure the dancer. The secret to the decision is a special floor designed to absorb shock that dissipates momentum. This is necessary not only for artistic design, but also for the safety of performers. Having become acquainted with the necessary laws of physics, we can compare their influence on the elements of classical dance.

<i>Classical dance</i>	<i>Application of the laws of physics</i>
Exercise at the machine and in the middle of the hall	Stable balance + center of gravity
Fouete (fouetté)	The law of conservation of angular momentum of the body
Grandjete	Gravitational force + center of gravity
Support, upper support ballerina on one arm	Stable balance + center of gravity
Pointe Dance	Solid pressure + stable balance

So, we can conclude: the basics of physics and the science of human perception provide an understanding of how this is achieved. All the beautiful movements, supports shocking rotation, jumping in zero gravity - this is the correct application of the laws of physics in the training of professional dancers. But if all the laws of physics can be calculated by the formula, then ballet dancers will need many years of long and hard work on themselves to achieve the highest technology and dance mastery.

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## **PEDAGOGICAL BASIS OF PROMOTING PRESCHOOL CHILDREN INTEREST IN A HEALTHY LIFESTYLE**

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### **ABSTRACT**

*This article discusses theoretical proposals for promoting a healthy lifestyle in the preschool education system, which is one of the most pressing issues today. There is also talk about the legal framework for the implementation of preschool education in our country. We believe that the importance of sports in the upbringing of children and their future development as spiritual and physically mature people is relevant.*

**KEYWORDS:** *Preschool Education, Pedagogical Technologies, Sports And Fitness Programs, Child Rearing, Healthy Lifestyle.*

### **INTRODUCTION**

The law provides for preferential treatment for children and young people, who are the founders of our future. In particular, among the state guarantees for social protection of youth specified in Article 10 of the Law "On the Fundamentals of State Youth Policy in the Republic of Uzbekistan", preferential access to sports, health and cultural-educational institutions for young people the opportunity to participate in the conditions is strengthened. Uzbekistan pays special attention to the development of out-of-school education. In our country, which is rapidly developing in all spheres of development due to national independence, it is important to raise the level of knowledge of the younger generation to meet world standards, to be aware of scientific and technological innovations, to think independently, to start life confidently, entrepreneurially and spiritually. For this, of course, we need a pedagogical basis based on modern technologies. We have always paid special attention to the upbringing of children. This work is still going on. In particular, Article 17 of the Law of the Republic of Uzbekistan "On Education" states that "to meet the individual needs of children and adolescents, the organization of their leisure and recreation, government agencies, public associations, as well as , other legal

entities and individuals to establish out-of-school educational institutions in the cultural-aesthetic, scientific, technical, sports and other areas "and to ensure the economic and material efficiency of these educational institutions. the foundations were laid.

**Main part:** The Decree of the President of the Republic of Uzbekistan dated September 30, 2017 No PF-5198 "On measures to radically improve the management of the preschool education system" and retraining and advanced training of managers and teachers of preschool educational institutions capable of solving problems of comprehensive development at a professional level "1. The decree also stipulates the use of modern innovative pedagogical technologies, effective forms and methods of education and upbringing in the educational process. Indeed, in recent years much attention has been paid to the problem of professional development of preschool teachers. One of the characteristic features of the modern scientific and technical stage is the computerization of all aspects of society, which leads to a dramatic change in the structure of professional and pedagogical activity. The use of information technology in all parts of the education system creates a daily demand in the informatization of education, which, in turn, makes it easier for a future teacher of technical education in a new information environment. requires mastery of working skills. The use of effective technology in the training process will increase the professionalism of educators. In the process of professional development courses, the development of pedagogical creativity in educators is effective in preparing children for school education by providing them with spiritual education and the development of pedagogical skills in educators. According to the Russian pedagogical scientist A.S Makarenko, mastery is "how to achieve what, the level of mastery of pedagogical activity." Pedagogical skills ensure his personal qualities and success in the pedagogical process. In our opinion, pedagogical skills are the art of teaching, the desire and interest of every teacher to work. B.T. Likhachev describes pedagogical skills as a part of pedagogical art, the ability of the educator to master modern methods and forms, pedagogical skills and abilities, the embodiment of pedagogical art in the process of forming a child's personality. The development of modern science and technology requires educators to be creative, responsible for their profession and personality, to think freely on important issues in science, in short, to have professional skills. According to P. Azarov, the basis of pedagogical skills is knowledge of the laws of child rearing. In order to improve the pedagogical skills of educators, it is desirable to organize the educational process on the basis of individual learning, problem-based learning, collaborative learning, modular learning, design, game technology. I.P.Andriadi, on the other hand, emphasizes that pedagogical skills are personality traits, spiritual-moral and intellectual preparation, social values and a tendency to socio-cultural creativity. The development of pedagogical skills of educators leads to an increase in their personal values, as well as general cultural competence. in particular, by playing a variety of roles in game technology, educators are provided with a full understanding of theoretical and practical knowledge on how to solve pedagogical problems. When thinking about the professionalism of the educator, it is necessary to pay attention to his commitment to the national idea and ideology, the breadth of knowledge and ideas, his attitude to his duties. professional skills and abilities are not easily formed in the educator. To do this, he must constantly read, study, research, work creatively, quickly understand the reality. At present, along with the professional skills of educators, the issue of children's health and care is one of the most pressing issues. In kindergarten, a critical question arises about ways to improve health, movement development, and physical development of children. It is known that health is only 7-8% dependent on health and more than half on a person's lifestyle. Caring for a healthy lifestyle



is the foundation of physical and moral health, and health can only be achieved through the solution of pedagogical, medical and social problems. The concept of 'health-saving technologies' has become firmly entrenched in the education system, starting with preschools. One of the main tasks of the preschool educational institution is to create conditions that ensure the formation and strengthening of students' health. After all, human health is very important for all times and peoples, and now it is crucial. The relevance of the topic of a healthy lifestyle is also confirmed by statistics. Developing respect for health should begin in childhood. According to experts, 75% of all human diseases are specific to childhood. A teacher may do less work than a doctor for a student's health. The teacher must learn the psychological and pedagogical technologies that allow him to work in the classroom in a way that does not harm the health of his students. The learning environment should be health-promoting and health-promoting. The concept of "health-saving technologies" integrates all areas of preschool education activities to protect, shape and strengthen the health of preschool children.

- Pedagogical culture of educators;
- have physical skills;
- Pedagogical skills and abilities;
- Speech culture and pedagogical interaction;
- Organization of sports in accordance with the age of children;
- Pedagogical communication and culture;
- Psychological and pedagogical knowledge;
- Self-analysis.

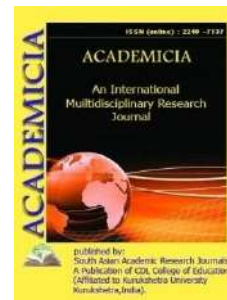
### CONCLUSION:

In short, in the process of professional development, along with the development of professional skills of educators, the development of their physical skills is one of the most pressing issues of today. To do this, it is necessary to identify the main approach in improving the skills of educators. That is, it is necessary to jointly improve the personal and professional qualities of educators, to acquaint them with the latest developments in the preschool education system, to organize the training process on the basis of world experience, to improve teaching and methodological resources. Today, we also have world-renowned athletes. If we can involve them in the pre-school process, it will evoke a special feeling in the hearts of children. Thank God, in every region today, our famous athletes have grown up. We hope that they will also contribute to pre-school education by sharing their views with them.

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## **EFFICIENCY OF USE OF AUTODESK INVENTOR ENGINEERING PROGRAMS AND PEDAGOGICAL INFORMATION TECHNOLOGIES IN THE FIELD OF “RESISTANCE OF MATERIALS” IN THE PROCESS OF TEACHING STUDENTS OF TECHNICAL UNIVERSITIES**

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### **ABSTRACT**

*The article is devoted to the formation of students' information competence in the study of the discipline "Resistance of materials". This paper presents a systematic review of models and methodologies that integrate information and communication technologies (ICT) and education. An important component in the formation of information competence is the ability to use ready-made software products in their professional activities. The article shows the relevance of the development of students of applied programs that contribute to improving the readiness of students for engineering activities. Emphasis is placed on improving understanding of the subject area when integrating experimental research and finite element modelling. The paper gives an example of using the application module of the Autodesk Inventor software package to calculate one of the problems of material resistance. One of the main goals of education at the global level has reduced the educational gap by bringing education to all people around the world [6].*

**KEYWORDS:** *Information and Pedagogical Technologies, Information Competence, The Resistance Of Materials, Application Program.*

## 1. INTRODUCTION

Currently, a very important factor in human life is higher education. “Maintaining a high level of education is the main factor in socio-economic progress and the most important condition for the sustainable development of any state, and this requires the improvement of the entire system of higher education” [12]. According to the World Bank's Learning for All [3], investment in people's knowledge and skills promotes the development of the world's population.

For the most part in the world, innovative engineering education now stands in the way of development [1]. And this education is currently aimed at the formation of specialists not only certain knowledge in the field of engineering and technology, but also personal qualities that contribute to becoming a competitive specialist in practice. Almost immediately, students are shown the relationship between the material being studied with their future engineering activities, the prospects of a technical and innovative society. And, of course, the question arises of obtaining a quality engineering education. The Inter-American Development Bank (IDB), Education for the 2012 Transformation, indicates that education must focus on quality, preparation for global scenarios and markets. The primary goal of modern engineering education is that it is necessary to prepare a competitive personality. Unfortunately, not every university graduate is a competitive person, because it is not enough to have a high level of education and professional skills, it is important at the same time to have psychological training and the ability to realize the tasks. Close the gap between education and the business world, it defines real needs and educates in skills to provide real solution's[3].

Currently, there is a rapid development of the process of informatization of education; new information technologies penetrate almost all spheres of life of a modern person. Effective use of these technologies helps to gain new knowledge, achieve success in the chosen professions. Currently, an education without ICT is not conceivable due to the impact and permeability of technology in all environments and areas of society [13].

Modern information technologies provide the teacher with a powerful toolbox that allows you to design and fill the learning process with information resources, as well as monitor its actions in the course of independent study of various teaching materials.

Along with the informatization of education, the main task of engineering education is the formation of special competencies among students focused on the ability to apply knowledge and skills in future professional activities. In the list of competencies, a competency reflecting information skills is mandatory.

### Research Focus

The purpose of the article is to prove that design and research activities contribute to the development of motivation for learning from students. Solving the problem on the subject of “Resistance of materials” in the Autodesk Inventor program, developing strategic areas for improvement in the graphic education of university students. The study of the effectiveness of the use of pedagogical information technology (PIT) using engineering graphics software in the process of teaching students of a technical university.

Objectives of the article - analysis of the solution of problems on the subject of "Resistance of materials" using computer programs of computer engineering like "Autodesk Inventor",

assessment of the effectiveness of design and research work. The solution to the problem of "Resistance of materials" plot in engineering graphics.

The scientific novelty is determined by the practice-oriented empirical basis of research.

The relevance lies in the growing social and economic importance of education as a strategic resource for the development of the individual, society and the state. To improve the quality of training of specialists, the level of development of the educational-material and educational-methodical base of education is essential [14]. It makes it possible to organize educational and cognitive activities of students at a higher level, to increase the intensity of teachers' work and students' interest in the process of obtaining the necessary education [17].

The subject of the study is the impact of project activities on the motivation of students to study the "Resistance of materials".

The problem posed in this article is the development of the motivational sphere of learning through the design and research activities of students.

## RESEARCH METHODOLOGY

### General Background

The study of the problem of formation of readiness of higher education institutions' students to the introduction of pedagogical information technology (PIT) has been carried out with the help of theoretical and empirical methods. **Theoretical methods** include; *analysis of scientific sources* on the research problem which made it possible to determine the object, subject, the content of the study, to formulate its objectives, to clarify the essence of the key concepts of the study; *modelling method* – to develop a model for forming students' readiness to the introduction of pedagogical information technology (PIT); **empirical methods:** *conversation* – a dialogic method in which a teacher, with the help of well-posed questions, prompts students to reproduce previously acquired knowledge; *testing* is a method that allows revealing the level of knowledge, skills and abilities, abilities and other personality traits; *questionnaire-receiving information* using respondents' written answers to the system of standardized questions; *pedagogical experiment* – recording, forming, control, for checking the hypothesis of the study; **observational methods** – *direct and indirect pedagogical observation, self-evaluation and evaluation*; **statistical** – *methods of mathematical statistics* to process the statistical data, to prove the statistical reliability of the results of experimental research.

### Instrument and Procedures

The scientific novelty of the results is to develop a model for the formation of the readiness of higher education institutions' students to the introduction of pedagogical information technology (PIT). An empirical study has been conducted based on Termez branch of Tashkent State Technical University named after Islam Karimov. There were 116 students in the control groups. The methodological basis of formation of readiness of higher education institution's students to the introduction of pedagogical information technologies establish such methods as: methodological-target (purpose, tasks, approaches, principles); content-technological (stages, content, forms, methods, technologies, means, pedagogical conditions); productively-estimated (components, levels, criteria and indicators). By the ethics of organizing and conducting the research, the procedure of participation of first-year students and teachers of professional

departments in the experiment has been considered and discussed at the meetings of the professional chairs. Discussion procedure was recorded in the minutes at the meetings of Department of General Professional Sciences of Tashkent State Technical University named after Islam Karimov (Minutes № 2 of September 3, 2019). With this approach, respondents agreed to work in control and experimental groups, and the teachers of these educational institutions to work as experiments.

## MATERIALS AND METHODS

We analyzed the indicator of the quality of comprehensibility of the material passed (IQCMP) and the results of the independent work of students who studied at the Department of General Professional Subjects of the Termez branch of Tashkent State Technical University in the subjects of “Resistance of materials” for 1 year. The IQCMP indicator was calculated based on the following formula:

$$\text{IQCMP index} = (\text{AKG} + \text{IS} + \text{FG} + \text{AS}) / 100.$$

AKG - the average current grade (the sum of daily grades/school days);

IS - interim estimates (total amount of interim estimates/number of interim polls conducted);

AS - the average score for independent work;

FG - final grade;

Given that the assessment is based on a 100 point system, in the end, the amount received was divided by 100.

A good result of the assimilation of the consumed material was considered when the index of IQCMP was from 0.8 to 1. Average - from 0.7 to 0.79. Unsatisfactory - from 0.69 and below.

The resistance of materials is a discipline that allows the most widely and varied use of various elements of informatization in the learning process. One such tool is application software.

There are many programs equipped with application modules designed to solve the problems of solid mechanics. As an example, let's consider solving the problems of the “Material Resistance” discipline using the Autodesk Inventor software package. The proposed program includes several application modules, of which Autodesk Inventor Simulation [2] is of most interest to us. This module, based on the finite element method, allows you to calculate the strength of structures in the elastic zone, to solve the problems of mechanics of a deformed solid. The resistance of materials is an engineering discipline that is studied by students of all technical specialties.

This discipline lays the foundations of general principles and methods for calculating structural elements for strength and rigidity, develops a culture of multi-criteria setting and solving problems, as well as the ability to analyze.

The state educational standard in the discipline “Resistance of materials” provides for a series of laboratory works, during which an experimental verification of the validity of the assumptions and hypotheses used in theoretical calculations when deriving the final formulas is carried out.

The integration of finite element modelling and experimental research improves student's understanding of experimental observations made in the laboratory and mechanics.



The introduction of new technologies, such as finite element modelling, already at the initial stage of training not only provides a powerful tool for visualizing mechanical processes but also increases students' interest in working in the technical field [4–8]. Also, an integrated approach helps students understand the meaning of computational and experimental methods for solving engineering problems and allows them to evaluate the significance of each component of engineering analysis, design and research. Mastering by students of finite element modelling at an early stage of their education allows improving the mastery of special disciplines in advanced courses and increasing students' readiness for engineering practice after graduation.

**As a computational experiment**, it was proposed to carry out finite element modelling to calculate the stress-strain state of structural elements based on the Autodesk Inventor program.

Currently, this program is widely used in the educational process by higher educational institutions. In particular, depending on the direction of preparation, this program can be studied in various disciplines: computer science, engineering graphics, CAD; therefore, as a rule, starting to study the resistance of materials, students already have the skills to build three-dimensional models.

But even if such skills are absent, this is not a significant obstacle to the implementation of laboratory work using the program, since Autodesk Inventor has a standard user interface combined with many Windows applications, which significantly reduces the time it takes to learn the program.

Resistance to materials is the course that develops creativity and analysis ability. However, if students do not realize the physical meaning of the task and the nature of the given conditions, then they will not be able to evaluate the results of computer calculations. Therefore, before proceeding with the implementation of laboratory work, it is necessary to study the theory and perform computational and graphic tasks for each section of the discipline passed. The implementation of the laboratory work is a logical continuation of the development and consolidation of the studied sections of the discipline "Resistance of materials".

In this regard, we list the main tasks of a computational experiment using an application program:

- Formation of a visual representation of the stress-strain state under various types of load;
- Demonstration of the advantages of using application programs in solving tasks to optimize structural elements;
- Verification of the reliability of the results obtained using the analytical calculation method.

**As an example**, we consider the implementation of laboratory work on the topic "Investigation of the stress-strain state of a stepped beam under tension (compression)." Before embarking on a computational experiment, the student must perform an analytical calculation of the stepped beam, determine the internal forces, stresses, strains, plot and determine the dimensions of the cross-sections. The admission to the laboratory work is the completed computational and graphic task, the results of which are used as source data for the computational experiment.

The result of the analytical solution of the problem will be the diagrams of internal efforts, stresses and deformations.

Successful completion of this work indicates that the student is familiar with the methodology for determining internal force factors, has familiarized himself with the basic terminology on the topic being studied and can begin to calculate the task on the computer. Static structural analysis using the program consists of several stages. Consider the main stages of calculating the strength of a straight stepped beam.

1. Launch Autodesk Inventor.

2. In the 3D model mode, we build a three-dimensional model of the beam. This operation, as a rule, does not because great difficulties for the student, since all the objects under consideration have a simple configuration that does not require complex constructions (Figure-1).

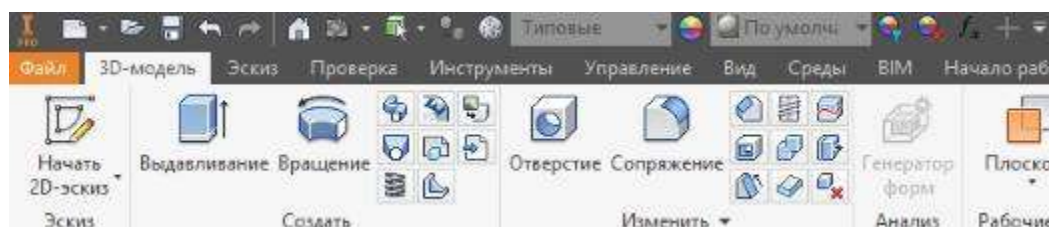


Figure-1 3D model mode

As a result, we obtain a three-dimensional model of a stepped beam, giving a visual representation of the object being studied (shape, size and relationships).

3. To perform the strength calculation, it is necessary to activate the stress analysis module and run this module in the 3D model area (Figure-2).

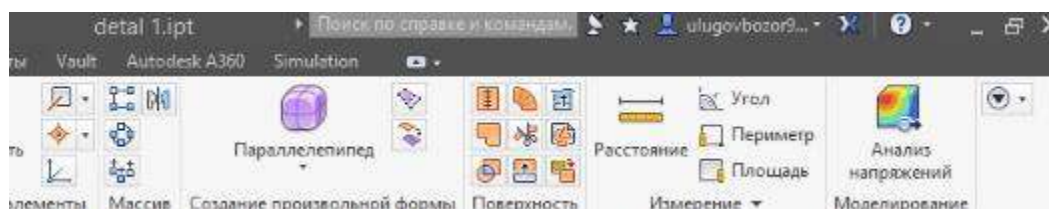


Figure-2 Launching the stress analysis module

An active Research Consultant command will appear on the toolbar, in which we select the Create Research command (Figure-3).

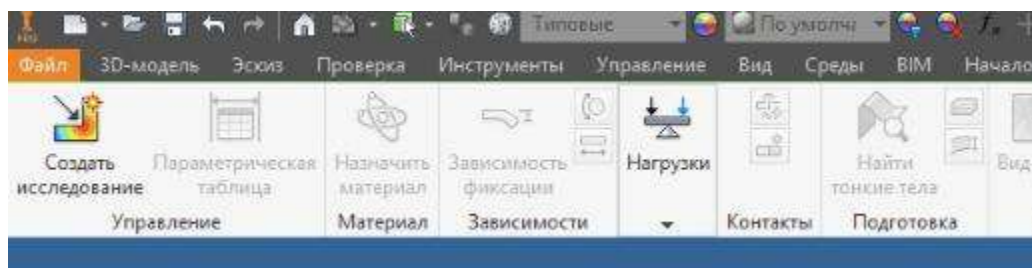


Figure-3 Launch the Create Study module

After that, various types of studies will be proposed, of which the Static study is of most interest to us.

4. The next step is to select material from the Autodesk Inventor library. The program offers a wide range of different materials, among which we select the material according to the assignment, in our case, alloy steel. This section provides complete information about the characteristics of the materials available in the database (Table-1) and (Table-2).

Material	Typical	
Density	1 g/sm <sup>3</sup>	
Weight	0.0290597 kg	
Area	6126.11 mm <sup>2</sup>	
Volume	29059.7 mm <sup>3</sup>	
Center of mass	x=0.00000000178048	mm
	y=0	mm
	z=7.16216 mm	

Table-1 Physical parameters

Name	Alloy steel	
General	Mass density	7.73 g/sm <sup>3</sup>
	Yield strength	250 MPa
	Ultimate Tensile Strength	400 MPa
Tension	Young's modulus	205 GPa
	Poisson's ratio	0.3 br
	Shear modulus	78.8462 GPa

Table-2 Materials

5. After the material is selected, in the Anchorages section, we set restrictions on movements in the corresponding directions. The program offers several options for the types of connections, from absolutely rigid terminations - Fixed-1, to the choice of axial and angular displacement restrictions in various directions, presented by the Reference Geometry team, with which the movable and fixed joints are modelled. As a result, the fastenings are depicted on the model in the form of directed vectors along those axes where displacements are limited (Figure- 4).

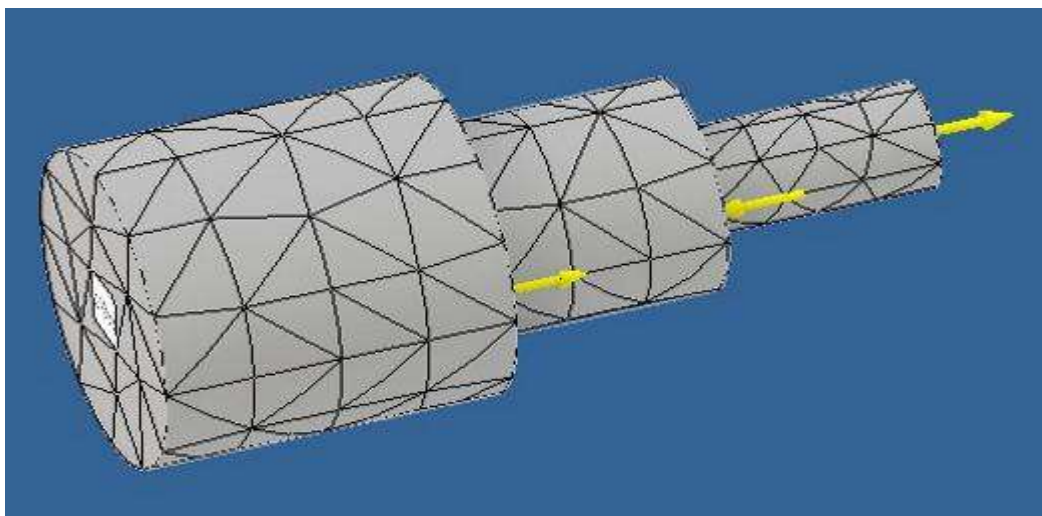


Figure-4 The choice of fastening timber

6. The external load is specified in the load section. In this section, you should pay attention to the units of measurement of the entered values. By default, in the settings, power characteristics are entered in the SI system, however, the settings allow you to change them at your discretion.

The entire external load (concentrated forces, distributed loads, concentrated moments) is set in the form of projections on the coordinate axes. In the case of tension (compression), only a longitudinal load acts on the beam, therefore, in the Force section, we set the concentrated forces and the distributed load located in one place, not forgetting to take their directions into account (Table-3).

Dependency name	Reactionpower		Reactivemoment	
	Value	Component (X,Y,Z)	Value	Component (X,Y,Z)
Commit dependency:1	20000 N	0 N	0 Nm	0 Nm
		0 N		0 Nm
		20000 N		0 Nm

Table-3 the strength and moment of reaction in the dependencies

Thus, the implementation of the preparatory stages of the calculation requires the student to know the main types of loads and their dimensions, as well as a clear idea of the main types of connections and materials.

The correctness of the calculation directly depends on how much the restriction on the movement of the beam and the power characteristics of the design scheme specified in the program correspond.

7. The last step is the Run command, which performs the static structural analysis. As a result of the static calculation, the program by default produces a stress diagram in the worst-case scenario (Table-4).

Name	Minimum	Maximum
Volume	29059.7 mm <sup>3</sup>	
Weight	0.224632 kg	
Mize's Stress	14.5516 MPa	580.028 MPa
Displacement	0 mm	0.0496744 mm
The coefficient margin of safety	0.431014 br	15 br
Equivalent deformation	0.0000747572 br	0.0025952 br

Table-4 Result

In this case, we are interested in the normal stress arising in sections perpendicular to the axis of the rod. The program provides a choice of viewing stresses in various planes, as well as a choice of voltage units

1. As a result of the static calculation, the program produces a stress diagram of the Mize's stress (Figure-5).

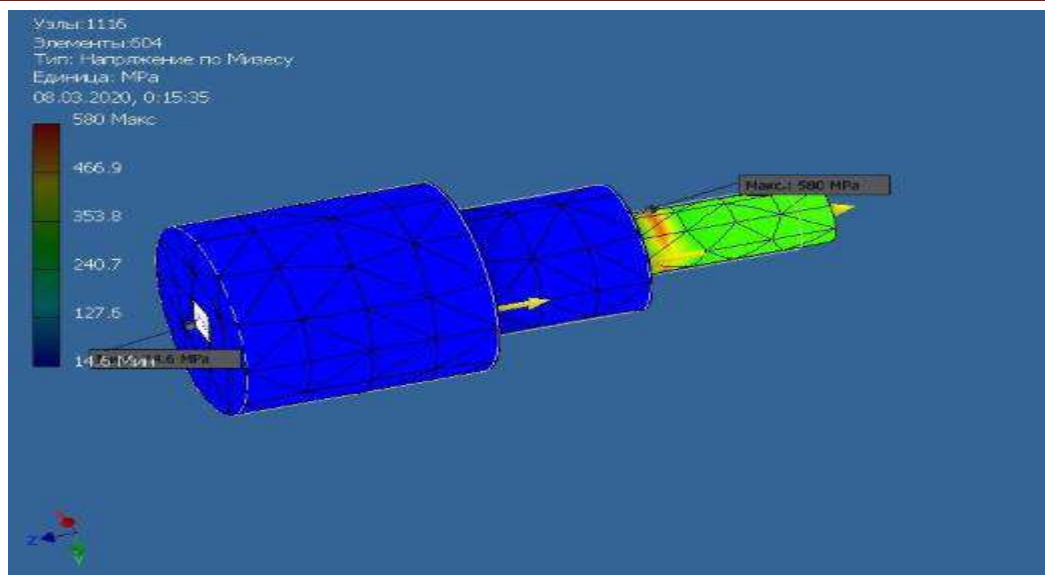


Figure-5 Mize's stress

2. As a result of the static calculation, the program produces a displacement diagram (Figure-6).

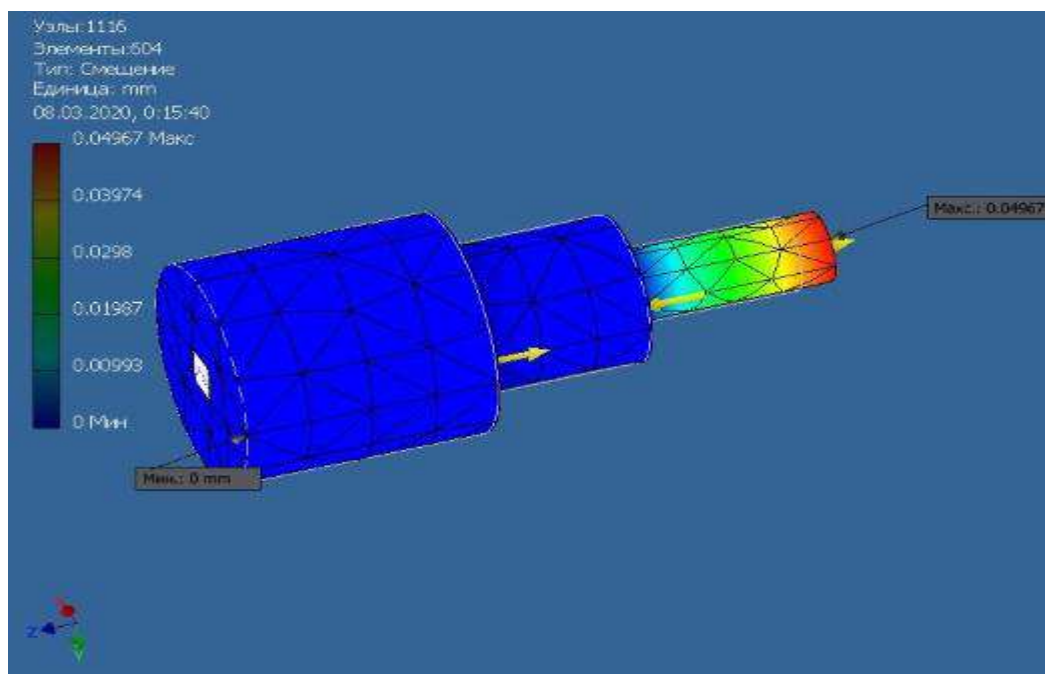


Figure-6 Displacement

3. As a result of the static calculation, the program produces a coefficient diagram. safety margin (Figure-7).



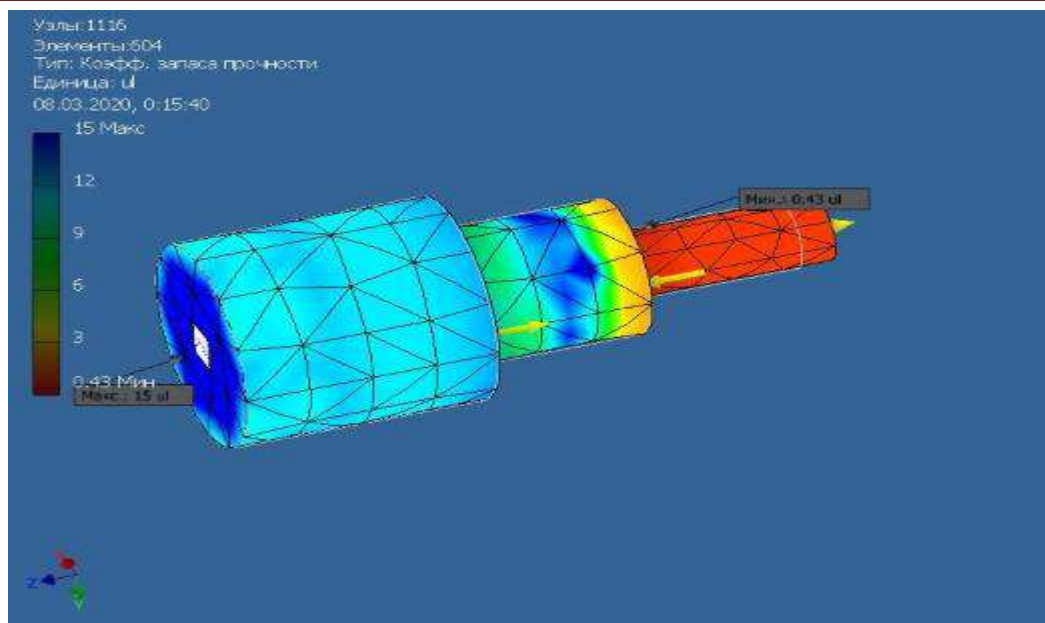


Figure-7 The coefficient margin of safety

4. As a result of the static calculation, the program produces an equivalent strain diagram (Figure-8).

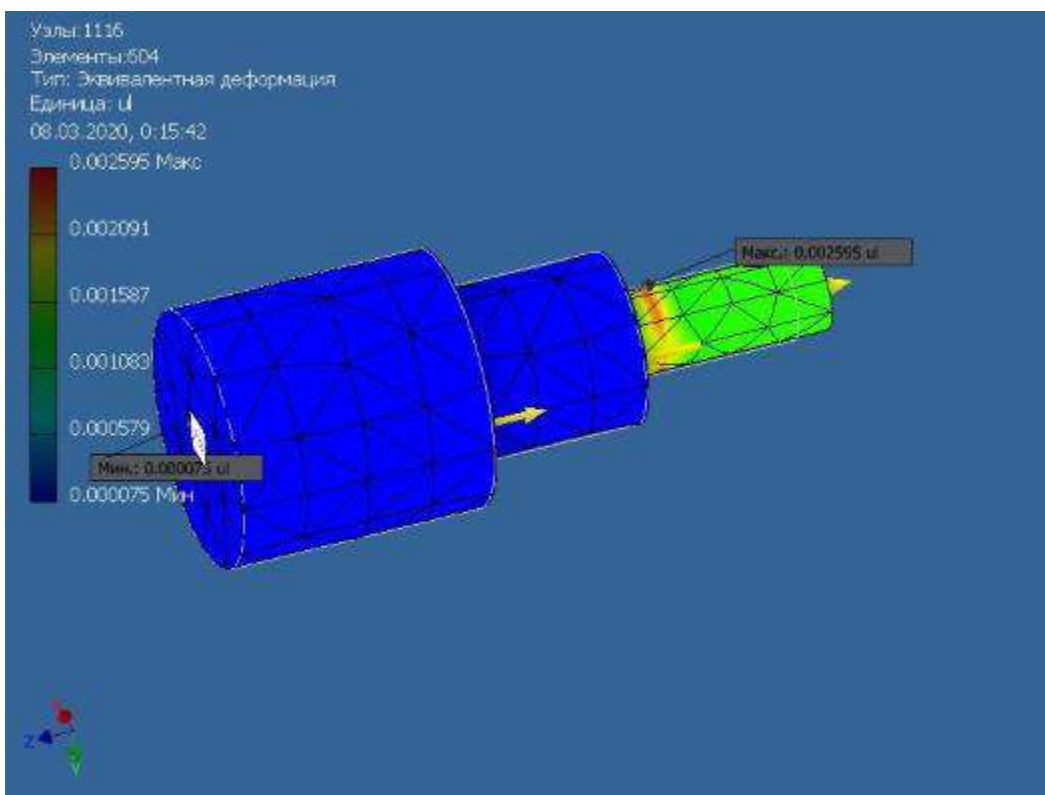


Figure-8 Equivalent deformation



### Research Result's

Nowadays yet it's not possible to carry out educational processes without technology and more if they are oriented to the web [11]. The effectiveness of the quality of forming the readiness of university students to the introduction of pedagogical information technology (PIT) depends to a large extent on a purposefully designed model of involving students in active activities that covered such components and their elements: methodological-targeted (purpose, tasks, approaches, principles); content-technological (stages, content, forms, methods, technologies, means, pedagogical conditions); productive-evaluative (components, levels, criteria and indicators).

The use of modern technical means of creation, storage, processing, obtained using the Autodesk Inventor application software is becoming more and more simple and affordable in the learning process, thanks to the rapid development of new information technologies. There was an opportunity for the wider use of information and technology in the process of teaching students.

At the same time, the group of pedagogical information technologies (PIT) using engineering graphics software includes:

- training audio and video materials;
- Internet resources on the subject and direction of the educational process;
- Electronic textbooks, teaching aids and educational materials;
- Interactive tests, etc.
- Computer engineering programs like Autodesk Inventor

We have analyzed the indicator of the quality of digestibility of the consumed material and compared the results of independent work of students who completed training at the Department of General Professional Subjects of the Termez branch of Tashkent State Technical University in the subjects "Descriptive Geometry and Engineering Graphics" for 1 year (Table-5).

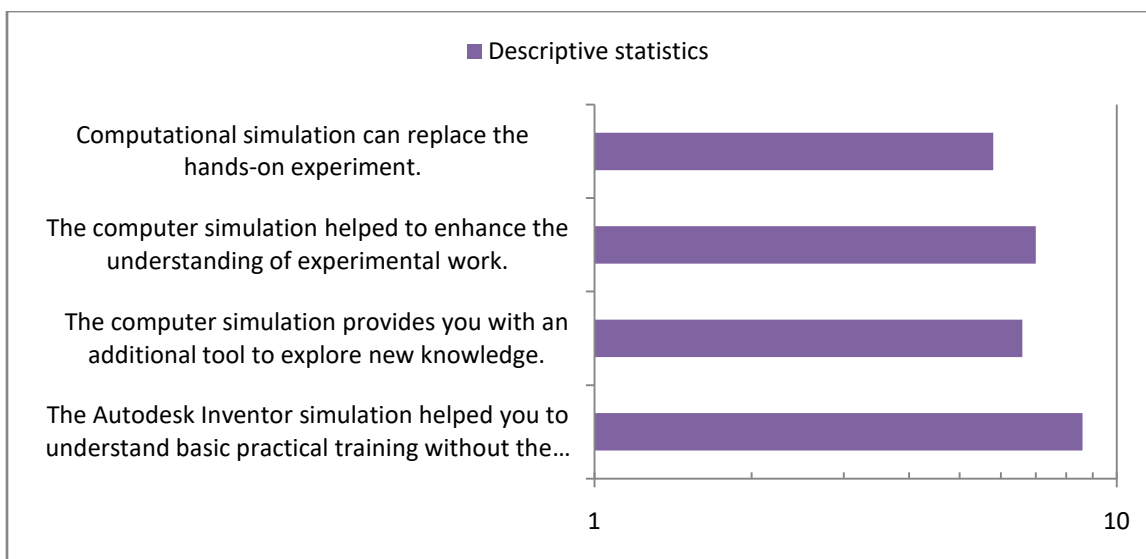


Table-5 Student's feedback: descriptive statistics.

Based on the approved standard and work program for each subject, specific hours are given for the classroom (practical, theoretical) and independent work of students, which are assessed by the teacher, and summarized in the final grade:

Final grade = (sum of daily grades / days of class) + sum of intermediate grades + grade of final control

When comparing the results of the student's digestibility of material consumed by students, based on testing, our results showed that the wider use of IPT tools using application software contributes to the higher achievement of the PMC index.

## DISCUSSION

The needs of education for new students are different and they need pedagogical and technological models, strategies, methodologies and updated technological paradigms, allowing to visualize the education of the future to apply it in the current education[16]. In particular, with the daily use of IPT using application software in practical exercises or in the process of conducting SOS, the IQCMP index reached an average of 0.87. When using IPT only during the organization and conduct of practical exercises - an average of 0.84. When conducting practical exercises, without using IPT using application software, an average of 0.76. When analyzing the results of independent work of students without the use of IPT, the IQCMP index did not exceed 0.73 (Table-6).

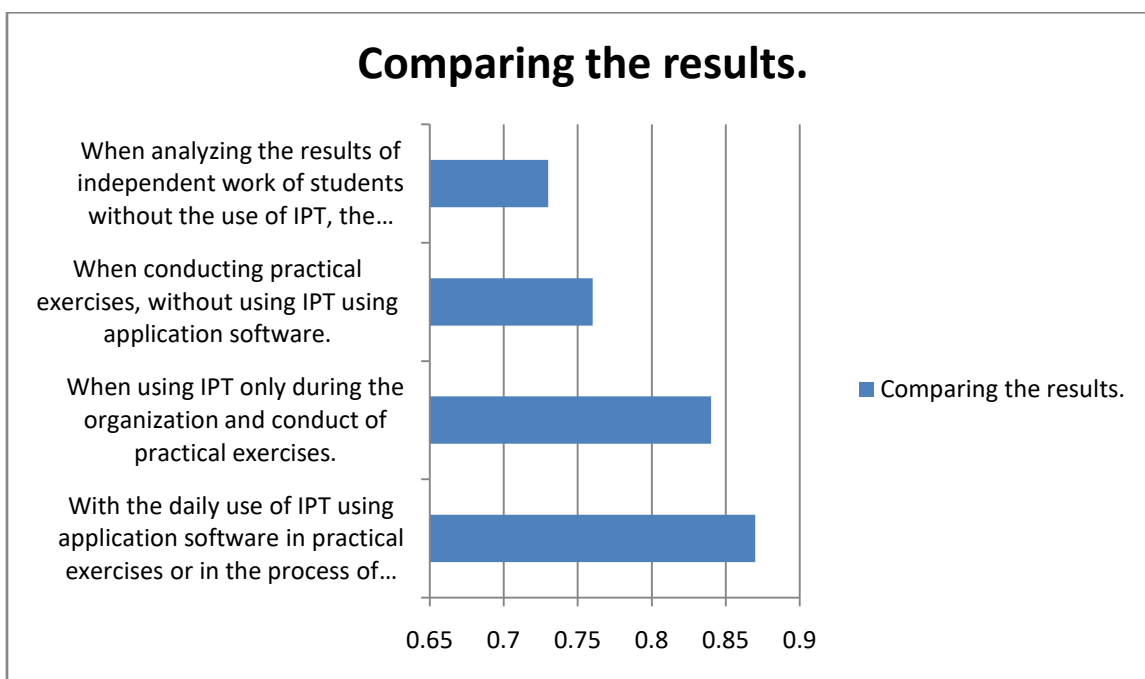


Table-6 Comparing the results of the students.

As our research has shown, the role of pedagogical information technologies PIT tools using application software is to intensify the work of teachers, which allows students to increase the pace of studying educational material, relying heavily on their independent work.

The results of the study show that before the organization of the scientific-experimental work, the students of the experimental and control groups were at almost the same level, but after the experimental work, the students of the experimental group showed high results, and we can conclude so. The use of pedagogical information technology and engineering programs "Autodesk Inventor" in teaching the subject "Resistance of Materials" to university students, their level of knowledge has increased significantly.

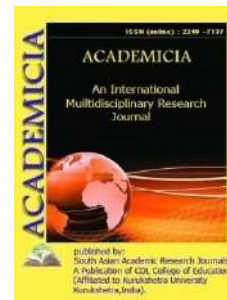
### CONCLUSIONS AND IMPLICATIONS

The teaching and learning of engineering courses are always challenging due to its complex and abstract nature, and the mathematics involved. Whenever there are new ICT that may apply to education, is possible to develop new studies and research related to the impacts of technologies in educational processes[15]. With diminishing resources (e.g., continuous funding cut, frequent professional/academic staff career movement, lack of competent professional staff, inadequate laboratory infrastructures), teaching and learning of engineering courses become harder and it is progressively becoming difficult to teach basic engineering courses effectively. As a result, students cannot achieve effective learning outcomes. To overcome these challenges, a three-step teaching approach has been developed to enhance students' learning outcomes. This approach is cost-effective, user-friendly and attractive. The method comprises a real laboratory demonstration video clip, conduction of a real laboratory experiment and a computer simulation/modelling. The developed three-step teaching and learning approach can be applied to any engineering courses. When interviewing students, it was noted that, in contrast to printed educational materials, pedagogical information technologies PIT tools using applied software affect the emotions of students, activate them, so they help to solve educational problems, strengthen interest in academic work, and develop the cognitive activity. Thus, the application of the Autodesk Inventor application program for solving the problems of material resistance contributes to the formation of a holistic picture of the stress-strain state of the studied object, consolidates the knowledge gained, builds skills in mathematical modelling and computational experiments using software packages, and forms the ability to interpret the results of computer modelling and make decisions on optimizing parameters and characteristics, and also develops information hydrochloric competence. A representation of a system that allows for the investigation of the properties of the system and, in some cases, prediction of future outcomes [18].

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## DEVELOPMENT OF NATIONAL NETWORK (TAS-IX)

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### ABSTRACT

*This article is devoted to the development of the national data network of Uznet and Tas-IX, the history and development of Tas-IX, to improve the efficiency of using international communication channels, by excluding the transfer of local traffic over them. Strengthening the economic state of small and medium-sized businesses in the telecommunications sector by reducing their production costs for traffic transmission. The work aims to directly contribute to the development of information and communication technologies in the telecommunications market of Uzbekistan. Promotes the development of the Uzbek Internet segment as a factor in the overall development of the society and raising the level of education in it, including by accessing the Internet resources of scientific, educational, state and business institutions.*

**KEYWORDS:** *Tas-IX, IP, TSP, Internet exchange Point, ATS, ADSL, Uznet, Internet festiveal.*

### INTRODUCTION

Worldwide global network. It is based on data transmission protocol, incorporating government, education, business, corporate networks. The parts are interconnected through a unique address space based on IP and TSP protocols. A set of interconnected computer networks that cover the whole world. The Internet provides access to computers, e-mails, board boards, databases and backgrounds, and many other systems that use the IP protocol. [1]

Internet - International - from international and net - network. The Internet is a colorful network, that is, all computers in the network are of one type and any computer can be connected to another computer in the network.

There are so many "secret" terms in the Internet. One of them is Tas-IX. The abbreviation Tas-IX in the Uzbek phrase "Tas" is "Tashkent". Place of agreement on creation of Internet traffic

exchange point - Tashkent city. "IX" is derived from the English word "Internet eXchange Point" - "Internet exchange point". Generally speaking, we can describe the Internet as an information exchange point in Tashkent. The point of Tas-IX is located at ATS 244. There are only 4 employees working there.

## LITERATURE REVIEW

The strategy we used to create the search strings was as follows [4] [19]: • Finding papers about cloud computing in education sector. Listing keywords mentioned in primary studies which we knew about. Use synonyms word (usage) and sub subjects of cloud computing in education such as (E-learning, management systems in education). Use the Boolean OR to incorporate alternative spellings and synonyms. Use the Boolean AND to link the major terms from population, intervention, and outcome. The complete search string initially used for the searching of the literature was as follows: Cloud computing AND education. It has been highlighted in [5] [20] that there are two main issues on conducting an SLR search which are the sensitivity and specificity of the search. In our preliminary search, when we used the complete search string defined above we retrieved a very high number of articles. For instance, Google scholar, Scopus, ProQuest education, IEEEExplore, Science Direct, Springer Link retrieved more than two hundred results. Therefore, we have deepened our search and used this search string: (Adoption OR Usage) AND (Cloud OR "*eXchange Point*") AND (*Tas-IX*, OR *IP*). The revised search string has given us a reasonable number of studies and we finally selected relevant empirical studies

## METHODOLOGY

When was the idea of Tas-IX born? What motivated him? In January 2004, the Ministry of Justice of the Republic of Uzbekistan registered the Tas-IX Transmission and Communication Center (ISS). Founders of the organization are: "Business Information Business Center" (BCC), "Buzton", "Sarkor-Telecom", "Sharq Telekom", "Texnoprosistem" LLC. The website of the organization - [www.tas-ix.uz](http://www.tas-ix.uz)[2]

Tas-IX Traffic Exchange The Tashkent point has been recognized by RIPE's international organization, which has provided its own AS30865 Autonomous System. In September 2004, five perfect Tas-IX members - VSS, Buzton, Sarkor-Telecom, Sharq Telekom and Technoprossystem - were created with excellent dynamic piring.

" MUTBM NGOs TAS-IX traffic exchange point of the Uzbek independent of the organizational and technical aspects of a number of international traffic exchange points in Europe (Moscow, London, Madrid, etc.) samples. Based on the rich international experience of TAS-IX Members, a wide range of excellence and competence has been achieved. [3]

Tasks of "TAS-IX" NGO: Creating opportunities for direct IP traffic exchange between different networks of data transmission in the Republic of Uzbekistan without use of international channels.

## State Policy

On August 14, 2017, the Cabinet of Ministers of the Republic of Uzbekistan adopted Resolution 625 "On Measures for Further Development of National Content in the World Wide Web." The



Resolution envisages the adoption of a comprehensive program for the development of national content in the global information network between 2017 and 2019 [4].

This program, in particular, provides for the creation of a traffic sharing network, which envisages the introduction of mutual settlements between operators, service providers and content creators in the national Internet segment of the global information network. "Implementation of this technical project is entrusted to the Ministry of Information Technologies and Communications of the Republic of Uzbekistan, "Uzbektelecom" JSC, telecommunication operators and providers of Uzbekistan.

After adoption of the resolution media outlets called this project "TAS-IX 2" or "paid" TAS-IX ", the new acquisition network has been operating since 2004 -" TAS-IX MUT "The NGO will become an alternative to the ping-ping network, a traffic exchange point. [5]

Joint Stock Company "Uzbektelecom" has shared plans for the organization of traffic exchange in the new charging network.

"We follow the principle of" breaking old things before building a new home ", which means that the new system will provide services in parallel with existing TAS-IX systems. In this case, all aspects that are restricted in TAS-IX are taken into account. Later on, which of them will remain in the market[6].

It should be understood that the NGO "TAS-IX MUT Cooperation Center" was registered in 2004 by the Ministry of Justice of the Republic of Uzbekistan. The center has been recognized by the RIPE international organization, which has granted the AS30865 Autonomous System to this organization. The initiator of TAS-IX creation is the largest Internet providers in Uzbekistan. "TAS-IX MUT Interaction Center" NGO is a financial and technical independent organization, and its main source of funding is payments of current accounts and current accounts. "Uzbektelecom" JSC is also a member of "TAS-IX MUT Cooperation Center" NGO. Despite the positive aspects of the TAS-IX, there are some shortcomings[7].

The content generator in the existing system, that is, the owner of the site is that it has to pay for your hosting provider. In the new system, everything is contrary, it is planned to create such conditions in which providers themselves "run" after content developers, that is, they are interested in the product distribution. Such conditions will be more convenient, accordingly, the number of those who want to place their content will also grow, and healthy competition will be emerging as a market-based competition for consumers of this content. Thus, national content will be attractive to the network users, so its generations will be a profitable business. This, in turn, appears in the richness of the content of the Web[8].

Additionally, the introduction of the TAS-IX options involves a number of existing problems, particularly the owners of sites / portals, to resolve the problem of sharing content between hosting providers. " This project is planned to be implemented this year. A new format of mutual relations creates new market conditions that will help to increase the number of content and ease of use. As a result, the number of users in the network grows. Specifically, the content-provider's interests are on the target, which is reflected in the improvement of the quality of the private product [9].

Additionally, the new project will provide a "ticket to the system" for small providers because it solves the problem of connecting to content resources. Content providers will also be provided

with the technical aspects of the issue by allocating the appropriate resources within the center of data processing. The center will be installed on the basis of high-speed channels, including inter-network speeds of up to 100 Gbit / s. up to speed. Thus, subscribers will have an unlimited access to quality content, including national content. As a result, it is necessary to develop new beneficial tariffs. [10]

Not all of this is a simple task, "Uzbektelecom" JSC is ready to support and implement them not only technically, but also within the framework of a business-friendly approach. Assistance in creation of favorable conditions for creation of national network of Internet. [11]

Participation in various activities of the population of the Republic, popularization of the Internet through press and electronic publications. Enhancement of economic conditions for the activity of small and medium-sized businesses in the Internet, including but not limited to: Internet access services (Internet providers, internet cafes); use of the Uzbek content of the Internet in production, trade and advertising[12].

### **Data analyses, Current status**

Telecommunication operators are unable to continue sharing information through internationally-funded international channels. The information exchange between users in neighboring buildings The situation in Tashkent or Moscow is technically inconvenient. So it does not only cost-savings for both operators and the state, but also saves currency resources.

That is why, despite the sharp competition in this market, five interconnected operators have united their efforts to create a single point of internal traffic, which, in turn, reiterates the relevance of this issue to the entire Internet market in Uzbekistan. . The ping-ping center, created by them, is a non-profit, non-profit organization that is open to all participants of this chain of the market but also of other educational institutions[13].

Every year, Tas-IX administrator and technicians of the Founders will consider the project of traffic exchange development. The required equipment is purchased and installed. The full functioning of "TAS-IX" NGO provides the following:

Increasing the effectiveness of using international communication channels through non-transmitting local traffic. [14]

Reducing production costs for traffic leads to the strengthening of the economic situation of small and medium-sized enterprises.

It contributes directly to the development of information and communication technologies in the telecommunications market of Uzbekistan.

It promotes the development of the Uzbek Internet-segment as a factor for the overall development of the society and raising the level of education, in particular through the involvement of science, education, public and business institutions in Internet resources.

All in all, Internet connection was initially made through dial-up modems. The speed of the 32Kbps or 56Kbps speed can be maintained. (Good or bad speed is directly related to ETS). Over time, with the advent of Internet technology, providers have been increasingly offering the Internet broadband (ADSL) connection[15].

There are about 100 different internet providers, from them status able ones are UZNET, UCELL, BEELINE, TPS, EVO, SARKOR TELEKOM, INFONET, SHARQ TELEKOM, EAST TELECOM, INFORM SERVIS TV, UZBEKTELECOM, CRON TELECOM, S-LINK, ARS-INFORM and others. Since 2004 ADSL technology has been widely used in Uzbekistan. By 2019 the share of using ADSL technology will increase by 45%. Instead, the G-Pon technology works on the fiber optic.

As a result, the volume of traffic used by the users has increased dramatically. Its growth has been attributed to the limited access to external channels that connect UZNET with the world. Connection to sites within UZNET was also made through an external channel. The channel was twice as busy as it was for the entrance and exit[16].

For example, if you visit [www.iiu.uz](http://www.iiu.uz) (if you want to access this site), this site is available on Uzinfocom ([www.dc.uz](http://www.dc.uz)) servers, but still goes to an external network and then goes back to your desired address. was going. The size of the external Internet access channel is limited. It costs a lot for every megabyte. As a result, access to our sites was slow.

This is a reason why Uzbek providers have joined forces to create traffic sharing points on Uzneta. The goal is to ensure that a local provider (such as Sharq Telecom) can access the hosted site (eg, Uzneta) via a local Internet service provider rather than through an external channel.

Here is an example of a fictitious Internet Explorer, which started its work in 2005. The best site in the field of science and education is the best site in the field of media, the best site in the field of public administration, the best thematic site, the best site in the field of culture and sport, the best site in medicine and health, the best site in the field of network services, The best corporate site, the best site in the field of tourism and regional linguistics, is the best personal page nominations.

"Heavy" content - movies, music, and downloaded them at great speed. There are many interesting thematic, personal, computational sites, blogs, social networks. For example: Ziyu.uz, Muslim.uz, Ziyonet.uz, Edu.uz and others.

Almost all providers will not subscribe to the Tas-IX sites at the tariff and will provide this service free of charge. If you do not get out of Uzneta, the information is free and enjoyable long enough [17].

But EVO internet provider, for some reason, is connected to the Tas-IX system, but does not count the Tas-IX. This means that if you go on an external channel, you can still pay for megabytes if you go inside the channel.

Indeed, if the site is in the .uz domain, it is likely that they are at Tas-IX. It may also be located in our domain site as well as in Russia, the US, or any other country. For example, the site islam.uz has its domain, but the host is located in the United States. However, in some countries with sites with other domains, there are strict limitations on this subject. For example, Kazakhstan has sites that use domains with .kz domains only for hosting in Kazakhstan. Rejected [18].

There are various services available to know if the site you are trying to access is at Tas-IX. The first and most popular one is SHARQ TELECOM, located at <https://st.uz/>. If you type the site

address in the box on this page, it will immediately answer the question whether the site is on the Tas-IX or on the Internet. Tas-IX, you can easily sign in, and your account will not be charged.

The Top-rating also featured sites at Tas-IX - they are separately flagged. You can see Tas-IX in green.

### **Web sites that have negative and positive resources and their importance**

Internal threats of the Internet are threats that may have negative consequences for the status and development of the network information space. These include: information collapse due to overloading of the network; attacks by hackers for destroying or modifying data, blocking traffic and blocking "traffic" routes; casual or organized arbitrary communications channels; incompleteness of information search systems; "moral" outlook of protocols and so on.

External threats are potential threats to users. External threats can be technological and social:

- Technological: slow speed channels; Unfavorable ways to connect to the network; infected viruses; information "flood" and so on.
- Social: Impact on users' physical and mental health; impact on human consciousness; information terrorism, crime and so on [19].

The impact of information threats on the human mentality in the process of globalization has become a pressing issue. The extent to which violent information is increasing is increasing. The day-to-day advancement of communication places creates favorable conditions for human life. We are aware of the changes and innovations that are taking place around the world. We control the technical equipment easily. Techniques are driving us. In the process of globalization, the speed of information exchange, the rapid development of new models of technology, or the inability of the virtual space to comply with ethical standards. A positive or negative adjustment to the process depends on the will of every person[20].

Healthy minded individuals are brought up in the family. When a baby is born, it usually takes on a primary school course with family members. There is a wonderful transcript of our people, "It does what it sees in a bird's house". In society, we need to create a basis for our child to work well. To do this, it is crucial to set the agenda and to define the norms of each used technique. The information obtained through the sensory organs is analyzed in our brain, divided into parts, compared to the previous information, and then summarized and expressed its opinion. That personal opinion creates an independent thinking, broadens the outlook, increases the vocabulary. It creates positive qualities for the country, parents, their relatives and friends. It gives us opportunities to know our history, to understand ourselves. Some of our news feeds our enthusiasm and our peaceful lives. We call them "Informational Threats". The number of such threats increases with independent Uzbekistan, which has been enriched with the world and achieved its every success. Influence of information threats or misuse of vertical space is more common among young people. The human brain accepts all the information that is relevant and not relevant, and expresses its perception of it.

### **CONCLUSION**

We would recommend that web developers who are creating their own Web sites install at Tas-IX. There are several reasons for this. First of all, as we have already said, access to the site will be free for the population of Uzbekistan. That is, if you have a resource similar to yours in the

external network, users will find that your access to your site is financially acceptable. The above services are free of charge, that is, how many Mb and Gb you move, your account will not be charged. (<http://mrtg.tas-ix.uz/>)

Second, the speed in Tas-IX is much greater than that of external channels. Most providers use Tas-IX at speeds of up to 2 mb / s and more. This is also a major factor that attracts users. (<https://www.uztelecom.uz/uz/jisman/internet-2/tariflar-2>)

Thirdly, an external channel is sometimes "dropped" and can not be accessed from external sites. For example, Vnimanus and its subscribers on the provider's web sites! В связи с внеплановыми работами на территории России: 20.08.2016г. с 01:00 до 07:10 (ТШК) возможно ухудшение качества услуги Интернет. Internal resources, however, are operating regularly. This saves \$.

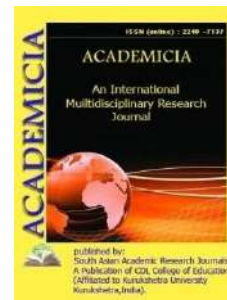
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## **EVALUATION OF THE EFFECT OF HEIGHT PARAMETERS ON LANDSCAPE TRANSFORMATION IN MEDIUM ZARAFSHAN LANDSCAPES ON THE BASIS OF MODERN METHODS**

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### **ABSTRACT**

*Special attention is paid to landscape reclamation in the field of ecology and environmental protection, the study of landscape stratification and their structure using modern methods, including aerospace, remote sensing, geoinformation systems. Carrying out landscape research based on modern methods requires analyzing and evaluating their existing capabilities, identifying current problems and developing ways to solve them on a scientific basis. Three-dimensional models of regions, mathematical modeling of geographical events, application of mathematical statistics in the study of individual components, in turn, in the study of complex dynamic processes occurring in landscape classes and their morphological units, their differentiation and transformation based on the specifics of regions attention is paid. This article analyzes the topography of the area, which is a key component of the landscape, the relationships between them, and the impact of these relationships on plant vegetation indices (NDVI).*

**KEYWORDS:** *Landscape, Factors, 3D Model, Slope, Aspect, Algorithm, Correlation, Matrix, Links, Vegetation Indices (NDVI).*

## INTRODUCTION

Due to the intensive use of landscapes in the world to provide mankind with natural resources, man-made degradation, desertification, land reclamation, soil erosion, degradation, deflation, desertification and other negative geo-ecological and natural geographical processes are increasing day by day. International organizations are paying great attention to combating these problems. In particular, the UN Sustainable Development Program until 2030 sets the tasks of "protection and restoration of terrestrial ecosystems, their rational use, rational forest management, combating desertification, stopping land degradation and preventing the loss of biodiversity." These tasks, especially in arid climates, require the development of irrigated agriculture on the basis of a systematic and structural analysis of the area, a set of landscape and reclamation measures.

A number of measures are being taken in the country to use the natural resource potential of the regions on a scientific basis, use modern scientific and technical achievements in their assessment, improve land reclamation, maintain their cadastre, combat salinization and desertification, ensure environmentally safe living. The Action Strategy for the further development of the Republic of Uzbekistan for 2017-2021 identifies important tasks for "further improvement of the reclamation of irrigated lands, development of reclamation and irrigation facilities." In this regard, targeted research on the mapping of the structure of natural and anthropogenic landscapes in the Middle Zarafshan basin and the role of geographical factors influencing the stratification of landscapes are important.

Resolution of the President of the Republic of Uzbekistan dated November 27, 2017 "On the State Program for the development of irrigation and reclamation of irrigated lands in 2018-2019", Decree of February 7, 2017 "On the Strategy for further development of the Republic of Uzbekistan" and December 28, 2018 In accordance with the requirements of the Appeal to the Oliy Majlis, this research work is carried out in the implementation of the tasks set out in other normative legal acts related to the activity. serves to a certain extent.

**Methods of research:** The research used methods such as field research, laboratory, comparison, cartographic, aerospace, mathematical, statistical analysis, simulation and systematic, mapping using geoinformation systems.

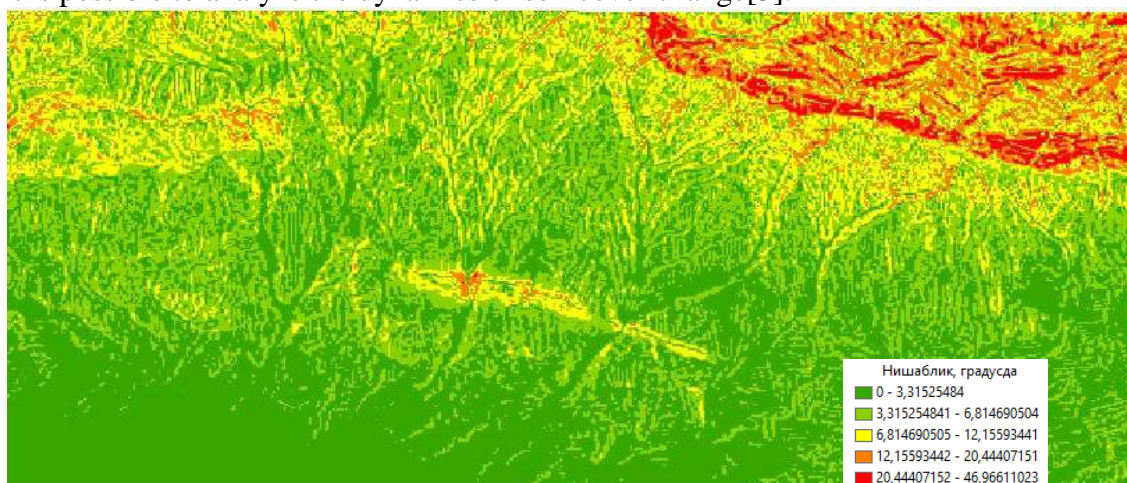
**Level of study of the problem:** Complex natural geographical studies of the Zarafshan basin SP Suchkov, LN Babushkin, NA Kogay, NA Gvozdetsky, AS Saidov, P. Baratov, LA Alibekov , AA Abdulkasimov, NI Sabitova, A. Rakhmatullaev, AN Khojimatov, Yu.H. Abdurahmanova, O.Sh. Ruzikulova and others. Foreign scholars P.A. Burrough [1], G.Eichorn [2], C.Le Bas, M.Jamagne [4], I.Yu.Katorgin and A.A.Kashin were engaged in the study of landscapes by modern methods.

However, in the study of landscapes of the Middle Zarafshan basin to date, little attention has been paid to the application of modern methods, including geoinformation systems, aerospace

methods, probability equations in mathematical modeling of natural processes. The main purpose of this work is to fill the above gaps.

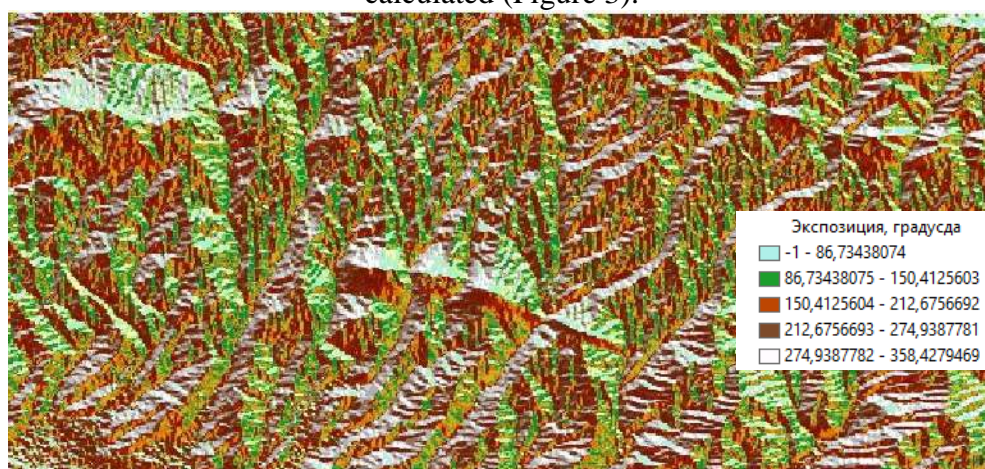
**The results of the study:** A model and method of mapping the effect of erosion processes and hydrographic networks on changes in landscape types on the basis of satellite images and digital model of relief; analysis of dynamic changes in landscapes through multi-zone space images, vegeta It is possible to use indexes as an indicator of landscape dynamics.

**Main part:** Determination of slope (Fig. 1) and exposure (Fig. 2) using slope and aspect algorithms representing relief on the basis of 3D model, based on which correlation matrices with changes in landscape vegetation, regression statistics and vegetation with landscape components and it is possible to analyze the dynamics of soil cover change[3].



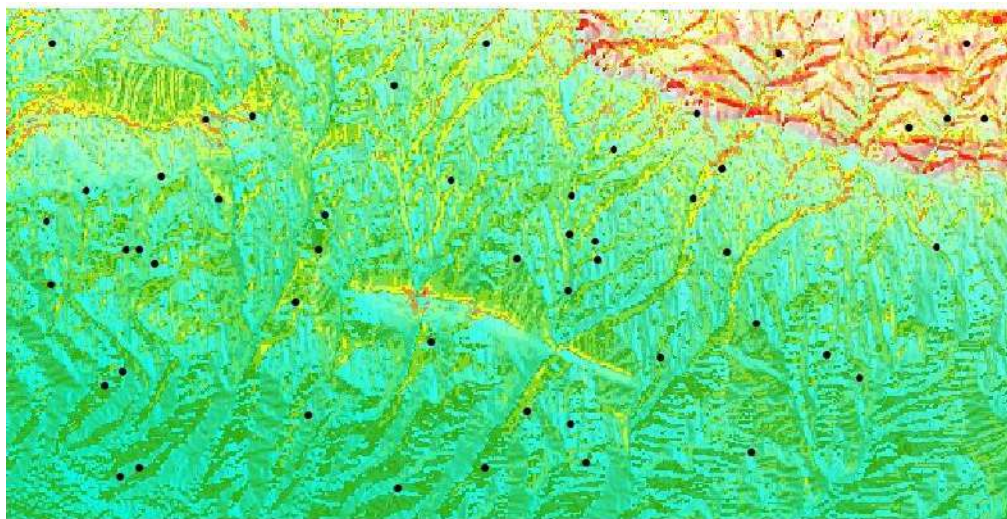
**Figure 1. A slope card based on a 3D model**

After these maps were created, the images taken in 3 periods were converted to NDVI values in the form of a three-dimensional model and slope and aspect values. On this basis, the extent to which the calculated NDVIs of the base section were related to slope, aspect, and height was calculated (Figure 3).



**Figure 2. Aspect card based on 3D model**





**Figure 3. Create Random Point Random Point Placement Card (Analysis Card)**

As a result of combining all the above-mentioned cards and placing 50 points at random on them, the ArcMap program automatically calculates the Attribute Table.

Based on this table, it is possible to perform correlation correlation matrices, regression statistics and make graphs of them.

**TABLE 1 GENERAL REGRESSIVE STATISTICS ON ALL FACTORS TAKEN INTO ACCOUNT**

Multiplicity R	0,591
R-square	0,350
Normalized R-square	0,276
Default error	0,109
Number of observations	50

**TABLE-2 SAMPLING STATISTICS BY COORDINATES**

<i>Coordinates</i>	<i>Coefficients</i>	<i>Default error</i>	<i>t-statistics</i>	<i>P-value</i>	<i>Less than 95%</i>	<i>Above 95%</i>
Y-intersecting	11,416381	25,897683	0,440826	0,661497	-40,776970	63,609732
X 1 variable	0,000371	0,000234	1,589170	0,119183	-0,000100	0,000842
X 2 variable	-0,010487	0,006003	-1,746785	0,087653	-0,022586	0,001612
X 3 variable	0,000119	0,000208	0,571191	0,570777	-0,000300	0,000537
X 4 variable	0,000003	0,000002	1,731164	0,090430	-0,000001	0,000007
X 5 variable	-0,000003	0,000006	-0,554423	0,582096	-0,000014	0,000008

**TABLE-3 LANDSCAPE CHANGE IN 2017 ACCORDING TO NDVI CORRELATION  
BOND MATRIX**

	<b>2017 ndvi</b>	<i>Height</i>	<i>Slope</i>	<i>Exposition</i>	<i>Coordinate X</i>	<i>Coordinate Y</i>
<b>2017 ndvi</b>	1					
<i>Height</i>	-0,0257	1				
<i>Slope</i>	-0,1345	0,781	1			
<i>Exposition</i>	0,3490	-0,073	-0,121	1		
<i>Coordinate X</i>	0,2242	0,588	0,381	-0,044	1	
<i>Coordinate Y</i>	-0,2367	0,791	0,647	-0,160	0,152	1

We will look at the data in this matrix and attribute table using the following graphs. Since the matrix only shows NDVI values in 2017, it does not reflect well the complete correlation of all parameters. Therefore, we consider how height, exposure, and slope are related to the average values of NDVIs in 2013, 2015, and 2017.

It is clear here that there is a correct and clear correlation of altitude with average NDVI values. That is, as the altitude increases, so do the NDVI values. This means that the vegetation index increases with altitude and decreases with altitude. With the exception of some anomalous cases (irrigated lands) it can be seen that it has the correct connection. Vegetation indices of agricultural crops are carried out on the basis of other methods. Since the main area of the base plot is a non-irrigated erosion plain, an algorithm for calculating NDVIs of irrigated lands has not been introduced. A similar connection can be seen in the correct connection when viewed through the exposure.

Here, 19 of the 50 cases correspond to the western slope, 14 cases to the northern slope, and the remaining 17 cases to the southern and eastern slopes. From this case it can be seen that while the humidity coefficient is high due to the barrier of the western slopes, NDVI has large values due to the low radiation on the northern slopes.

From this graph, it can be seen that the slope has an inverse relationship with the vegetation index. That is, as the slope increases, the index decreases, and vice versa. This is due to the fact that on large sloping surfaces the washing erosion is strong and the bedrock is exposed. Although the process of soil formation is accelerated, they accumulate in low-lying areas. As a result, unfavorable conditions for plant growth occur.

## CONCLUSION:

Separate NDVI (vegetation index) of each of the satellite images of the base plot taken at the Landsat space station was automatically calculated and mapped. This made it possible to create a differential map to determine the dynamics of change over the years.

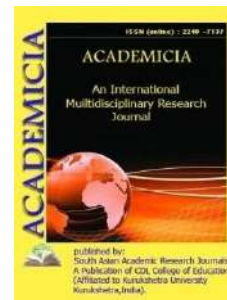
Maps reflecting the slope (slope) and aspect (exposure) properties of the base plot were created. After that, all the created layers were merged and random points were optimally placed on it

using the Create Random Points command line in ArcGIS. On this basis, it is possible to determine the extent to which the calculated NDVIs of the base section are related to slope, aspect and height.

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## THE ROLE OF DANCE IN THE OPENING OF THE IDEA OF THE PERFORMANCE AND IN THE ART OF CINEMA

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### ABSTRACT

*In this article, dances staged in performances, the use of dance in theatrical and cinematic art to express the inner experiences of the protagonist, the expression of emotions, and dance is a delicate and magical means of expressing the character of the protagonist. The artist wants his or her sample of creativity to remain in the audience's attention for years to come, and to enjoy it every time he or she sees it for the first time. To do this, directors must pay attention to the fact that every detail, every means of expression is used in place during the filming process. The play glorifies the kindness, traditions and national values of the Uzbek people. The dance scenes of the play were staged by the Honored Worker of Culture of Uzbekistan Sivilya Tangurieva. In it, Maryam and her friends dance to the national anthem of the Russian people. The cheerfulness and cheerfulness of the dance attracts the audience in the hall as well. Every work of art tries to convey an idea to people. Also cinema, theater, dance. While the image of man is at the center of all art forms, the power of each is unique in expressing his feelings, joys, sorrows, and heartaches. Every work of art is a means of conveying an idea to people. Each dance performance on the stage also depicts the idea of the play, its essence, and expresses the emotions in the minds of the protagonists through actions.*

**KEYWORDS:** Art, Dance, Performance, Actor, Theater, Performance Idea, Dance In Performance, Film, Dance Activity In Cinema, Film Idea, Means Of Expression.

## INTRODUCTION

Art is an artistic expression of beauty, sophistication, love. That is why all kinds of art call people to beauty and goodness, kindness. Every work of art tries to convey an idea to people. Also cinema, theater, dance. While the image of man is at the center of all art forms, the power of each is unique in expressing his feelings, joys, sorrows, and heartaches. In cinema, the human psyche is expressed through artistic words and actions, while in theater, character is created in the stage space. In dance, the human psyche is expressed through the wordless body, facial expressions, dance movements.

“Dance is about human labor and the emotional impressions we have of being. The art of dance is aimed at illuminating the spiritual world of man, it has a strong ideological - emotional impact on the audience. Harmonic movement, posture, plastic expression, facial expressions, rhythm and tempo, spatial formation and composition are the main tools of the art of dance” [1]. Dance expresses indescribable rage, pain, enthusiasm, joy, suffering, love, affection through bodily movements.

"The body has its own language," said French actor and dance expert François Delsart. Indeed, in the Andijan polka, joy and applause are expressed, in Dilkhiroj the enthusiasm, in Tanovor the love song, and in Lazgi the energy and enthusiasm. When a poet puts his dreams and heartaches on paper through words - as poetry is born, in the harmony of pleasant music and beautiful movements - dance emerges. The artistic image in dance is created through a constant exchange of plastic movements, body expressions and rhythmic means.

At the same time, the masked play, pantomime, labor ceremonies, hunting processes have become an independent spectacle, which also means a theatrical work a play.

The use of dance in performances often enhances the charm and spectacle of the show. Dance scenes are staged by the choreographer based on the theme and idea of the play. The use of dance in theatrical art is useful in revealing the inner experiences of the protagonist in the performance of the actor, in expressing his anger, in expressing his feelings.

At the Uzbek National Academic Drama Theater, we will analyze the dance scene in the play "Uzbek Dance" by Nurillo Abbaskhan, staged by People's Artist of Uzbekistan Turgun Azizov. The play glorifies the kindness, traditions and national values of the Uzbek people. The dance scenes of the play were staged by the Honored Worker of Culture of Uzbekistan Sivilya Tangurieva. In it, Maryam and her friends dance to the national anthem of the Russian people. The cheerfulness and cheerfulness of the dance attracts the audience in the hall as well. Young actors-actresses perform in chains, circles, in pairs, following the rules of choreography. The next scene depicts the son of Tursunboy (T. Muminov) and Maryam (L. Eltoeva) in the form of a circumcision ceremony, the Uzbek dance, the trumpet, the drum, the courage of the Uzbek guys.

The accuracy of the actors' hand-foot movements, their obedience to the rhythm, and their sense of music testify to their professionalism. The play, titled "Uzbek Dance" by the playwright *Qumri Chevar* (People's Artist of Uzbekistan D. Ikramova), depicts the patience, contentment and love of an Uzbek woman. *Qumri Chevar* raised his only child with a thousand and one

sufferings, married a child of another nation without going against the love of his child, and rejoiced in the noise of his grandchildren. However, Tursunboy's sudden nailing to the bed, burning in the spot of the child, filled the mother's heart and poured all her pain and sorrow on Allah.

A monologue full of pain connects to the scene of dhikr as heartbreaks. A dervish dance performed to the point of exhaustion brings the performance to a climax. The arms are raised, the head is thrown back, and the feet are hit hard on the ground. At first glance, it looks crazy. It is the prayer of the servant to the Creator, the rebellion of the heart.

There is also a ballet troupe at the Uzbek State Musical Theater named after Muqimi. The team has been giving aesthetic pleasure to the audience with their performances in most performances. Some performances feature dances performed by actresses.

In addition, M. In Azizov's Persian classmate "Classmate or Candidate for Groom," a female dancer named Tutikhon uses her "art" to make a living. She appears as a player, not a dancer. Tutikhon (D.Ibrahimova) performs dances in the style of "Doira". Dance choreographer Sh. Staged by Akhmedov. The actress is limited to one or two dance moves, performing muqam. It uses decorative movements, not concrete movements. In a sense, the actress's actions can be justified in terms of the Persian genre of the play. However, in any case, a dance performed in accordance with the rules of the art of choreography would further enhance the artistry, integrity and spectacle of the performance.

It is worth noting that dance is a subtle and magical means of expressing the character of the protagonist. In the play "*Toptalgan tuygu*" by H.Khalikov, the protagonist (M.Bekchonova) will dance to the tune "*Tanovar*" to one of the bridesmaids. It is known that "*Tanovar*" - "represents the desire to understand the feelings of man through all the details of life, from love, tenderness, kindness to betrayal and spiritual death" [2]. It is clear from the facial expressions and eyes of the dancer that she is tired of the insults and insults of her innocent husband, and that it is difficult to protect her trampled honor, love, and sweet words. The deep lyrical melody, which reflects the anguish of the heart, and the figurative lyrics of the song, which penetrate the human heart, require that the song be performed softly, half-heartedly, and even gently. In fact, dreams of eternal longing, freedom, and happy love are the content of lyrical songs by women all over the world.

Cinema is a synthesis of arts. It generalizes the fine arts, theater, art of speech, choreography and conveys the idea it wants to convey to the audience while absorbing its features. Feature films vary in genre, and the art of dance is no exception.

Indeed, the use of dance in the art of cinema is a convenient tool in conveying the idea of the film to the audience, in expressing the character of the protagonists.

It is safe to say that the elements of rhythmic gymnastics performed by the little bride Nigora in Melis Abzalov's film "Brides Revolt" have become a memory for every movie fan. In particular, Sotti's bride's comic dance moves evoke an involuntary laugh. Dance performed by Nigora is a type of artistic dance in which the human body reveals the character of the protagonist through

the use of figurative, associative-descriptive and expressive artistic means, combined with music, thoughts, feelings, imagination. The movements of the arms, shoulders, and legs move in precise, rhythm-controlled ways. The actress also used gymnastics. The director could have described Nigora's character in the language of other heroes. However, given the comedy of the film genre, the director made effective use of the art of choreography, aiming to increase the audience, raise the aesthetic spirit.

It is also useful in expressing national and traditional customs, wedding ceremonies through the activities of dance in cinema. For example, the film "Happy Wedding". In the film, Kyzlarkhon Dustmuhamedova will perform the dance "Spring". In order to give aesthetic pleasure to the guests, the dancer skillfully performs dance movements that symbolize the awakening of nature, the singing of birds, the opening of flowers, the ripple of water under the soft melody. It's as if the dancer is speaking through her body parts with her performance.

Ritual dances are often used in films. Rituals reflect the relationship between man and nature, demonstrating the "living" forces of nature; calendar periods represent the events of the seasons.

Films shot in the 60s and 70s of the twentieth century, such as "I'm fascinated", "Yor-Yor", "Mahallada duv-duv gap" show dance compositions in their entirety. Nowadays, the dance begins with half of the song and ends before the end of the song. This is a sign of unprofessionalism. The fact that the actress studied at a choreography school could have been aspect of her performance in the film, but being able to put the theory into practice is also a skill.

It should be noted that each dance has its own language. While the dances in the films express the hero's pains, joys and sorrows, each dance action should serve to convey the idea of the film to the audience. In cinema, music and soundtracks are chosen based on the theme of the picture. When we watch some movies, the dances in it seem superfluous. Neither the song nor the dance seems to have anything to do with the theme.

In the film "*Tango, yohud adashgan sovchilar*", the heroine dances to the song of her classmate, the first representative of pop art Botir Zokirov. The fact that the film is called "Tango" does not correspond to the content of the film. Because there is no mention of this dance at any time other than that birthday night. The dance is forgotten that night. If this dance had caused the boy and girl to find each other, his name would have been justified.

True, dance expresses human emotions. However, there must be aesthetics and ethics in the expression of language expressions. Because dance is a symbol of beauty, elegance, grace. The artist wants his or her sample of creativity to remain in the audience's attention for years to come, and to enjoy it every time he or she sees it for the first time. To do this, directors must pay attention to the fact that every detail, every means of expression is used in place during the filming process. It would be a great light upon light if they would consult with the choreographers and, if possible, offer to stage a dance for the actresses as they begin to use dance performance in their films. We can comfort ourselves by saying that there is a shortage where there is work. But overcoming the shortcomings is in our hands.

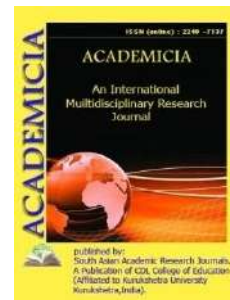
In this way, he revealed the most delicate aspects of both the art of cinema and the art of dance. When both types of art come together, they display universal qualities in bright movements, impressive and attractive. The skillful use of means of expression in conveying the idea of the film to the audience plays an important role in the spirituality and worldview of our people.

“... Every talented person is a unique world, so it is impossible to teach the creative people any wisdom, and most importantly, to try to control them. But in this life there are sacred concepts that unite them, inspire them to new creative achievements, which are inextricably linked with the interests of the Motherland and the people, the principles of goodness and humanity. If every artist puts these immortal ideas as the main goal in his works and is able to express them artistically, then, without a doubt, literature, culture and art will be able to fully fulfill their social function, serving for spiritual growth. 3], - said the head of state. This means that art is the most powerful means of finding a way into the human heart.

Every work of art is a means of conveying an idea to people. Each dance performance on the stage also depicts the idea of the play, its essence, and expresses the emotions in the minds of the protagonists through actions. Effective use of theatrical opportunities ensures the artistic integrity of the play, its long place in the repertoire.

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## **DYNASTY IN TASHKENT SCHOOL OF WOOD CARVING: ON THE EXAMPLE OF M. IBRAGIMOVA'S CREATION**

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### **ABSTRACT**

*This article examines the role of the Tashkent school of wood carving in the national architectural integration of traditions, the artistic features of the development of the master of the people's Republic of Uzbekistan in the work of M. Ibragimova is highlighted very clearly. Also, the creative activity of M. Ibragimova is studied in detail in the unity of artistic works created on an evolutionary basis. Some works focus on the semantic features of patterns in applied art. However, in the field of handicrafts, the tradition of succession, dynastic issues have been neglected. In Tashkent wood carving, the "pargor" style is widespread, and the word "pargor" or "pargol" itself is a phrase that fits into a list of patterns rather than style. It means drawn in a compass. For this reason, the circular or circular patterned flowers commonly used in woodcarving and painting compositions are called "pargory". The doors of M. Ibragimova's building for the Oliy Majlis building were made of palm trees (a type of tree grown in the subtropical zone) imported from Malaysia, which not only served as a traditional decoration, but also met other modern requirements. She designed a carved wall (panel) for the State Art Museum of Uzbekistan. This carved ornament is still preserved. Since 1982 she has been working in the creative group of the Master Association.*

**KEYWORDS:** *Applied Art, Wood Carving School, National Traditions, Types Of Patterns, Artistic Features, Architecture, Style, International Vision.*



## INTRODUCTION

Wood carving is a widespread type of applied decorative art of the Uzbek people. In this case, a pattern or image is drawn, cut and engraved on a wooden or wooden object. By the 1990s, Uzbekistan had entered a new phase in the history of woodcarving and painting.

When it comes to research in this area, it should be noted that while some researchers have studied wood carving patterns as part of the field of architecture, another group of other factors examines that type of applied art as a work of art, as part of material culture. Some works focus on the semantic features of patterns in applied art. However, in the field of handicrafts, the tradition of succession, dynastic issues have been neglected. Therefore, this article for the first time analyzes the work of master Muharram Ibragimova, a member of the Ibragimov dynasty, which preserves and develops the traditions of the Tashkent School of Wood Carving.

Wood carving is one of the most widespread national arts in our country. Each region has its own style and direction of wood carving. The schools of wood carving and painting in Uzbekistan are mainly Tashkent, Fergana, Bukhara, Samarkand and Khiva. While there are many similarities in the technical, methodological, and compositional aspects of these schools, there are also differences.

For example, the monumentality of Khiva wood carving differs from others by the preservation of the natural color of the wood. Bukhara wood carving is distinguished by the attractiveness of the carved pattern, the silent patterns are decorated with gold and silver water, the use of colors on the background of the pattern. Margilan wood carving used a flat carving with a deep floor. Kokand carvings used short-relief, flat-carved carvings. In Tashkent, flat-carved, groundless drawing carvings covered with patterns are widespread.

In Tashkent wood carving, the “pargor” style is widespread, and the word “pargor” or “pargol” itself is a phrase that fits into a list of patterns rather than style. It means drawn in a compass. For this reason, the circular or circular patterned flowers commonly used in woodcarving and painting compositions are called “pargory”. This style is found in the works of almost all masters. But in the second half of the last century, in the work of Tashkent master Muharram Ibragimova, she reached her peak. L. According to Rempel, “wood carving is superior to terracotta and plaster in terms of the theme and shape of the embroidered ornaments”.

Muharram Ibragimova was born on July 1, 1949 in Chakar mahalla of Tashkent in a family of wood carvers, masters. 9 children, 3 girls and 6 boys grew up in the homes of Nigmat ota Ibragimov, an artist whose father served in Uzbekistan, and her parents Mashhura aya Kosimova. Surprisingly, all the children grew up to be masters of handicrafts.

The dynasty of wood carvers, consisting of seven generations, and M. Ibragimova became artisans, preventing the disappearance of centuries-old family traditions. Her grandfather was once a famous carpenter. His art is highly framed. Forty camels were given in exchange for the piled door. According to family legend, one of the piled doors was taken to Switzerland and installed in one of the banks. Scholar Hamid is in Switzerland, and indeed his grandfather, Ibrohim, sees a door piled with fatherly patterns. Ibrohim ota lived in caravans in Tashkent and

Bukhara, where she lived in "two houses", and the dynasty of wood carvers from her "Tashkent" wives continued.

It is no exaggeration to say that Muharram Ibragimova grew up among wooden objects and her legs were in the workshop. From a young age, she grew up playing wood carving tools instead of dolls. Seeing the interest in her daughter, Nigmatova Mashkura aya Muharram began to teach the secrets of woodcarving from the age of 5. When she left school in 1956, her lessons were prepared in a workshop. All the activities of the school, with the help of Muharram Ibragimova, helped to decorate the hall and publish posters. In 1972 she entered the Faculty of Biology of Tashkent State University.

After graduation in 1978 she joined the Research Institute of Endocrinology of the Academy of Sciences of Uzbekistan as a researcher. But his deep-rooted love for his profession did not leave her alone. In 1979, she connected her life with Tulagan Gaipov. In 1989, she began working as a wood carver in her father's workshop.

At the same time, she began working as a wood carver at the Tashkent Folk Art Experimental Combine (Tashkent experimental creative arts and crafts complex). During her career, she participated in various exhibitions, construction of cultural and public facilities with her creative work.



In 1968, the building of the Institute of Oriental Studies was built and it was planned to install columns decorated in the style of wood carving. Management said it would be very costly. In response, Muharram, 18 said the column would be close to the price of a diamond, but that if she was provided with the necessary material, she could engrave a pattern on those columns for free. Recognizing her tenacity, the leadership entrusted the pillars to this girl. These columns still adorn the building. She and her students also made carved doors for the neighborhood mosque and offices. She designed a carved wall (panel) for the State Art Museum of Uzbekistan. This carved ornament is still preserved. Since 1982 she has been working in the creative group of the Master Association. Throughout her career, she invented non-reversible, unique pattern methods and researched on a variety of ideas. During these years, in 1984, she worked on 3 carved doors

to the Musical Drama Theater of Jizzakh region.

In 1985, he painted patterns for 2 carved doors to the Museum of Military Labor Glory and participated in carving them into wood. This work is done in the style of a three-tiered, deeply carved Islamic pattern, chokapardoz. They built and installed 4 carved doors to the mausoleums of Turbat Ismail ota and the Palace of Culture in the Republic of Kazakhstan. In 1986-1987, a carved door was made for the teahouse at the Elektrkhipromkombinat in Chirchik. They also made a carved door for the Museum of Local Lore in Chirchik.

Muharram Ibragimova carved a number of shelves, 8,6,4-sided tables, chairs, plates of different sizes, carved bowls, jugs, upadons and other items on the basis of unique patterns. Most importantly, among the masters of wood carving, Muharram Ibragimova developed the technology of weaving carvings in different shapes on the first pumpkin.

Among the samples in the department of folk arts and crafts of the State Museum of Arts of Uzbekistan, a number of works by Muharram Ibragimova are regularly exhibited. Many of their works of art have been exhibited in exhibitions in France, Italy, Germany, Bangladesh, Korea, Romania, Japan, Finland, Malaysia, and Turkey. A number of carvings were exhibited at the Museum in Riyadh, Saudi Arabia.

Muharram Ibragimova paid a creative visit to Malaysia in 1995. A number of works were exhibited at the Museum of Islamic History in Kuala Lumpur, Malaysia.

Four large carved doors made in 1997-1998 are installed in the building of the Oliy Majlis of the Republic of Uzbekistan, two doors in the building of the Navoi Theater. It should be noted that among the great works of Muharram Ibragimova, the doors have a special place. Among the architectural decorations, the door has a special function in Islamic art. "At first glance, the door, which is an element of service in the architectural space, is a symbol of the divine gate, which is more widely interpreted as a transition from the mortal world to the higher heavens." The master sought to capture this tradition in the creation of each door and tried to express a particle of heavenly beauty on the door through Islamic patterns.

The doors of M. Ibragimova's building for the Oliy Majlis building were made of palm trees (a type of tree grown in the subtropical zone) imported from Malaysia, which not only served as a traditional decoration, but also met other modern requirements. Muharram Ibragimova's modest work was awarded in 1999 by the First President of the Republic of Uzbekistan Islam Karimov. She was awarded the Medal of Fame.

Along with creative research, Muharram Ibragimova teaches the younger generation the secrets of her profession. Among the students who learned to work in their home, many children in the neighborhood also learned to work and became masters. Their children Jamshid and Khurshid Gaipov, Mukhayo Gaipova and students Elmurad Pirmatov, Nuriddin and Ulugbek Rasulov, Botir Mavlonov, Olim Fayziev, Jamol Ibragimov, Bakhrom Juraev have studied and are still working.

Muharram Ibragimova and her students participated in the creation of all the wood carving equipment of the restaurant "Seven Treasures" in Almaty, Kazakhstan. They carved wood carvings with their students at the Silk Road restaurant in Tashkent. They also took part in the construction of two carved doors to the Muyin Ota tomb in Uchtepa district of the capital.



In 2007, Muharram Ibragimova was given a special place in the master's studio of the Barakkhan madrasah of the Khasti Imam complex. There, Muharram Ibragimova demonstrated to foreign tourists wood carving, carving pumpkin making techniques. They took an active part in various events in the city, district and the country.



Muharram Ibragimova has works in the Bukhara Hall of the Navoi Theater, museums and many palaces. Muharram Ibragimova is not only a craftswoman, but also the only woman in this field, the People's Master of Uzbekistan.



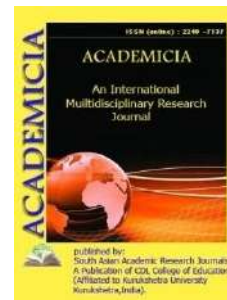
In 2004, the Movement of Entrepreneurs and Businessmen became a member of the Liberal Democratic Party of Uzbekistan. The Republic of Uzbekistan is a member of the Public Association "Entrepreneur and businesswoman" in Tashkent.

In short, since the 1990s, most of the "professional" folk artists who have been engaged in independent creation have created by being members of centers and associations. The masters, members of the Republican Special Creative and Production Association "Usto", participated in large-scale facilities and constructions of national importance, members of the research and production centers "Musavvir" and "Hunarmand" created at home and distributed their products through these centers. The center provided them with methodological assistance, promoted the work of masters among the general public, at major exhibitions in the country and abroad, and so on.

Today, the art of wood carving and painting is regaining its former status. Demand for it is growing day by day in a number of religious and secular buildings under construction, commissioning or reconstruction in Tashkent and other major cities of the country.

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## CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTIC OF HYMENOLEPIDOSIS IN CHILDREN

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### ABSTRACT

*Hymenolepidosis is a chronic parasitic disease that develops with parasitization in the human intestine of the tape helminth *Hymenolepis nana*, or dwarf tapeworm. Hymenolepidosis affects mainly the urban population. More often, children 4-14 years old are sick, which is explained by the insufficient instillation of hygienic skills in them, as well as the characteristics of age-related immunity. Hymenolepidosis disease is asymptomatic. The main symptoms of the disease are: abdominal pain in the form of seizures, skin rashes, loss of appetite, heartburn, nausea, diarrhea, weight loss, dysbiosis, dizziness, asthenia, irritability, headache, skin itching, rhinitis, Quincke's edema. With severe helminthic invasion, the patient may experience fainting, low-grade fever, myocardial dystrophy, seizures, hepatomegaly, anemia, hypovitaminosis. In addition to standard research methods (general analysis of blood, urine, bacteriological and biochemical studies), we conducted a thorough study for all children. At the same time, they paid attention to their complaints, to the transferred and concomitant disease, premorbid background, the cause of the disease, the duration, the effect of previous treatment measures. When studying the results, hymenolepidosis in children is often found in hot climates and, which is apparently associated with the anatomical and physiological characteristics of the child's body, age, and possibly with the severity of the underlying disease. Children were examined regardless of the presence of complaints. In addition to standard research methods (general analysis of blood, urine, bacteriological and biochemical studies), we conducted a thorough study for all children.*

**KEYWORDS:** *Hymenolepidosis, Children, Hot Climate, Immune System.*



## INTRODUCTION

According to the World Health Organization, intestinal helmentoses among parasites are in second place after diarrhea - their frequency is more than 3.5 billion cases per year. World Bank experts put intestinal helminthiasis in 4th place among the leading causes of damage caused by human diseases. However, the importance of helminths in human pathology until recently has been underestimated. Helments are one of the oldest and most numerous life forms on our planet. In the human body, helminths parasitize, mainly related to two types of worms: round (class Nematoda) and flat (class tapeworms - Cestoda and flukes - Trematoda). Currently, more than 250 types of helminths capable of invading humans are known, of which approximately 60 species are recorded in Russia and the CIS countries, 20 of which are most common (1,3,8,9).

According to the results of epidemiological studies conducted in many countries, the most at risk group for helminth infections is children, mainly 5-14 years old. Prevalence of geohelminthiasis in children under the age of 17 varies from 27% (India) to 6-7% (Indonesia, China, Nigeria) and 2-3% (Democratic Republic of the Congo, Tanzania, and the Philippines) (2,6,7).

Among human helminthiasis, enterobiosis (up to 65%), ascariasis, and opisthorchiasis have the largest share. In recent years, there has been an increase in the frequency of severely occurring helmentoses —hymenolepidosisin children.

Hymenolepidosis is a chronic parasitic disease that develops with parasitization in the human intestine of the tape helminth *Hymenolepis nana*, or dwarf tapeworm. Hymenolepidosis affects mainly the urban population. More often, children 4-14 years old are sick, which is explained by the insufficient instillation of hygienic skills in them, as well as the characteristics of age-related immunity. Hymenolepidosis disease is asymptomatic. The main symptoms of the disease are: abdominal pain in the form of seizures, skin rashes, loss of appetite, heartburn, nausea, diarrhea, weight loss, dysbiosis, dizziness, asthenia, irritability, headache, skin itching, rhinitis, Quincke's edema. With severe helminthic invasion, the patient may experience fainting, low-grade fever, myocardial dystrophy, seizures, hepatomegaly, anemia, hypovitaminosis (2,4,5).

Currently, the issues of studying the clinical manifestations of the disease of hymenolepidosis in children are relevant, taking into account the infection paths and regional characteristics. The classic manifestation of hymenolepidosis that an infectiologist may encounter is the development of hymenolepidosis in children, which dictates an urgent need to perform the study.

## AIM

Clinical and epidemiological characteristics of hymenolepidosis in children at various stages of the disease.

## MATERIALS AND RESEARCH METHODS

For the period from 2016 to 2019 under our supervision there were 60 children with hymenolepidosis under the age of 14 years. There were 28 boys (48%), 32 girls (52%).

**TABLE 1. DISTRIBUTION OF PATIENTS WITH HYMENOLEPIDOSISIN CHILDREN, TAKING INTO ACCOUNT AGE AND GENDER**

sex	Age of patients								Total	
	from 1 month. to 1 year		from 1 yearto 3 years		from 3 to 7 years		from 7 to 14 years			
	abs	%	abs	%	abs	%	abs	%	abs	%
M	6	21,4	10	35,7	9	32,2	3	10,7	28	46,6
W	13	40,6	12	37,5	5	15,6	2	6,3	32	53.4

All of them are registered at the Bukhara Regional Infectious Diseases Hospital. The diagnosis was based on determining the method of fecal retention (for protozoal cysts).

In the case when immediate examination of the material is not possible, its conservation is used. The principle of detection of intestinal protozoa in feces by conservation is based on the fact that the preservation solution causes fixation of protozoa with prolonged preservation of the basic morphological characteristics of all stages, especially cysts (amoeba, lamblia, balantidia), unchanged. The following preservatives are often used: Safaraliyev preservative: zinc sulfate - 1.65 g; concentrated formalin - 10 mg; phenol crystals. - 2.5 g; acetic acid conc. - 5 ml; methylene blue - 0.2 g; distilled water - 100 ml. Phenol is pre-dissolved in a water bath. The protozoa turn blue. Preservative Turdiyeva: aqueous solution of sodium nitrate 0.2% - 80 ml; Lugol's solution - 8 ml; concentrated formalin - 10 ml; glycerin - 2 ml; acetic acid conc. - 5 drops.

Protozoa are stained golden brown. Preservative is poured into penicillin vials to half the volume. The test material from each patient immediately after taking is transferred to the bottle in a ratio of 1: 3 (one part of feces, 3 parts of preservative). A wooden stick is mixed, closed with a rubber stopper and fixed with adhesive tape. Each vial should have a label or serial number.

The main manifestations of abdominal pain in the form of seizures in 10 (16.6%), skin rashes in 14 (23.3%), loss of appetite in 8 (13.3%), heartburn in 16 (26.6%), nausea in 8 (13.3%), diarrhea in 4 (6.6%), weight loss in 8 (13.3%), dysbiosis in 8 (13.3%), dizziness in 8 (13.3%), asthenia in 8 (13.3%), irritability in 8 (13.3%), headache in 8 (13.3%), pruritus in 8 (13.3%), rhinitis in 8 (13.3%), Quincke's edema in 8 (13.3%) patients.

Children were examined regardless of the presence of complaints. In addition to standard research methods (general analysis of blood, urine, bacteriological and biochemical studies), we conducted a thorough study for all children. At the same time, they paid attention to their complaints, to the transferred and concomitant disease, premorbid background, the cause of the disease, the duration, the effect of previous treatment measures.

If necessary, sick children were consulted by neurologists, pediatricians and other specialists. On examination, the condition of the patient was evaluated depending on the course of the underlying disease. Results and their discussion: When studying the results of the study, the epidemiological characteristics of hymenolepidosisin children in the regions of the Bukhara region were revealed.

Due to the significant increase in the number of cases of hymenolepidosisin children, the likelihood of contact by an infectiologist with hymenolepidosisin infected patients also increases.

With hymenolepidosis in children often there are various manifestations of the disease with damage to the internal organs. Infectiologists, as well as other specialists, already have to take an active part in the diagnosis, treatment of hymenolepidosis in infected people, and preventive work, which, of course, will require knowledge of the features of the course of hymenolepidosis in children. Patients who do not know about the infection of hymenolepidosis can hide at the reception, hiding - for well-known reasons - the infection; patients in the incubation stage, which can also become a source of infection for other patients. To prevent infection of personnel, one should know the ways and factors that realize the transmission of hymenolepidosis in children, and assistance should be carried out in compliance with the necessary safety measures and with strict observance of the rules for disinfection and sterilization of used tools.

Another issue that will be addressed in this article is a statistical analysis of the frequency and development of hymenolepidosis in children. Similar to the previous analysis, it covers the territories of Bukhara region (Bukhara, Peshku, Karakul and Zhondar regions).

**TABLE 2. DISTRIBUTION OF SICK CHILDREN IN AREAS OF THE BUKHARA REGION, DEPENDING ON THE PREVALENCE OF HYMENOLEPIDOSIS**

Age of patients	Districts of Bukhara region							
	Bukhara district		Peshku district		Karakul district		Zhondar district	
	abs	%	abs	%	abs	%	abs	%
1 month. to 1 year (20 children)	3	13,6	5	22,7	6	27,2	8	36,5
1 year to 3 years (16 children)	3	7,8	7	18,4	10	31,6	14	42,2
3 to 7 years (14 children)	6	21,4	10	41,1	14	58,8	24	78,8
7 to 14 years (10 children)	2	3,4	3	5,1	3	5,1	2	3,4

The dynamic indicator of the incidence of hymenolepidosis in children of detected cases in the Karakul region is more than in other regions.

Therefore, hymenolepidosis in children is often found in hot climates and, which is apparently associated with the anatomical and physiological characteristics of the child's body, age, and possibly with the severity of the underlying disease.

Thus, hymenolepidosis contributes to the violation of the immune system and causes the emergence and development of various secondary diseases, the severity of which depends on the course of the underlying disease.

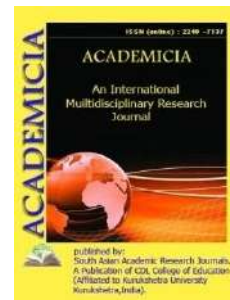
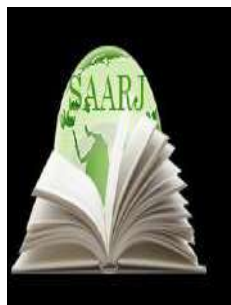
## CONCLUSION

Hymenolepidosis in children leads to the onset and development of various secondary diseases characterized by a specific clinical course. This is clearly related to the severity of hymenolepidosis and the frequency of development of various secondary diseases in children.

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# THE EFFECT OF COMMUNICATION PRACTICE ON CONFLICT MANAGEMENT IN ETHIOPIAN ELECTRIC POWER CORPORATION (A CASE STUDY OF ETHIOPIAN ELECTRIC POWER CORPORATION NORTH-WESTERN REGIONAL OFFICE)

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## ABSTRACT

*The main purpose of this paper was to investigate the effect of communication practice on conflict management in Ethiopian electric power corporation (a case study of Ethiopian electric power corporation north-western regional office). It adopted both descriptive and explanatory research design. The sample size of 100 respondents was selected from 200 employees. The study findings of correlation analysis showed that all constructs of communication practice (Open Communication Channel, Formal communication, Informal communication, and Freedom of act in communication) were positively and significantly related to conflict management. The findings of the multiple regressions analysis showed that the observed changes in conflict management attributed by the elements communication practice is 47.1% (adjusted  $r^2 = .471$ ). The study also reveals from four major dimensions of communication practices, Open communication Channel, formal communication, and Freedom of act in communication has a positive effect on conflict management, while informal communication doesn't have a significant effect.*

**KEYWORDS:** Communication Practice, Conflict, Conflict Management, And Ethiopian Electric Power Corporation

## 1. INTRODUCTION

### 1.1 Background of the study

As long as people in organization work together, conflict is inevitable or unavoidable and even desirable. This means as people work together the incompatibility of goals, attitudes, and

behaviors lead to disagreement or opposition between parties both at home and at office. Conflicts occur because people do not agree on goals, issues; perceptions and people inevitably compete for the scarce resources (Rahim, 2001). It cannot be avoided, but it is possible to manage them in a way that companies recognize it on time. According to (Kinicki & Fugate, 2018) conflict is a disagreement occurs when one party perceives that its interests are being opposed or negatively affected by another party.

Traditionally, conflicts have been viewed as obstacles to organizational functioning. However, for modern organizations; they are essential to the growth, change, and evolution of systems (Aula & Siira, 2010). The extent of organizational conflict increased today than ever before as organizations become more open and diverse, financial uncertain, technologically advanced, flatter and more decentralized. Managers in the twenty first century do not seek to avoid conflict rather manage conflict in the organization (Aduet *al.*, 2015). According to (Kinicki & Fugate, 2016) employees spend two or more hours per week, or one day per month, dealing with some type of conflict at work. Due to this, conflict management is receiving increasing attention from top managers and policymakers across major corporations. Managing conflict viewed as an important element in achieving organizational effectiveness and enhancing productivity (Wairimu, 2016).

According to (Schermerhorn, Hunt, & Osborn, 2002) organizations experienced conflict as functional (constructive) and dysfunctional (destructive). Constructive conflict induces a positive performance, while destructive conflict heats up the work environment and results in reduction of productivity and job performance. This is suggestive that Conflict can be managed in different ways; a well-managed conflict aims at the improvement of organizations for the purpose of stimulating performance in the work-situation. When conflict arises, we need to be able to manage them properly, so that it becomes a positive force, rather than a negative force, which would threaten the individual and group (Robbins & Judge, 2013). Ineffectiveness in conflict management is the reason of undesirable outcomes (VatanKhah, Raeisi & Kalhor, 2008).

(Aduet *al.*, 2015) also argues that unmanaged conflict significantly affects employee morale, increase turnover and absenteeism, which affects the performance of a company in long term. Conflict management does not mean the elimination of conflict, nor does it refer only to conflict reduction. It means maintaining conflict at the right level to help the department, work unit, or organization reach its goals (Champoux, 2011). To manage conflict accordingly managers at different level and organizations must create an open environment to aware the interest of conflicting parties before and after the conflict intensify. According to (Murerwa, 2019) Communication plays a vital role in management where employees' views are listened to and interest of management and employees indeed coincide.

Effective communication skill serve a key role in successfully resolving conflict, both in the home and work place through increase mutual understanding of conflicting situation among parties and reduce the risk of making bad generalization (Hener, 2010). Nothing can be achieved in an organization without effective communication. It is not possible to have good human relation and proper organizational functioning without effective communication (Shonubi & Akintaro, 2016). An effective communication is required, not only for maintaining human relation and for achieving good business performance but also to manage conflict accordingly. Spaho (2013) recommends that all levels of management have a responsibility for good



communication and conflict management in an organization as many factors prevent employees from direct and open communication, whose consequence is an increased risk of conflict situations.

Good or effective communication can facilitate peaceful conflict management or resolution. On the other hand, Poor communication such as offensive and unclear communication is probably the most frequently cited source of conflict. Poor communication transforms latent conflict into violent (Gyamfi, 2009). Nyamboga and Kiplangat (2008) also argued conflict can result from misinformation between people with respect to their needs, ideas, beliefs, goals or values. Communication with employees should be on-going and consistent; especially when organizations need guidance or when there is opposition to changes inside the organization (Dawson, 2003).

### **1.2 Statement of the problem**

Ethiopia has seen dramatic economic growth in recent years, to sustain this growth mass industrialization and dramatic expansion of energy supply is mandatory. Electricity plays a driving role in social-economic development and improvement of the quality of life of a society and it is also linked to all sectors of the economy. Energy is an important factor in all sectors of the economy. For industrialization and growth in economic condition, the access to energy is a key concern, which is useful to remove poverty, enhance food production, increase clean water availability, upgrade medical facilities, boost up education standards, and develop employment opportunity for young people including women (Khan & Singh, 2017).

Ethiopia is endowed with outstanding and diversified renewable energy resources, namely hydro, wind, solar, geothermal, and biomass. For many decades, the power generation for the electric grid in Ethiopia currently depends almost entirely on hydropower. Even if the government of Ethiopia is firmly determined to increase the production and availability of electricity to satisfy demanding needs of citizens and industries, the consumers are unable to get uninterrupted and good quality services yet. According to (Odi, 2016) only 23% had access to electricity, in urban areas 85% had access, compared with 10% in rural areas. Lack of reliable electricity service has been listed as a major obstacle preventing growth of firms in developing countries. In the 2017 World Bank Enterprise Survey (WBES) cited at (Carlsson *et al.*, 2018) about 40 percent of firms in Sub-Saharan Africa stated that a shortage of electricity was a major constraint to the operations of the firm. The electricity services are still characterized by high frequency of interruptions with long duration of outages. Long and frequent outages can damage assets (such as electronics) and inventory. Moreover, they can disrupt work by shutting down equipment and cutting off lighting, heating or internet connections, which increase an economic burden on households (Toleshi, 2016).

This unsatisfied demand becomes higher burden for Ethiopian Electric Power Corporation (EEPO). The corporation must satisfy the needs of individuals (citizens), business organizations, industries, and government requirements. To do this effectively, the company must create clear cut communication practice both within and outside it. No business task is performed without communication. Based on this, the researcher motivated to examine communication practice and its impact on conflict management that can be created as a result of higher burden on the corporation.

### **1.3 Objectives of the study**

#### **1.3.1 General objective**

The general objective of study isto assess communication practice and its effect on conflict resolution in Ethiopian electric power corporation (a case study of Ethiopian electric power corporation north-western regional office)

#### **1.3.2 Specific objectives**

The specific objectives of the research are to

1. Determine the relationship between communication practice and conflict management.
2. To determine the impact of communication practice on conflict management.

## **2. Review of related literature and conceptual framework**

### **2.1 Communication; meanings and concepts**

Organizational communication is a crucial aspect for the effectiveness of organizations and of individuals inside an organization. It is a fundamental mechanism by which members show their satisfaction and frustrations, and the manager aware their interest. Organizational communication includes the purpose, flow, and direction of messages and the media used for those messages (Champoux, 2011).The term communication is freely used by everyone in modern society, including members of the general public, organizational behavior scholars, and management practitioners.

Communication is from a Latin word-communis, which means common or shared understanding. Therefore it is a purposeful effect to establish commonness between a source and receiver (destination) (Schramn, 1965 cited at Shonubi &Akintaro 2016).

According to (Mensa, 2010) communication is a process of sharing ideas, information, and messages between two or more parties in a given place and time. For communication to be said to have taken place, there is the exchange of shared meaning which occurs between two or more parties and feedback must obtained. That means the interaction between individuals or groups is should not belinear. (Keyton, 2011) also define Communication as the process of transmitting information and common understanding from one person to another through amedia.

Communication is the exchange of information between a sender and a receiver, and the inference (perception) of meaning between the individuals involved. It is a circular and dynamic process in which people interpret and make sense of the information they exchange (Kinicki& Fugate, 2018).

Communication is the process of transmitting or sharing meaning (idea, feeling, thought, experience, knowledge, and skill) for some purpose through the transmission of symbolic messages this means if no information or ideas have been conveyed, communication has not taken place. For communication to be successful, the meaning must imparted and understood perfect communication , if such a thing existed, when a transmit thought or idea will perceive by the receiver exactly as it will envisioned by the sender(Adler, 1989).

## 2.2 Types of Communication

There are different types of communication that flow within an organization. However, the key distinctions with respect to organizational communication involve: levels; formal versus informal; direction (vertical, horizontal, diagonal), verbal and non-verbal, and internal versus external focus. Communication occurs at several levels and is divided into interpersonal communication, Group level communication, Organizational level communication, Inter-organizational level communication and Mass communication (Canary, 2011).

According to (Champoux, 2011) Verbal and nonverbal communication are the two major types of communication found in organizational communication processes. Verbal communication includes oral, written, and electronic forms of communication. Nonverbal communication also called the “silent language,” nonverbal communication can be defined as “no word human responses such as gestures, facial expressions, eye movements, tone of voice, and the like (Luthans, 2011).

Communication can flow vertically or laterally. Communication that flows from one level of a group or organization to a lower level is downward communication. Group leaders and managers use it to assign goals, provide job instructions, explain policies and procedures, point out problems that need attention, and offer feedback about performance (Robbins & Judge, 2013).

Upward communication flows to a higher level in the group or organization. It is the flow of information from lower levels to the higher ones (from subordinates to superiors or from employees to management). It's used to provide feedback to higher-ups, inform them of progress toward goals. It keeps managers aware of how employees feel about their jobs, co-workers, and the organization in general (Hener, 2010).

Horizontal Communication refers to the exchange of information between people operating at the same or similar levels, managers at the same level or any other horizontally equivalent workers. It saves time and facilitates coordination (Tubbs & Moss, 2008).

Diagonal communication flows between people, which are not on the same organizational level and are not in a direct relationship in the organizational hierarchy. This type of communication is rarely used – usually in situations when it supplements other types of communication (Spaho, 2013).

## 2.3 Conflict and conflict management strategies

Conflict is inevitable. It is part of all relationships. When people work together, conflict becomes a part of doing business; it's a normal occurrence in any workplace. It is inevitable part of organizational life since the goals of different stakeholders such as managers and staffs are often incompatible (Robbins & Judge, 2009). Conflict is doubt or questioning, opposition, incompatible behavior, controversy, or antagonistic interaction. It includes disagreements, debates, disputes, and active efforts to prevent a party from getting what it wants. Conflict in organizations includes interactions in which one party opposes another party interest or one party tries to block another party from reaching his goals (Champoux, 2011).

According to (Robbins & Judge, 2013) functional or constructive conflict supports the goals of the group and improves organizational performance while, a destructive or dysfunctional conflict hinders group performance. Conflict in organizations connected to task, relationship, and process.

Task conflict relates to the content and goals of the work. It occurs when the members of a group cannot agree about the tasks they are expected to perform (Stroh, North craft, & Neale, 2002). Relationship conflict focuses on interpersonal relationships. It diverts energies, hurts group cohesion, promotes interpersonal hostilities (increase personality clashes and decrease mutual understanding), and overall creates a negative environment for workers. It is a dys functional or destructive conflict (Schermerhorn et al., 2002). Process conflict relates to how the work gets done (Robbins & Judge, 2013).

Conflicts have both negative and positive outcomes to the individual employees and organization at large. Conflict management involves implementing strategies to limit the negative aspects of conflict and to increase the positive aspects of conflict, such as through enhanced team learning and group outcomes. It helps to find a middle way, an alternative to any problem and successful implementation of the idea (Kazimoto, 2013). Conflict management is the principle that all conflicts cannot necessarily be resolved, but learning how to manage conflict (avoidance, reduction, or termination) to minimize the dysfunctions of conflict and enhancing the constructive functions of conflict (Rahim, 2002).

Conflict management involves acquiring all-encompassing skills related to conflict resolution, self-awareness about conflict models, conflict communication skills, and impacting the degree to which an employee experiences ongoing conflict (Pathak, 2010).

A number of scholars have developed typologies of conflict management styles using the conceptual foundation provided by Blake and Mouton's (1964) managerial grid. The two dimensions have been labeled as cooperativeness (the degree to which one party attempts to satisfy the other party's concerns) and assertiveness (the degree to which one party attempts to satisfy his or her own concerns) (Robbins & Judge, 2013, Schermerhorn *et al.*, 2002, & Stroh *et al.*, 2002). Based on these five conflict-handling mechanisms are developed as follows:

**Avoiding;** (low concern for self and others) style has been associated with withdrawal, buck passing, or sidestepping situations. An avoiding person fails to satisfy his or her own concern as well as the concern of the other party (Rahim, 2002). Avoidance may be the best course of action if others can better handle the problem and when the issue is trivial (Stroh *et al.*, 2002).

**Competing:** it exists when one person seeks to satisfy his or her own interests regardless of the other party's desires. It is achieved through force, superior skill, or domination by one party. This is a high-assertiveness and low-cooperativeness situation (Schermerhorn *et al.*, 2012).

**Collaborating:** When parties in conflict each desire to fully satisfy the concerns of all parties, there is cooperation and a search for a mutually beneficial outcome. In collaborating, the parties intend to solve a problem by clarifying differences rather than by accommodating various points of view. It is a win-win solution that allows both parties' goals to be completely achieved (Robbins & Judge, 2013).

**Compromising:** One conflict management strategy is to reach a compromise, which means the parties to the conflict settle on a solution that gives both of them part of what they wanted. It occurs when each party gives up something of value to the other. No party gets exactly what it wanted, but neither loses entirely either. Parties choose to compromise are assuming they cannot reach a solution completely acceptable to everyone, but they would rather not force someone to accept a completely disagreeable choice (Kazimoto, 2013).

**Accommodating:** it exists when a party who seeks to settle an opponent may be willing to place the opponent's interests above his or her own, sacrificing to maintain the relationship. It is lower Assertiveness and higher cooperativeness (Robbins & Judge, 2013).

## 2.4 The role of communication in conflict management

Communication and conflict are in an interdependent relationship; communication can engender conflicts, can escalate conflicts and it also can prevent conflicts, help in conflict management and resolution activities (Hener, 2010). It is an important source of conflict situations, but that communication can prevent, avoid, manage, control and solve conflicts. According to (Robbins & Judge, 2013) most of the conflicts in organization arise due to communication problems. There are several situations that can be considered failed communication: when communication includes only a part of the information, when it incorporates ambiguous or threatening information or when it offers too much information (either in terms of quantity or too highly coded for the recipient). (Spaho, 2013) also concludes the exchange and sharing of information through communication process can help in a great way to resolve crises and build confidence between the parties in conflicts.

Joseph & Adewale (n.d) conducted a study on Effective Communication: A Strategic Tool for Managing Organizational Conflict from two multinational organizations in Lagos, Nigeria and concluded that effective communication is vital in reducing organizational conflicts and the communication skill of the communicator is crucial in managing organizational conflict. Nordin, et al., (2014) in their quantitative research in gas and Oil Company, the results of the study revealed that good communication climate associate positively to conflict management and conclude that the importance of organizational communication however cannot be overlooked in conflict resolution.

Aduet *al.*, (2015) conducted study on the Role of Conflict Management in Improving Relationships at Work with The Moderating Effect of Communication from two major manufacturing companies in Ghana and founded that that there exist a significant positive relationship between conflict management and communication at the workplace. Thus as conflict management increases then the entire communication channel within an organization is at its peak.

Chatterjee & Kulakli (2015) conducted a study to identify the effect of organizational communications system on the conflict among the employees in management institutes based in NCR region using an instrument used to examine the organizational communications system with five dimensions (freedom of act in communication, efficient inform, formal and informal communication, one-way communication, and open communication channels) and interpersonal conflict with three dimensions (conflict with colleague, conflict with chief, and conflict with subordinate). The study confirmed that communication is the key factor with an issue becoming an interpersonal conflict.

Thomas (2020) conducted a study on The Role of Effective Communication in Resolving Conflict in Afar Regional State, Ethiopia and founds that employees believed that communication plays role in resolving conflict and communication used in resolving conflict in the municipality.



### 3. RESEARCH METHODOLOGY

**3.1 Research design:** This study employed both descriptive and explanatory research design. Descriptive research design is selected because it is a powerful form of quantitative analysis and enables to describe the area of the research, characteristics of the variables and analyze data logically. Moreover, the method permits description of the collected data in words, pictures, charts, or tables. As this study to establish causal relationships between variables, explanatory design was used to determine the relationship between the dependent ( conflict management) and independent variables , and to address the effects of communication practice on conflict management.

**3.2 Target population and sample size:** This study was aimed determine the role of communication on conflict management. The population of this study is all permanent employees of Ethiopian Electric power corporation (EEPCO) it accounts for 200 individuals (employees). From them 100 employees are selected for the study.

**3.3 Sources of Data and methods of data collection:** This study focuses on primary data. A primary survey has been conducted to discover the effect of communication practice on conflict management. The items are all close ended items to get opinions of the respondents. The questionnaire carefully developed in a way that measures the effect of communication on conflict management.

**3.4 Data Analysis:** The data collected were analysed quantitatively. For quantitative data the researcher used graphs, tables, frequencies and percentages to show the highest number of group responses or the most common opinions from the group responses. To estimate the influence of communication practice on conflict management multiple regression analysis was used. The researcher has treated conflict management as the dependent variable and communication practice as the independent variables.

### 4. RESULTS AND DISCUSSIONS

#### 4.1 Demographic profile of respondents

**TABLE 4.1 PERCENTAGE AND FREQUENCY DISTRIBUTION OF DEMOGRAPHIC PROFILE**

	Description	Frequency	Percentage
1. Gender	Male	66	66.0%
	Female	34	34.0%
	<b>Total</b>	<b>100</b>	<b>100.0%</b>
2. Age	18-30	53	53.0%
	31-40	42	42.0%
	41 and above	5	5.0%
	<b>Total</b>	<b>100</b>	<b>100.0%</b>
3. Level of education	Primary education	5	5.0%
	Secondary	16	16.0%
	Diploma	27	27.0%
	Bachelor	33	33.0%
	Masters	14	14.0%
	PhD	5	5.0%



	Total	100	100%
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**Source; Own survey (2019)**

As it is shown on the above table, 66 respondents, representing 66.0% are males and 34 respondents, representing 34.0% is female. This shows the gender distribution for male employees is larger than the female. In the case of classification of respondents by age, 53 respondents representing 53.0% of respondents are their age between 18 – 30 years, 42 respondents representing 42.0 % are their age between 31- 40 years and the remaining 5 respondents representing 5.0% are their age above 41 years. This indicates that the majority of respondent's age is lies between 18 – 30 years. With regard to educational level of respondents, the table shows that 5 respondents, representing 5.0% of the employees have primary education, 16 respondents, representing 16.0% holds secondary education, 27 respondents, representing 27.0% holds diploma, 33 respondents, representing 33.0% holds Bachelor degree, 14 respondents, representing 14.0 % holds master's degree, and the remaining 5 respondents, representing 5.0 % are PhD holders.

This shows that nearly 79.0% of respondents have educational preparations of diploma and more than diploma.

**4.2 Correlation Analysis**

Based on the Table 4.2, the result of correlation matrix between each communication practice constructs and conflict management (CM) is analyzed as follow: As per Table 4.2 showed, Open communication channels (OCC), positively related to conflict management (CM) with a Pearson correlation coefficient of 0.301 ( $r=0.301$ ) and significance value 0.002. This significance tells that there is positive relationship between open communication channel and conflict management (CF). The Table also depict that as there is positive association between Formal communication (FC) and conflict management (CM) with a Pearson correlation coefficient of 0.374 ( $r=0.374$ ) significance value 0.05. This significance tells that there is medium effect and positive relationship between formal communication (FC) and conflict management. On the other hand, the Pearson correlation test indicated in the Table 4.2 also showed that there is high effect and positive correlation between Informal communication (IC) and conflict management (CM) with a Pearson correlation coefficient of 0.494 ( $r=0.494$ ) and significance value is 0.000. This significance tells that there is significant association of informal communication and conflict management. As per the Table 4.2, the correlation test conducted between Freedom of act in communication (FAC) and conflict management clearly indicates that there is high and positive relation between the two. The result of correlation coefficient showed 0.517 ( $r=0.517$ ) and significance value is 0.000 which indicates as there is significant relation between them. As Table.1, indicated all the independent variables are positively correlated with the dependent variable at 0.05 level of significant.

**TABLE 4.2: CORRELATION BETWEEN ELEMENTS COMMUNICATION PRACTICE AND CONFLICT MANAGEMENT**

		OCC	FC	IC	FAC	CM
OCC	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	100				
FC	Pearson Correlation	0.301**	1			

	Sig. (2-tailed)	.000				
	N	100	100			
IC	Pearson Correlation	.318**	.306**	1		
	Sig. (2-tailed)	.000	.000			
	N	100	100	100		
	Pearson Correlation	.310**	.330**	.344**	1	
FAC	Sig. (2-tailed)	.000	.000	.000		
	N	100	100	100	100	
CM	Pearson Correlation	.301*	.374*	.494**	.517**	1
	Sig. (2-tailed)	.002	.001	.000	.000	
	N	100	100	100	100	100
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: Own survey (2019)

### 4.3 Regression analysis

A Multiple Linear Regression analysis was conducted to investigate the relative influence of each variable on conflict management. In this part, conflict management was regressed against the four variables (Open Communication Channel, Formal communication, Informal communication, and Freedom of act in communication). The results are presented in table 4.3, 4.4 and 4.5 below.

**TABLE 4.3: MODEL SUMMARY**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.696 <sup>a</sup>	.484	.471	.654

a. Predictors: (Constant), Open Communication Channel, Formal communication, Informal communication, and Freedom of act in communication

R defines the relationship among the variables and that should be more than 0.5 and the table result shows that (R=0. 696) which is greater than 0.5 (Bashir, 2017). The magnitude of the adjusted R Square is 0.471. This means that 47.1 percent of the dependent variable (conflict management) can be explained or influenced by the independent variables, while the remaining 52.9 percent is explained by other variables. The model summary result clearly revealed that the model is reasonably fit for further analysis. R<sup>2</sup> values of 0.26 and above are considered substantial as Cohen (1988) discussed cited in (Rahman and Kamarulzaman, 2012).

**TABLE 4.4: ANOVA<sup>A</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	62.126	4	15.531	95.390	.000 <sup>b</sup>
	Residual	66.274	96	.428		
	Total	128.400	100			

a. Dependent Variable: conflict management

b. Predictors: (Constant), Open Communication Channel, Formal communication, Informal communication, and Freedom of act in communication

The ANOVA results associated with the model are presented in table 4.4 and shows that F-stat which is used to measure the overall significance of the model is 95.390 and the p-value was 0.000 ( $p < 0.05$ ). This indicates that the overall model was reasonable fit and there was a statistically significant association between communication practice and conflict management.

**TABLE 4.5: REGRESSION COEFFICIENT BETWEEN INDEPENDENT VARIABLES AND DEPENDENT VARIABLE**  
**COEFFICIENTS <sup>A</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.754	.285		5.650	.000
Open Communication Channel	.196	.063	.211	3.117	.002
Formal communication	.160	.080	.168	2.004	.003
Informal communication	.156	.078	.162	1.989	.048
Freedom of act in communication	.320	.067	.341	4.742	.000

a. Dependent Variable: conflict management

Source: Own survey, 2019

Table 4.5 above displays the estimates of the multiple regression of conflict management against its variables for the sample of 100 individuals from the corporation. On the basis of the analysis of multiple regression result, it can be said that the relationship between the independent variables (viz. Open Communication Channel, Formal communication, and Freedom of act in communication) and dependent variable (i.e. conflict management) is significant at 5 percent significance level, while informal communication is not significant at 5 percent.

Unstandardized beta coefficients (also known as rate of change) indicated how much the dependent variable varies with an independent variable, when all other independent variables are held constant. Standardized regression coefficients, were used to determine the relative importance of communication practice in predicting conflict management. The beta coefficients indicated that how and to what extent communication practice dimensions influence conflict management. On the basis of the result of multiple linear regression analysis result, multiple regression models can be written as follows;

$$Y_i = 1.754 + 0.211X_1 + 0.168X_2 + 0.162X_3 + 0.341X_4 + 0.05$$

Where,  $Y_i$  is the dependent variable (conflict management),

The value 1.754 is the constant (the value of  $y$  when the value of all independent variables are 0), whereas,  $X_1$ ,  $X_2$ ,  $X_3$ , and  $X_4$  refers Open Communication Channel, Formal communication, Informal communication, and Freedom of act in communication respectively. Finally, the researchers set its confidence level at 95 percent with 5 percent (0.05) error term.

The standardized beta coefficient column shows the contribution that an individual variable makes to the model. The higher the value of beta coefficient shows the great contribution or impact of the independent variable in explaining and predicting the dependent variable. Among

all communication practice constructs, Freedom of act in communication with its beta coefficient value of 0.341 has emerged as the most important construct in predicting conflict management followed by Open Communication Channel, formal communication, and informal communication with beta value of 0.211, 0.168, and 0.162 respectively. Generally, as indicated from the regression result, the researchers identified that all of the proposed communication practice dimensions except informal communication have positive and significant influence on conflict management.

## 5. Conclusions and Future Research Direction

The study sought to examine the effect of communication practice on conflict management. The study findings of correlation analysis showed that all constructs of communication practice (Open Communication Channel, Formal communication, Informal communication, and Freedom of act in communication) were positively and significantly related to conflict management. The findings of the multiple regressions analysis showed that the observed changes in communication practice attributed by the elements of communication practice is 47.1% (adjusted  $r^2 = .471$ ).

This finding of this research shows communication practices significantly affect conflict management of Ethiopian Electric Power Corporation north western regional office. The study also reveals from four major dimensions of communication practices, Open communication Channel, formal communication, and Freedom of act in communication has a positive effect on conflict management, while informal communication doesn't have a significant effect. The results of this study will have important implications and is believed to be helpful for public sectors in Ethiopia. The study recommends that future studies should include more variables from different variables and models as well as additional social issues at macro level.

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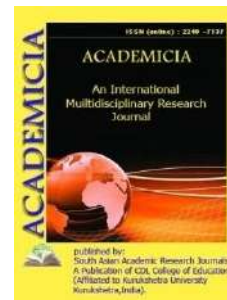
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## SOCIO-PHILOSOPHICAL ANALYSIS OF THE CATEGORY OF SOCIAL TRUST IN CIVIL SOCIETY AND DEMOCRACY

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### ABSTRACT

*New conceptual horizons allow us to revise existing approaches to the analysis of relations between society and the state and analyze them in the context of systemic socio-economic and political processes. Thus, this article pursues two goals: on the one hand, to describe the main approaches and arguments explaining the development of civil society and democracy, and to show their relationship with system theories that describe socio-economic and political processes in various societies; on the other, to analyze the scientific literature and show research prospects. The solution of these problems will make it possible to demonstrate the explanatory power of the concepts of civil society for understanding social processes, as well as determine the factors that influence the development of the phenomenon itself.*

**KEYWORDS:** *Civil Society, Democracy, Social Trust, Interest, Democratization, Theoretical Approaches, Values, Tolerance.*

### INTRODUCTION

The first ideal-typical concept of civil society was described as "a dynamic complex which is characterized by a non-violent, self-organizing, self-assessing tendency and protected by the law of non-governmental institutions in constant problematic relations with each other and with public authorities." [1]. There are different district views and approaches on the context of the emergence of the concept of civil society. As Michael Edwards describes, the concept of civil society has been repeatedly distorted and reinterpreted because of its multifunctionality, its use not only in the scientific environment, but also in the political and social, public spheres [2]. Indeed, during its existence, this concept has become very important not only for researchers and

analysts, but also for politicians, active citizens. Charles Taylor also defined the concept of civil society as follows: “A network of associations that unites citizens on the basis of common interests, is autonomous and relatively independent of the state. The existence and activity of such associations provide an opportunity to influence public policy” [3].

One of the debates about the relationship between civil society and democracy is the thesis that civic associations can both help and hinder its development. Recognizing that civic associations do not always lead to tolerance and participation in public activism, but can create repressive scenarios and support authoritarian regimes, as well as promote clientelism and corruption, was an important step toward eliminating the normative resonance of civil society theory [4]. Researchers cite the collapse of the Weimar Republic as an example, that is, citing hyperinflation in the 1920s and a radical shift in needs and values in society [5]. Another example of the proliferation of civil society organizations, which has not always led to the practice of democratic governance, is Germany in the 1930s, where civil society groups developed during this period could not prevent repression and undemocratic regimes [6]. These findings have led to the development of evidence that a specific context must be taken into account that clearly affects how social capital “works” in different contexts. According to Nord, this or that scenario of the development of civil society depends on a number of external conditions. In general, the researcher distinguishes three factors, the options of which had long-term consequences for the development of civil society in nineteenth-century Europe:

1. The integration of the rural population into urban life during the formation of the national state (in the case of France and the United Kingdom, this played a decisive role);
2. The role of religious communities and churches in the structuring of civic associations (the positive role of Protestantism in socio-economic and political development is highlighted by Max Weber, but the role of other denominations in shaping civic practice is not always the same);
3. The nature of liberal-designed community initiatives and their interactions with parliamentary institutions (primarily connected with political parties) [7].

Hence, the impact of civil society on the political regime depends heavily on the context. If the quality of democratic governance in Patnem's idea is the key to answering the question of the participation of citizens in activities and associations, then the development of his arguments allows to take into account the role of political culture in the formation of democratic values in society.

The phenomenon of civil society is closely related to the perception of citizens of the values of civil, democratic political culture. Discussing the existing theoretical data on the compatibility of democratization and civic political culture, Ronald Inglehart and Christian Weltsel acknowledge that the exact direction of the interaction between these phenomena (phenomena) is not yet clear [8]. At the same time, according to their research, the political culture and values that dominate society have an impact on democracy, but in turn they are shaped by socio-economic conditions. The evidence based on the scholars is that the category of “political culture” is a complex and complicated measurable concept, often used as a residual category. Measuring and evaluating its impact on the development of a society is extremely complex, both methodologically and theoretically. Therefore researchers focus on the concept of value as a more understandable category, distinguishing between two types: survival (survival) and self-expression values. The

relationship between citizens' values and common priorities for political development is unclear. In the case of less developed countries, however, society can separate democratic values on its own. However, the primacy of the values of survival (basic material needs of man) hinders the formation of democratic practice. For example, the survival (survival) values inherent in the majority of the population in relatively poor countries do not allow for the creation and maintenance of democratic practices of citizen participation. On the contrary, the values of self-awareness, self-expression, and demonstration have a positive impact on supporting democratic institutions [9]. Values of self-expression are a complex indicator that includes the following components: 1) the general level of trust between people; 2) level of tolerance; 3) postmaterialistic aspiration to civil and political freedom; 4) civic activism; 5) subjective feeling of well-being. At the same time, the statistical model of Inglehart and Welzel shows that the level of socio-economic development is determined by the priority of one or another value in society, which is ultimately reflected in the practice of civic participation and democratic governance.

It should be noted that the concept of understanding the relationship between social capital, political culture and democracy and civil society according to the Neotokvillian tradition dominates in both Western and Eastern scientific literature, civil society and NGOs (non-governmental non-profit organizations). Theoretical reflection and empirical research allow to form a modern interpretation of the concept of civil society and understand its impact on political and socio-economic processes [10]. That means, it served as a reason for a critical rethinking of the thesis on coordination with the practice of democratic governance and civic participation..

Teda Skocpol's argument for the role of citizens and organizations in the formation of democracy is based on historical institutionalism, which observes associations not as a generator of social trust but as a source of public pressure [11]. According to the American researcher's points of view, a democratic political system is the result of conflicts between different social groups, as well as between the authorities and society [12]. Current social and political disagreements force citizens to unite in order to influence the government to protect their interests [13]. Elites, in turn, mobilize citizens united for common goals to exert political pressure. Civil society institutions and organizations institutionalize channels that influence power, allow lesser-known groups to participate in political decision-making, and oppose unlimited governance [14]. Teda Skocpol and her colleagues point out that civic associations are not a separate organization separated from the government simply because of the individual actions of citizens. According to them, the mass formation of political parties in the first half of the twentieth century coincided with the period of development of civic associations. Government institutions and political parties have undoubtedly exerted their influence on the diversity, codes of conduct and strategy of civic associations. Research shows that the process of electoral mobilization in national elections in the United States encourages citizens to join the activities of volunteer associations [15]. Civic organizations help to activate their members to carry out political actions and law enforcement activities under certain conditions [16]. The result of such activities is membership registration and the growth of organizations that include a wide range of citizens. The institution of equal and free elections has become an important way of structuring existing conflicts and disagreements in society. In the 1950s and 1960s, both elites shifted their focus from collaboration to professional and human rights organizations focused on social services. As a result, the demand for large-scale volunteer movement has declined, leading to a decline in public participation in civic associations. Thus, Skocpol's interpretation provides

an opportunity to explain the qualitative changes in civil society based on the strengths of the political elite. According to Scotcpol's logic, conflicts create civic activism, and their activities lead to the emergence of institutions, and institutions structure these conflicts and ensure equality and protection of interests. Depending on their preferences and elite selection, they are mobilized with the help of social groups or mass political parties and trade unions, or human rights organizations.

Nancy Bermeo explains in her book that since the 1970s, civil society has been seen as a positive component of democratic governance. The development of concepts of interest groups, class associations, and popular organizations have demonstrated their uncertain role [17]. At the same time, Juan Linz, a scholar who studies the change of political regimes, considers the close relationship between the ruling elites and the organized groups of citizens problematic, as overly active civil society often leads to instability in the democratic era [18]. First of all, the relationship of political parties with labor movements, trade unions and religious organizations does not contribute to the sustainable functioning of institutions, as existing social conflicts have a political dimension. Researchers such as Martin Lipset and Giovanni Sartori have also highlighted the role of political parties as important institutions in ensuring that citizens interact with the state in support of democracy. The ability of civil society to structure social conflicts is crucial because an institutionalized, politically mobilized, divided society poses a threat to democracy [19].

Some studies show that the participation of similar citizens in public (non-profit) organizations does not affect the quality of political institutions, and in many cases can be the opposite. Sheri Berman believes that political institutionalization determines at the national level whether public participation is used in civil (democratic) or non-citizen practices [20]. Strong political institutions have the ability to resolve and structure existing contradictions in society [21], they direct citizens to achieve long-term goals, not short-term ones. Political stability and transparent rules of the game (rule of law and security of private property) guide citizens to perform tasks within the existing system. The lack of such stability leads to civil society becoming an alternative to politics for a citizen who is dissatisfied with the current situation. A number of researchers agree that the results of civic activism depend on the state's ability to meet public demands and the nature of the political community [22].

The theory of noncorporateism, which sheds light on the interactions between interest groups and the state, has shown that the role of the state is key in resolving social conflicts, creating platforms for dialogue, and developing certain communities. In particular, the experience of the Scandinavian countries shows that the leading role of the state in resolving disputes between employers (trade unions) and trade unions is to take into account and agree on the views of these two leading stakeholders in shaping the political direction will help achieve stability in the development of the society.

Philip Schmitter, one of the leaders in the theory of necorporatism, defines this as a system of interaction and representation of interests, a special ideal-typical agreement that provides communication between decision-makers, associative stakeholders of civil society and the authorities [23]. There is a much broader definition to the concept of civil society, which is all the associations in society, which are not part of the state, and thus include themselves in business systems and civil society organizations. Schmitter prefers to describe noncorporateism

as a system of interaction of interests. First of all, he doubts the ability of formal associations to express the demands of their members, as he believes that this may not be a task of great importance to them [24].

Based on this interpretation, some researchers extend it to a system of political participation, in which citizens delegate their rights to the leaders of organized and centralized groups [25]. In this sense, non-corporate systems are representative bodies use forms that compensate for the protection of interests by political parties and parliament. Sometimes the emergence of non-corporate systems interaction is associated with the inability of political institutions (political parties and parliaments) to resolve existing social conflicts in society. Therefore, the government should always rely on the “most reliable” ways to reach an agreement [26]. One of these ways is used to create non-corporate areas.

Schmitter links the systematic involvement of stakeholders in the decision-making process at the national level to the development of capitalist society [27]. Consideration of the advantages of socio-economic stakeholder groups in the interaction as an object of research has left its mark on the methodology and basic principles of the theory of corporateism. The scope of researchers' interests here includes tax and socio-economic policies in which the state has a serious interest. In addition, interaction or activity agents are often large business systems and trade unions that have significant resources and can influence the state apparatus. Therefore, it is necessary to take into account the specifics of non-profit organizations that can behave as interest groups, unite citizens for common goals, and influence the existing political path using certain methods. Scholars acknowledge that noncorporate groups have been severely negated in noncorporate analysis [28]. Annette Tsemmer's scientific work also emphasizes that this concept can be very useful in some countries to shed light on the specific interactions between society and the state. In the example of Germany, we see that large associations and citizens of non-profit organizations are integrated into the process of political decision-making and implementation.

One of the scholars who developed this theory was Klaus Offe, who defined corporateism as a system of political participation in which the right of citizens to participate in political processes was divided into centralized group leaders [29]. To describe the relationship between the state and stakeholders, Offe proposes the concept of public prestige (status). This status includes many aspects:

1. Representation system is provided with state resources;
2. State regulation of the range of stakeholders;
3. Formal regulation of the relationship between members of the organization and its representatives.
4. The right of associations interested in the formation and implementation of political directions to act within the legal system [30].

One of the important developments of this theory is the elucidation of two models of noncorporateism, i.e. there is a system of stakeholders who may or may not be able to advance an independent political agenda independently of the state, depending on the state of the organization management system. The point is that “bottom-up” associations with a hierarchical system of governance can advance relatively independent requirements set by stakeholder members. Such a model is called “liberal” corporateism. In contrast, the “state” model of



corporateism is characterized by the state's control over the system of interest representation and the inability of interest groups to maintain a relatively independent agenda. This is mainly due to the weakness of the organizational system and the lack of mechanisms for the involvement of stakeholders in the governing bodies. These models make it possible to distinguish significant differences between systems based on stakeholder representations.

In conclusion, it should be noted that noncorporateism explains a special type of interaction between stakeholders and the state, demonstrating its ability to resolve and stabilize existing social conflicts. In such a relationship, the state plays a crucial role in shaping the political direction, in which it limits the influence of interest groups only to recognized and significant (from his point of view) associations. Under certain circumstances, when it is not possible to reach an agreement without state intervention, this allows the interests of the latter to be taken into account. Thus, in non-corporateism, the leading and regulatory role of the state is necessary for some communities to form a political agenda that takes into account the interests of the main stakeholders in society.

In general, research by stakeholders shows that their specific activism may counteract the effective functioning of the market and the state [31]. Non-transparent, non-competitive cooperation of interest groups with representatives of the ruling class leads to the formation of redistributed alliances, coalitions, which take advantage of the close interaction that has arisen, preventing the reform of similar practices. Of course, the socio-political context plays an important role in creating such relationships.

Research in this area suggests that it is the characteristics of the existing political regime and the degree of transparency of the political decision-making process that determine the nature of civic associations, their values and the results of collective action [32]. In particular, economic inequality, the selectivity of application law, and social conflicts affect social capital options [33]. The example of transition to democracy and return shows that in Eastern Europe and Latin America, attempts by a repressive political regime to influence civil society are inevitably denied [34]. Thus, the strength and viability of civic associations depends directly on the ability of political institutions and the government to exercise the rule of law [35]. It is the guaranteed legal norms that ensure the predictability of social interactions and their transparency, which, in turn, leads to the formation of general social trust. Such accumulated social capital is, as researchers point out, the state's ability to guarantee the rule of law [36].

The debate over the role of civil society in the democratization of the political system can also be seen as a result of political reflection on the political system of the European Union. Its critics question whether the bureaucracy and the expert community are capable of providing effective governance if they have weak traditional institutions of representation and civic participation mechanisms in political decision-making. Theoretically, the role of civil society in activating good governance is related to the fact that it is civil society associations that are able to represent the truly important interests of society and report important issues [37]. It means this important information function that has enabled the EU to be able to propose optimal management decisions and monitor their implementation. The informational and representative functions of NGOs, as well as their ability to provide social services, were recognized by various structural units of the European Commission [38].

On the one hand, in the context of the lack of democratic legislation of the national institutions of the European Union (EU), the improvement of interaction with civil society organizations for EU institutions should help to create a democratic practice of involving civil society organizations. On the other hand, the interaction with civil society is aimed at improving management efficiency by involving civil society organizations in the process of developing policy documents.

Expansion of the practice of participation of NGOs in EU programs required European officials to regulate the categories of existing organizational and legal forms. At the same time, the European Commission adopted the following division of non-profit organizations: service providing NGOs help to provide social services; "Advocacy NGOs" represent the interests of sections of society, designed to influence government policy and public opinion. Of course, both activities belong to all organizations to one degree or another. European countries use different criteria to describe NGOs whose main area of activity is socially useful activities.

The European Commission is concerned with providing representation to improve its interaction with civil society organizations. For this purpose, the strategy of non-profit organizations to create and implement pan-European associations (so-called umbrella organizations and associations) was selected. To a series of such organizations CONCORD and the European Environmental Bureau were initially 100% sponsored by the European Commission [39]. The amount and order of funding will vary depending on the purpose and involvement in the NGO. Thus, it is a support system that includes long-term (5-6 years) administrative costs, and organizations such as the European Youth Forum and the European Women's Lobby are open. The EU represents the organizations of all member states.

From the pluralistic position of the theory of democracy, understanding the experience of the European Union, Robert Dahl argues that the citizens of Western European countries are confronted with a problem (dilemma). On the one hand, a national government that is accountable to its citizens may not always be effective, which is prone to populism after the election, and tends to change its political course. On the other hand, the EU's professional paperwork (bureaucracy), capable of effective governance, does not adequately account to the public. This dilemma is relevant not only for the EU, but also for all modern political systems, in which society and the economy are subject to external influences that are difficult to control, such as the global economy and world politics [40].

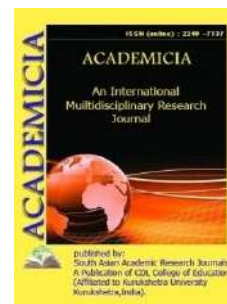
The debate over how to ensure the participation of citizens in non-democratic national institutions has aroused interest in the concept of public participation within the theories of deliberative democracy and participatory democracy, in which civil society has a special role to play. These integrative concepts of democracy are supposedly aligned with Gegel and Montesquieu's notions of high-level civil society. The deliberative concept of democracy considers the relationship between the political process of decision-making and public debate [41]. This area prepares the ground for a debate on issues such as government and decision-making requirements. The collective discussions help to bring important issues to the attention of decision-makers, who act by justifying themselves by proving as they are in the "common interest".

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## SOCIO PRAGMATIC ASPECTS OF THE OCCURRENCE OF METAPHORS IN THE WORKS OF CHARLOTTE BRONTE

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### ABSTRACT

*The article explores how the formation of metaphors in a specific communication environment is based on cognitive practices and, in general, on the main causes of metaphorical creativity. The article observed that the social environment of communicants plays an important role in choosing a metaphor. Indeed, it is difficult to imagine the manifestation of the process of linguistic thinking not justified for certain reasons. The literature on cognitive linguistics refers to the practice of generalizing and using one's own experience in metaphorical thinking and speech. However, such an interpretation can only lead to a partial understanding of the nature of the metaphor. It is worth noting that the formation of contextual requirements and conditions is not only a metaphor, but also a key feature that determines the essence of other linguistic phenomena.*

**KEYWORDS:** *Jane Eyre, Cognitive Linguistics, Conceptual Metaphor, Social Factors, Metaphorical Structure, Event, Context, Environment, Gender Concept.*

### INTRODUCTION

Metaphor is created by a specific person, in exact, the author or the subject of the speech. This process is interpreted directly as a product of the creativity of linguistic thinking, as an example of the conceptualization of reality and linguistic realization in cognitive linguistics. Indeed, Kovech stated that at the same time, this creative activity involves the formation of a metaphor and attempts to use it for expression of thought [Kövecses, 2010]. Such kind of broad approach allows for a study focused on the creation of a metaphor, and for a separate or specific analysis of some aspects of it also.



Particularly, the metaphorical structures, which were activated in the text of the novel "Jane Eyre" are the product of efforts to rework and create one or another type of conceptual metaphors. Thus, even though many of them are as a consequence of conceptual comparisons appeared urgently such as "knowing is seeing" (bilmoqko'rmoqdemakdir), "events are action" (voqeafaoliyatnatijasidir), "emotion is force" (hissiyotkuchdir), others are based on conclusions from familiar everyday experiences such as "life is a journey" (hayotsayohatdir), "a life time is a day" (tiriklikkuningo'tishidir), and "people are plants" (odamlaro'simlikkao'xshaydi). That is why, the goal isto observe what cognitive actions they rely on the formation of metaphors in a particular communication environment and what reasons underlie metaphorical creativity in general in this part of our work. It is difficult to imaginelinguistic mentality process would in any way be spontaneous, without cause and without basis.

According to the literature on cognitive linguistics, when a person thinks and speaks metaphorically, he refers to the practice of generalizing and using his own experience. However, such an interpretation might lead to a partial understanding of the nature of phenomenon "metaphor". According to Z. Kovech's viewpoint, it is not possible to contradict that core reasons of metaphorical thinking are in most cases related to context [Kövecses 2006; Kövecses 2010]. It should be stressed that the formation on the basis of the context's requirements and conditions is not only key feature that determines a metaphor, but also the essence of other linguistic phenomena. In addition, Z. Kovech and his followers came to this conclusion while analyzing material collected from various resources. We try to explain the aspects of metaphor formation in relation to the context of the text, the statement of reality, by referring to the Charlotte Bronte creative works.

While describing the concept of 'context', linguists often refer to the linguistic framework, taking this or that unit, in conjunction with any other unit, coming side by side into account. Such kind of approach is even reflected in dictionaries about linguistic terms. To illustrate, the linguistic siege is dominant in all four meanings of the definition of the term "context" according to the dictionary compiled by David Crystal [Crystal 2005: 108-109]. Indeed, it difficult for linguists, who emphasize the importance of context for semantic expression, to move away from the rules defining the specific features of a language system, the functions that its units perform. However, especially, in the analysis of speech structures, identifying their communicative content, it is necessary to take into account, its transition situation, the relationship between the interlocutors, the genre of the text, as well as taking into account socio-cultural indicators in addition to the previous and subsequent structures. American scholar Bronislaw Malinowski in his time suggested that the term "cultural context"(madaniykontekst) which was brought in by him is important with the environment in which communication takes place [see Swann and others 2004: 50]. In the same way, the concept of "context of situation" (vaziyatkonteksti) describes the state of speech activity, that is, what speech actions participants perform in a given situation. According to J.Martin, "culture can be described with actions that can be understandable to everyone" [Martin 2001: 156].

So, besides being connected with social and cultural environment, the concept of context is considered in relation not only to, but also to the natural-physical environment. The environment or surroundings are based on geographical basis, covering the surrounding landscape, fauna, flora, habitat, and so on, and the speaker has his or her own outlook on them. The objects, which have their own place in the linguistic scenery of the world, are reflected in a certain language and

in the mind of each interlocutor. It is inevitable that diversity in the environment affects the linguistic occurrence of concepts formed in thinking. The reason is that human activity is related to the characteristics of the environment.

Usually, the geographical, biological-physical environment around people who communicate in a particular language is understood the content of the environment or the natural environment is talked about. It is predictable that there will be differences in the natural environment in which people of different nationalities live, and people will involuntarily adapt such kind of environment. It is obvious that such adaptation is also reflected in their communication. The ability to form metaphors is not the same among individuals living in different languages and in different environments, including creators. Let us provide the example from the following passage from Jane Eyre's novel:

*Reader, do you know, as I do, what terror those cold people can put into the ice of their questions? How much of the fall of the avalanche is in their anger? Of the breaking up of the frozen sea in their displeasure? The avalanche had shaken and slid a little forward, but it did not yet crash down.* [Chapter 35, 396].

This pattern is Jane's very emotional response to St. John Rivers, the reason is that St. John had begun to treat him coldly, as he received a rejection of his offer. In the passage, the leading conceptual metaphors should be defined as "EMOTION IS SUBSTANCE, EVENTS ARE ACTIONS, RATIONAL IS COLD".

Here, source domain (tayanchhududi) of metaphorical change such as ice (muz), fall of avalanche (muzko'chkisi), breaking up the frozen sea (dengizmuzqatlaminingyorilishi) move to another place and serve to express the meanings of cold attitude, anger, protest. As a result, the reader of the novel believes in St. John River's being really upset.

The phrase in the opening part of the passage "*the ice of question*" came as the result of a metaphorical conceptualization of St. John Rivers 'cold and indifferent attitude toward Jane. This metaphor reflects the human psyche partially, as the ice is a cold thing and the unpleasant and rude actions of one of the speaker affect the other one. Here, the conceptual connection between ice and emotion happens.

Similarly, the compositions like "*fall of the avalanche is in their anger*" and "*breaking up of the frozen sea in their displeasure*" are as the result of the development of the metaphor "EMOTION IS FORCE". The writer encourages the reader to feel reality differently by means of developing an individual member of a pre-existing source in an unusual method. In this case, the concept of "power" (kuch) is realized in a exclusive way through the concepts of "*fall of the avalanche*" and "*the breaking up of the frozen sea*". It becomes a means of clearly transmission to the reader the anger and resentment towards the interlocutor in its turn.

However, knowing the reason for choosing such source areas is important. As mentioned above, the means by which metaphor is formed are not based on the human psyche, but also the role of a specific environment or environment in it is also vital. As the natural, physical environment changes, the process of selecting the intended source will differ. It is definite that England is an island and its nature is unique. Of course, Jane's metaphorical creativity adapts to this very environment as she lives on this island, and it is natural for her to refer to the environment she is familiar with to express negative emotions, such as the ocean, the sea, the ice avalanche. In order

to understand the impact of the environment on metaphorical choice better, the metaphorical abilities of those living in another environment can be compared. For instance, it is hard to imagine that a representative of the Uzbek nation would choose such concepts as "frozen sea" and "ice avalanche" as a source for comparison in the situation above.

Let us analyze another passage from the novel:

*A ridge of lighted heath, alive, glancing, devouring, would have been a great emblem of my mind when I accused and menaced Mrs. Reed: the same ridge, black and blasted after the flames are dead, would have represented as meetly my subsequent condition, when half-an-hour's silence and reflection had shown me the madness of my conduct, and the dreariness of my hated and hating position* [Chapter 4, 31].

In this passage, Jane's rage is taken as a target during the assimilation of the conceptual metaphor "ANGER IS FIRE," which is likened to fire. Thus, his mental state is reminiscent of the peak of a blazing fire that ignites an alternative and angry passion for the endless desert. Here, the fire first begins to burn slowly, and the description of this condition with the word "alive" (tirik) is a metaphorical expression of the birth of a feeling of anger, which demonstrates the reality. After several time, the fire burns vigorously, and the use of the word "glancing" indicates that the anger is increasing. Eventually, the fire rockets completely out of control, and the use of the unit "devouring" (yamlamoq, komigatortmoq) is an example of the metaphorical conceptualization of the states of outrage and explosion. The combination of "black and blasted", which is one of these metaphorical structures, indicates that after the fire, the character experiences depression after anger in the image of the situation.

The conceptual metaphor of "ANGER IS FIRE" mentioned by Jane, precisely, by her prototype Ch. Bronte, reflects the natural environment and conditions which she had. Haworth, where the Bronte family lived, is located in the Worth Valley in the middle of pastures in Pennin. The pastures are as endless as the steppe. According to L. Miller, the American literary critic and who studied the works of Charlotte Bronte, Haworth is the place which "has the appearance of a legendary shrine and is a romantic space in the middle of an endless pasture where the wind blows without stop" [Miller 2003: 40]. Other writers have also emphasized the magical power of this place, which inspired the family of Bronte. Emily Bronte's novel "Wuthering Height" is an example of this. The events described in this novel, which tells the story of a relationship between a lady named Catherine (Katerin) and a man named Heathcliffe (Hitkliff), occurred in pastures and bogs near Haworth.

In another type of natural environmental context, the direct material environment the situation in which the event or conversation takes place takes the lead. As Z. Kovech stated, material events not only create an environment for objects to live, but also affect the actions of mind. Besides, the poet or writer can describe the nature, the environment around there, and use that environment as a conceptual source [Kövecses, 2010]. However, it is also noticeable that the surrounding natural environment serves as a target for metaphorical transmission sometimes. As an example of this, use of the natural-material context can be seen in the following situation:

*The thought of Mrs. O'Gall and Bitternutt Lodge struck cold to my heart; and colder the thought of all the brine and foam, destined, as it seemed, to rush between me and the master at whose side I now walked, and coldest the remembrance of the wider ocean – wealth, caste, custom intervened between me and what I naturally and inevitably loved* [Chapter 23, 239].

The interest and uncertainty about Jane's feelings encourage Edward Rochester to look for a way to persuade Jane to tell the reality. Suddenly, he tells her that he will soon marry Miss Blanche Ingram and Jane has decided what she will do in the future that she will go to Iceland and bring O.Gall's offspring up. Ireland is separated by the sea from the UK, and this context helps to activate the frame of ocean, and let Jane talk about the barrier of wealth and castle (tabaqato'sig'i), the barrier stood between Jane and Rochester.

According to our opinion, on the basis of the phrase "intervene between" in the text, the conceptual metaphor "SOCIAL GAP IS PHYSICAL DISTANCE AND BARRIER" is activated within the frame above. In this place, the concepts, which act as a source, "distance" (masofa) and "barrier" (to'siq), are developed using the concept of "vast ocean" (bepoyonokean). Through applying such a linguistic reasoning practice, it is associated with the material environment mentioned during the conversation and encourages the speaker to choose a metaphorical expression appropriate to that environment.

The role of socio-cultural factors in the formation of nominative and communicative units is at the center of researchers' attention [Rezanova 2003: 41]. of Non-verbal social factors includes the nationality, age, level of education, position in the community, profession of communicants. According to the literature on sociolinguistics and pragmalinguistics, much information has been provided on the role that these indicators play in the environment of communication.

According to psycholinguist V.P. Belyanin, "Worldview, which is reflected in the literary text, is the result of the author's perception of the world as a separate person and his linguistic realization" [Belyanin 2000: 55]. If we consider any individual to belong to a particular group, it must be agreed that the gender factor is also an integral part of the social context. According to N.Z. Nasrullaeva, who stressed that gender is manifested as a phenomenon that arises at the meeting of cultural, psychological, social norms, "the concept of gender has a social character, which reflects the occurrence of male and female stereotypes" [Nasrullaeva 2018: 28].

Linguists stressed that the linguistic actions and speech activities of men and women are not always compatible, and that their ability to create metaphors and use them in discursive activities is no exception also. Stanley Brandes's book "Metaphors of Masculinity" can be a striking example of this. Being familiar with the examples of oral creations prevalent in the Spanish province of Andalusia, the author states that one of the main aspirations of the male members of the indigenous population is to know in what respects they are similar to or different from females. Reference to examples of folklore, especially the metaphors they contain is one of the ways to achieve [Brandes 1992: 8].

There are also differences in the metaphorical abilities of men and women in the material that we have collected:

a) *The water stood in my eyes to hear this avowal of his dependence; just as if a royal eagle, chained to a perch, should be forced to entreat a sparrow to become its purveyor. But I would not be lachrymose: I dashed off the salt drops, and busied myself with preparing breakfast* [Chapter 37, 423].

b) *"I am no better than the old lightning-struck chestnut-tree in Thorn field orchard, - he remarked ere long. "And what right would that ruin have to bid a budding woodbine cover its decay with freshness?"*

*"You are no ruin, sir—no lightning-struck tree: you are green and vigorous. Plants will grow about your roots, whether you ask them or not, because they take delight in your bountiful shadow; and as they grow they will lean towards you, and wind round you, because your strength offers them so safe a prop"* [Chapter 37, 428].

It is visible that the metaphors of likening animals and plants are becoming more active in the above passages. While Rochester compares Jane to lamb, bird, skylark, flower, woodbine (qo'zichiq, qush, to'rg'ay, gul, beshbargli), he compares himself to a shepherd or a chestnut tree. The metaphors used in Jane's answer have a different source. She gave Rochester the qualities of an eagle and a tree while keeping the resemblance of a sparrow (sparrow) and a flower (woodbine) to herself. The appearance of such metaphors suggests that the social status of men and women in society is assessed variously. In other words, the delicate nature of women shifts to the imagination of them, to the scope of perception. In its turn, it is reflected in the process of conceptualizing the worldview through metaphor.

As we use metaphors in our speech activities, we try to adapt them to the social circumstances in which we communicate. It is stated that the social environment has a different look, this environment covers the relationship between the interlocutors, the norms of intimacy, and extends to the gender status of individuals interacting in different social conditions. We should also not forget that these social relations can be manifested in direct and indirect contexts.

Mainly, the impact of the direct social environment on the choice of metaphor is observed in the context of oral communication and is less common in literary texts. In Z. Kovech's article, there is an example from "USA TODAY" newspaper. The newspaper published an article about the famous musician Fats Domino, who lived in the flooded New Orleans, and the description to Domino was given in a such way: *"The rock'n'roll pioneer rebuilds his life- and on the new album 'Goin' Home' his timeless music"* [USA Today, 2007, September 7]. Z. Kovech regards the metaphor *"rebuilds his life"* as a symbol of the development of the conceptual metaphor "LIFE IS A BUILDING". According to the scientist, the reason why the conceptual basis is exactly this semantic analogy can be attributed to the fact that, Domino was rebuilding his house destroyed during the 2005 hurricane during the dialogue [Kövecses 2010: 683].

If Z. Kovech's comment is believed, we have to admit that the social situation, that is, the reconstruction of the house, the metaphor "LIFE IS A BUILDING" served as a conceptual basis for the development of a new metaphor.

Let us illustrate the place of the direct social environment in the choice of metaphor; here is an example from the novel "Jane Eyre":

*The forehead declares, Reasons sits firm and holds the reins, and she will not let the fillings burst away and hurry her to wild chasms* [Chapter 19, 190].

We see that the figurative expression is built around the central conceptual metaphor "EMOTION IS A CAPTIVE ANIMAL" here. The content of the metaphorical structure is trying to control emotion is equal to the animal control in the coverage. The metaphorical conceptualization of the concept of "encircled horse" (more precisely - "wild horse") is directly related to the environment. It is known that the events described in the novel took place in Britain in 19<sup>th</sup> century, and the main means of transport in this country was a horse-drawn carriage at that time. The same animal motivated Rochester to think metaphorically.

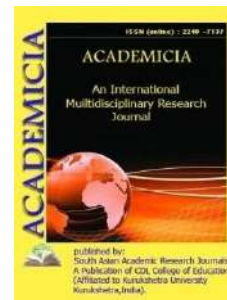


While predicting the future of her interlocutor Jane, Rochester, whose behavior resembles that of a fortune-telling gypsy woman, urged her to speak openly about her feelings. Rochester aimed at grasping the true nature of Jane's independent, confident and determined character through the use of a horse-riding frame model. On the other hand, Jane prefers to see herself in rational control rather than giving in to feeling. Such wisdom is metaphorically likened to a chariot driven by a horse. The task of the chariot driver is to control the movements of the horse, which is showing violent behavior. If the horse gets out of control, it will drag the cart into risk. The formation of such quality metaphor is directly based on the environment, and also to the characteristics of the speaker, Rochester as well. It is known that this person, who is one of the main characters of the novel, is one of the aristocrats who has enough belongings. Wealthy aristocrats spent a lot of time relaxing, riding horses and having a rest. Consequently, the choice of this metaphor is natural and appropriate to the conditions.

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## INTEGRATED REGIONAL DEVELOPMENT BASED ON FUTURE LAND USE

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### ABSTRACT

*The article is referred with the analysis of the content of activities for the development of land property. The projects implementation of land use planning and management is extremely relevant nowadays. The concept of "Land Development" is substantiated, the content of activities for the integrated development and development of large land properties is analyzed, the main problems and prospects for the development of this area are considered. The prospect of land-development is related not only with the development of the territory, but also with creation of laws and regulations on nature protection issues. It will help to improve the current situation in this area, as well as to prevent other possible problems.*

**KEYWORDS:** *Land-Development, Land Market, Investment And Construction Complex Investment Project, Land Property, Development Project, Development, Complex Development,*

### INTRODUCTION

The relevance of the chosen topic is due to the fact that the development of land assets is one of the most important areas of development. Land acts as the primary property and is part of the property complex of any building and structure. For many years in Uzbekistan there was no legal and economic base, which was necessary for the development of activities for the integrated development and development of land plots. However, in recent years, basic regulations have been developed that allow for the implementation of land development in the form that corresponds to established market relations.

To date, the development of land has become so relevant that it has formed as a separate professional area, called Land Development. Land development has become widespread, both in Uzbekistan and abroad. In this article, we considered such terms as Land development which represent the development of land plots.

The term “land” is supposed to be understood not in the usual everyday sense, but in the legal sense, which implies understanding the term “land” as an object of economic relations. This term in legal terminology is understood as a plot of the earth’s surface that has the ability to be an object of ownership, in conjunction with everything that is attached to it by nature or human labor. Land is an integral part of any property, and moreover, is the primary property. The land as well as the building undergoes fundamental changes in order to increase value. Land transformations can occur both within the framework of a development project to create or change a real estate object, and as part of an independent project aimed at changing the land plot. It is such projects that include the development of land, which is called Land Development. The Russian scientist Anatoly Nikolaevich Asaul in his writings characterized land development as an activity that is aimed at increasing the liquidity and investment attractiveness of land [1].

Under land development in foreign practice, it is customary to understand the type of investment business, the essence of which is to perform several successive stages:

1. Acquisition of land
2. Land development in order to increase market value
3. Preparation of the project for the targeted use of the land
4. Sale of the project to an investor who is ready to begin construction.

As in any other development project, in land development the main task is to increase the profitability of the project and reduce risks [2, p. 459]. All the tasks presented above are aimed at achieving these goals. For example, market analysis and land selection should be carefully conducted to select the most attractive property in which to invest and to develop a concept that will bring high profits with minimal risk. And most importantly, such a project should be in demand on the market. Kamenetsky Yu.V. believed that when developing the concept of a project for integrated development of the territory, it is necessary to take into account real solvent demand, otherwise such a project and the efforts of all project participants will be in vain [3, p. 251]. Justification of the necessary investments is also a very important stage, since already at the stage of project development, it is important to determine the feasibility of investing and the effectiveness of the project as a whole. As for the legal development of the land plot, these measures are aimed to a greater extent to reduce risks. These activities include such works as: registration of property rights to the land plot, change of the purpose of the plot, permitted use, work on land surveying and zoning of land plots, allocation of land and other works. The stage of design and engineering and technological development of the land plot is aimed at increasing the efficiency of land use and increasing its market value. The implementation of each of the tasks of Land Development increases the final cost of the land.

According to world practice, in many developed countries and cities the creation of the necessary infrastructure and engineering preparation of the land lies with the state. As a result of this, it most often turns out that the infrastructure is incomplete or when constructing facilities, outdated technologies and materials are used, since investors are not ready to invest heavily in non-

profitable facilities. The most rational solution in this situation is the concept of public-private partnership. This concept is widely used abroad. PPP is a kind of union between the state and an investor, businessman or developer in order to create projects that are of great importance to the state. The prospect of developing land development should be connected with the integrated development of the territory and the creation of a regulatory framework governing relations in this area, only after these changes are improvements in this area possible and the existing problems will not be easier to solve, they will not even be formed and to pile up. To implement these projects, it is necessary to create conditions under which the interaction of municipal authorities and developers (developers and project initiators) will be most optimal.

Today, there are many problems in land management due to the lack of inter-municipal coherence and interest in solving both general and private issues of land use in urban districts and municipal areas. One of the main problems is the problem of the practical impossibility of expanding the boundaries of an urban settlement or urban district in cases where the territory requires the consent of an adjacent municipal entity to seize their land, and even in cases where this does not affect the interests of other municipalities, the procedure itself expanding borders is quite complicated and time consuming. Another important problem in land management during the implementation of promising investment projects of regional significance in the inter-settlement territories is the lack of a consistent organized process of selection and registration of land plots, as well as poor activity in the selection and provision of land from the forest and water resources for the implementation of tourist and recreational areas.

The article is devoted to the analysis of activities on the integrated development of large land plots. The purpose of this scientific research was to analyze the activities on the integrated development of large land plots, to consider the main problems and prospects for the development of Land Development, and to develop mechanisms and tools to improve the efficiency of project management for the integrated development and development of large plots.

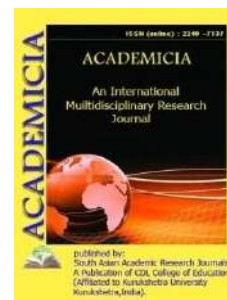
After analyzing the experience of implementing integrated development projects, examining the scientific and methodological literature and regulatory legal acts in the field of integrated development projects, we came to the conclusion that the concept of integrated development of the territory should be clarified in terms of the goals of this process. Integrated development of the territory is considered as an activity involving the implementation of all development tasks, including the preparation of documentation for the planning of the territory, preparation of land for construction, design and construction of residential, commercial, social, engineering and transport infrastructure and other development tasks, in order to create complex development, combining a complete set of real estate needed for a comfortable stay.

As a tool to improve the efficiency of project management for integrated development and development of large areas, we have developed a classification of integrated development projects for the territory, which structures all existing integrated development projects, highlighting the main characteristics of such projects. The presence of a carefully thought-out classification serves to improve the information exchange between the participants of the investment and construction complex and gives a clear understanding of the diversity of such projects. We also proposed several activities that contribute to improving the management and implementation of integrated development projects.

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## BIOMETRICS AUTHENTICATION: A STUDY

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### ABSTRACT

*We'll use the term access control as an umbrella for any security issues related to access of system resources. Within this broad definition, there are two areas of primary interest, namely, authentication and authorization.*

**KEYWORDS:** *Biometrics, Universal, Collectable, Authenticate, Fingerprints.*

### INTRODUCTION

Biometrics represent the “something you are” method of authentication or, as Schneier so aptly puts it, “you are your key” [1]. There are many different types of biometrics, including such long-established methods as fingerprints. Recently, biometrics based on speech recognition, gait (walking) recognition, and even a digital doggie (odor recognition) have been developed. Biometrics are currently a very active topic for research [2, 3].

In the information security arena, biometrics are seen as a more secure alternative to passwords. For biometrics to be a practical replacement for passwords, cheap and reliable systems are needed. Today, usable biometric systems exist, including laptops using thumbprint authentication, palm print systems for secure entry into restricted facilities, the use of fingerprints to unlock car doors, and so on. But given the potential of biometrics—and the well-known weaknesses of password-based authentication—it's perhaps surprising that biometrics are not more widely used.

An ideal biometric would satisfy all of the following:

- Universal — A biometric should apply to virtually everyone. In reality, no biometric applies to everyone. For example, a small percentage of people do not have readable fingerprints.
- Distinguishing — A biometric should distinguish with virtual certainty. In reality, we can't hope for 100% certainty, although, in theory, some methods can distinguish with very low error rates.

- Permanent — Ideally, the physical characteristic being measured should never change. In practice, it's sufficient if the characteristic remains stable over a reasonably long period of time.
- Collectable — The physical characteristic should be easy to collect without any potential to cause harm to the subject. In practice, collectability often depends heavily on whether the subject is cooperative or not.
- Reliable, robust, and user-friendly — these are just some of the additional real-world considerations for a practical biometric system. Some biometrics that have shown promise in laboratory conditions have subsequently failed to deliver similar performance in practice.

Biometrics are also applied in various *identification* problems. In the identification problem we are trying to answer the question “Who are you?,” while for the authorization problem, we want to answer the question, “Are you who you say you are?” That is, in identification, the goal is to identify the subject from a list of many possible subjects. This occurs, for example, when a suspicious fingerprint from a crime scene is sent to the FBI fingerprint database for comparison with all of the millions of fingerprint records currently on file.

In the identification problem, the comparison is one-to-many whereas for authentication, the comparison is one-to-one. For example, if someone claiming to be Alice uses a thumbprint mouse biometric, the captured thumbprint image is only compared with the stored thumbprint of Alice. The identification problem is inherently more difficult and subject to a much higher error rate due to the larger number of comparisons that must be made. That is, each comparison carries with it a probability of an error, so the more comparisons required, the higher the error rate.

There are two phases to a biometric system. First, there is an enrollment phase, where subjects have their biometric information gathered and entered into a database. Typically, during this phase very careful measurement of the pertinent physical information is required. Since this is one-time work (per subject), it's acceptable if the process is slow and multiple measurements are required. In some fielded systems, enrollment has proven to be a weak point since it may be difficult to obtain results that are comparable to those obtained under laboratory conditions.

The second phase in a biometric system is the recognition phase. This occurs when the biometric detection system is used in practice to determine whether (for the authentication problem) to authenticate the user or not. This phase must be quick, simple, and accurate.

We'll assume that subjects are cooperative, that is, they're willing to have the appropriate physical characteristic measured. This is a reasonable assumption in the authentication case, since authentication is generally required for access to certain information resources or for entry into an otherwise restricted area.

For the identification problem, it is often the case that subjects are uncooperative. For example, consider a facial recognition system used for identification. Las Vegas casinos use such systems to detect known cheaters as they attempt to enter a casino [4]. Another fanciful proposed use of facial recognition is to spot terrorists in airports.<sup>1</sup> In such cases, the enrollment conditions may be far from ideal, and in the recognition phase, the subjects are certainly uncooperative as they likely do everything possible to avoid detection. Of course, uncooperative subjects can only serve to make the underlying biometric problem more difficult. For the remainder of this



discussion we'll focus on the authentication problem and we'll assume that the subjects are cooperative.

### Types of Errors

There are two types of errors that can occur in biometric recognition. Suppose Bob poses as Alice and the system mistakenly authenticates Bob as Alice. The rate at which such misauthentication occurs is the *fraud rate*. Now suppose that Alice tries to authenticate as herself, but the system fails to authenticate her. The rate at which this type of error occurs is the *insult rate* [5].

For any biometric, we can decrease the fraud or insult rate at the expense of the other. For example, if we require a 99% voiceprint match, then we can obtain a low fraud rate, but the insult rate will be high, since a speaker's voice will naturally change slightly from time to time. On the other hand, if we set the threshold at a 30% voiceprint match, the the fraud rate will likely be high, but the system will have a low insult rate.

The *equal error rate* is the rate for which the fraud and insult rates are the same. That is, the parameters of the system are adjusted until the fraud rate and insult rate are precisely in balance. This is a useful measure for comparing different biometric systems.

### Biometric Examples

In this section, we'll briefly discuss three common biometrics. First, we'll consider fingerprints, which, in spite of their long history, are relative newcomers in computing applications. Then we'll discuss palm prints and iris scans.

#### Fingerprints

Fingerprints were used in ancient China as a form of signature, and they have served a similar purpose at other times in history. But the use of fingerprints as a scientific form of identification is a much more recent phenomenon.

A significant analysis of fingerprints occurred in 1798 when J. C. Mayer suggested that fingerprints might be unique. In 1823, Johannes Evangelist Purkinje discussed nine fingerprint patterns, but this work was a biological treatise and did not suggest using fingerprints as a form of identification. The first modern use of fingerprints for identification occurred in 1858 in India, when Sir William Herschel used palm prints and fingerprints as forms of signatures on contracts.

In 1880, Dr. Henry Faulds published an article in *Nature* that discussed the use of fingerprints for identification purposes. In Mark Twain's *Life on the Mississippi*, which was published in 1883, a murderer is identified by a fingerprint. However, the widespread use of fingerprinting only became possible in 1892 when Sir Francis Galton developed a classification system based on "minutia" that enabled efficient searching, and he verified that fingerprints do not change over time [6].

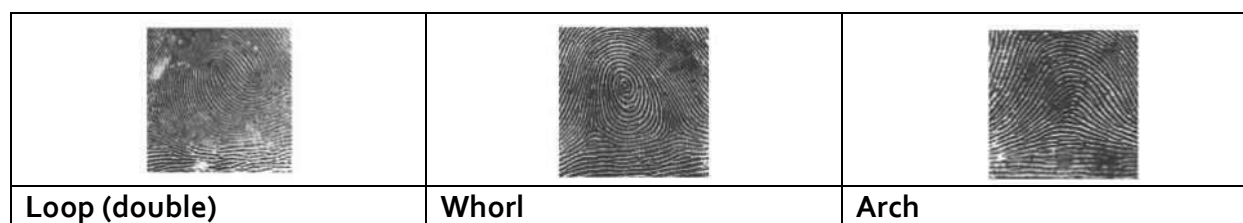


Figure1: Examples of Galton's Minutia

Today, fingerprints are routinely used for identification, particularly in criminal cases. It is interesting to note that the standard for determining a match varies widely. For example, in Britain fingerprints must match in 16 points, whereas in the United States, no fixed number of points are required to match.

A fingerprint biometric works by first capturing an image of the fingerprint. The image is then enhanced using various image-processing techniques, and various points are identified and extracted from the enhanced image. This process is illustrated in Figure 2.



Figure 2: Automatic Extraction of Minutia

The points extracted by the biometric system are compared in a manner that is somewhat analogous to the manual analysis of fingerprints. For authentication, the extracted points are compared with the claimed user's stored information, which was previously captured during the enrollment phase. The system then determines whether a statistical match occurs, with some predetermined level of confidence. This fingerprint comparison process is illustrated in Figure 3

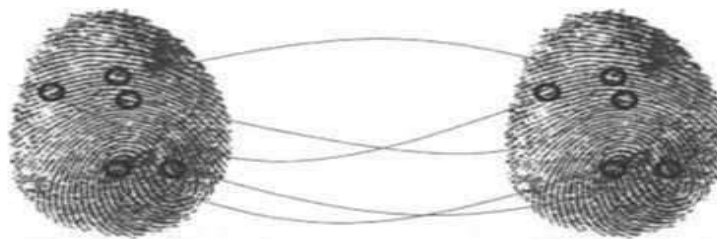


Figure 3: Minutia Comparison

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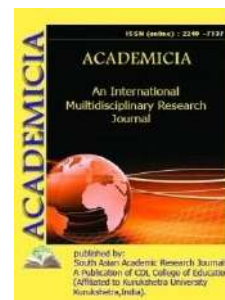
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# ACADEMICIA

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### EFFICIENT USE OF WATER RESOURCES OF THE AMU-BUKHARA CANAL

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#### ABSTRACT

*The article discusses the water supply of Bukhara region. The construction of the Amu-Bukhara canal and its hydrological regime have been studied in connection with the increase of irrigated lands in the region. Currently, the issues of effective use of this channel are covered.*

**KEYWORDS:** *Amu-Bukhara Car Canal, Kyzylkum Desert, Kuyimazor Reservoir, Dengizkul, Ayoqogitma, Shurkul, Todakul Reservoir, Jilvon, Parsonkul, Ogitma, Groundwater.*

#### INTRODUCTION

Bukhara region is one of the oldest centers of irrigated agriculture in the country. From ancient times, irrigated lands in the region were irrigated by the Zarafshan River.

The increase in population in the Zarafshan valley has led to a growing problem of water as a result of the increasing number of irrigated lands. As a result, in order to prevent water shortages and water problems in the Bukhara region in the late 50s of the last century, the Amu-Bukhara machine canal was launched from the Amudarya in 1965.

The Amu-Bukhara car canal supplies water to the territory of Bukhara region and partly to Navoi region. The Amu-Bukhara machine canal is an irrigation canal in Bukhara region. The Amu-Bukhara car canal starts on the right bank of the Amudarya, 12 km above the city of Chorjoi (now Turkmenabad).

The first turn of the Amu-Bukhara car canal was put into operation in 1965, and the second turn in 1976. The total length of the Amu-Bukhara car canal is 197 km. The maximum water lift is 111 m, the maximum water capacity is 270 m<sup>3</sup> / s. After the commissioning of the first stage of the Amu-Bukhara canal, 136.5 thousand hectares of land in Bukhara region, irrigated from other

sources, can be irrigated with Amudarya water. It is possible to improve the water supply of 377 thousand hectares of land in the Amudarya basin, to irrigate 23.8 thousand hectares of new lands. The Amu-Bukhara car canal flows from the Kyzylkumbarkhans to the foothills of the Dengizkul plateau. The canal water is then pumped upwards by pumping stations up to 50 m in several stages, and the canal water is discharged towards the Tudakul, Kuyimozor and Shurkul reservoirs and distributed through irrigation outlets. The Amu-Bukhara machine canal has 65 hydraulic structures, 11 pumping stations (including 10 pumping units with a capacity of 12.5 thousand kW, each of which lifts water to a height of 54 m. Today, the attitude to water has completely changed not only in the country but also in the region. issues of use have been put on a new agenda.

The issues of planned use of water from the Amu-Bukhara canal are currently complicated. The amount of water taken from the Amudarya through the canal is now relatively stable, averaging 4.0-4.2 km<sup>3</sup> per year. By means of suction pumps, this water is discharged in reverse relative to the relief slope and gradually rises to a height of 125 meters. Thanks to the Amu-Bukhara canal, new areas, oases, reservoirs and settlements have been built. In the lowlands around the oases, more than a dozen abandoned lakes, several ditches, and road systems were formed.

Administratively, the Amu-Bukhara machine canal belongs to the Bukhara and Navoi regions, in other words, it covers the entire desert zone, from the Ayoqogitma-Malik desert meridian to the Amudarya riverbed. Of particular note are the small closed basins with the lowest hypsometric surface among the areas affected by the Amu-Bukhara car canal. Many of these are now turned into reservoirs, abandoned lakes. Lowlands such as Khojka, Konjakul, Khojamsayyod, Shurkul are covered with salt deposits with accumulative basis. During the period since the launch of the Amu-Bukhara canal (55 years), the hydro-ameliorative properties of irrigated lands in its zone of influence have changed dramatically. Irrigated lands in Bukhara region have long been formed by the Zarafshan River, and at the same time by the Amu-Bukhara system of canals.

Hydrological and hydrochemical properties of these irrigated areas are directly related to the water consumption of the Amu-Bukhara canal. Due to the erosion, numerous lakes and ponds, tugai forests were formed along the canal valley. Large amounts of water evaporate from these surfaces throughout the year. Brief information about water resources of Bukhara region.

Todakol Reservoir is a reservoir in Navoi region. It was built in a natural ravine 26 km east of Bukhara, southwest of the Kuyimozor reservoir. Launched in 1968. Renovated in 1977. Tudakol basin and its foothills are covered with saline, gypsum alluvial deposits. Today its area is 215 km<sup>2</sup>. It is replenished from the Amudarya via the Amu-Bukhara canal. Provides additional water to irrigated lands in Bukhara region.

Kuyimozor Reservoir - In the Navoi region, the bowl of the reservoir, built in 1958 around one of the depressions in the foothills of the Zarafshan River, is located in the deposits of sandstone and mud. The area reaches 17.3 km<sup>2</sup>. Water will be pumped into the reservoir through the Kuyimozor pumping station in the second stage of the Amu-Bukhara machine canal. Its water is mostly used as drinking water. Most of the irrigated areas in Bukhara region are ditches and lakes. At present, only a part of the ditch water is discharged into the Amudarya River through the Porsonkol ditch, and the main part is discharged into the lowlands around the Bukhara oasis. As a result, more than 10 abandoned lakes have been formed in the region: Ayoqogitma, Qoraqir, Zamonbobo, Kichik-Tuzkon, Katta-Tuzkon, Dengizkul, Devxona, Khadicha. Especially

in the southern part of Karavulbozor district, their area is growing every year. In the following years, Devxona-1, Devxona-2, Khadija and in recent years, Qumsultan lakes were formed. Due to the lack of well-developed drainage systems in the region, pastures continue to be flooded, swampy, saline, and chemically polluted. Improvements to drainage systems are still ongoing. This is due to the fact that the launch of the Amu-Bukhara canal, which flows in the opposite direction to the relief of the region, requires further improvement of the drainage system.

When the canal overflows, its water seeps into the surrounding lowlands and forms puddles. When the canal is dehydrated, the reverse process is observed, i.e. the surrounding saline groundwater flows towards the canal bed, resulting in seasonally variable specific ecotone areas. Saline areas are common in low-lying areas, where groundwater is directly close to the surface and rises to the surface. It should be noted that in addition to the Kuyimazor-Tudakul reservoirs, there are parts I-II of the Amu-Bukhara machine canal, as well as canals and several ponds, such as Ortachul, Shohrud, Kuyimozor, which receive water from them.

It is necessary to regulate such irrigated areas, the appearance of canals, to develop ways of rational organization of tugai forests growing along the water. In the future, it is expedient to carry out the following work on the efficient use of irrigated areas of the Amu-Bukhara canal and the rational organization of the areas in its zone of influence. It is necessary to strengthen measures to save canal water, to prevent its erratic and inefficient use of water. One example is the installation of pumps in 11 places on the left bank of the Todakul canal, which developed 1,800 hectares of land. But the harvest from these lands, the income that comes, does not justify itself.

There are changes in the nature of the Amu-Bukhara car canal and its associated region. It is known that irrigated lands in Bukhara region are concentrated in three places: Bukhara, Karakul and Karavulbozor oases. In order to improve the reclamation of irrigated lands, a system of ditches has been created. Most of them are open ditches. Annually, 0.5 km<sup>3</sup> of ditches and sewage are discharged out of the oasis. A small part of this saline water of different levels (11-12) flows into the Amudarya River through the Katta-Turkon Lake Porsonkol ditch. The rest of it is collected in such lakes as Dengizkul, Karakir, Ogitma. According to rough estimates, these artificial lakes accumulate about 5 million tons of salt and various harmful chemicals each year. This situation has a negative impact on the ecological situation in our region. In order to solve this problem, the Shurdarya main ditch is being built at a rapid pace in order to discharge sewage and drainage water from the oases in the south-western part of Uzbekistan into the Aral Sea. Part of it passes through the territory of Bukhara region. In the future, taking into account the interests of fisheries and nature protection, it is necessary to direct the drainage of the region to Shurdarya and accelerate the measures to radically improve the ecological environment. In addition, the development of ways to effectively use groundwater is another way to overcome the existing problems, as Bukhara region has a large fund of groundwater.

Despite the timely implementation of complex measures, the shortage of water resources in the country, including in our region, is growing. As a result, agriculture is suffering severely. In years of water scarcity, even sewage and groundwater are widely used. This affects the quality of river water. For example, the level of mineralization of the Amudarya water has increased for this reason. Most of the newly developed lands have become fallow, fallow, tugai forest. The canal water should be diverted to the ancient and uncultivated lands of the Bukhara oasis. It is



necessary to establish effective use of tugai forests, such as willow, reed, willow, poplar, which are formed in the canals along the canal. However, in most cases it is burned every year in autumn and winter. It is advisable to plant fruit and woody trees (bread, apricot, gujum, etc.) instead. The low-lying ponds around the canal should be filled with soil-sand. Otherwise, a large amount of water evaporates every year in vain.

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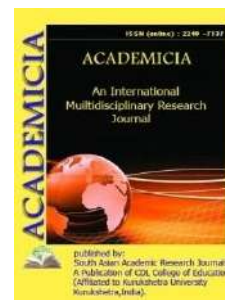
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# ACADEMICIA

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### USE OF SMARTPHONE APPLICATIONS IN ENGLISH LANGUAGE LEARNING

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#### ABSTRACT

*Since English became one of important disciplines in educational system even among youngsters. Nowadays, parents also have a desire to teach basic words to their children at home independently with a help of technology, however come across several problems in selecting appropriate android apps and effective methods. This article will guide those who are willing to overcome the issue.*

**KEYWORDS:** Overall, Assess, Repeat, Research, Utilize, Point Out, Phone, Drawback, Active, Complete, Productive, Divide, Communicate.

#### INTRODUCTION

It has been proved by psychologists that the most appropriate age for teaching a child a foreign language is from 3 (or even from 1.5 year) to 7 years. At this age, the child learns to speak. And it is precisely at this age that they can learn to speak not only in their native language. Each child has a certain type of memory someone can easily memorize sounds, words and expressions by ear, and someone must write them down, someone cannot remember a word without demonstrating the corresponding image. Defining abilities, preferences and interests of the child about the subject, the first thing is to determine what type of memory and perception it has. The efficiency of the whole educational process depends on it. Since English is an international language it is very popular among pupils and students even in Uzbekistan this language is thought from early age a child it means from nursery school. Listening ability of children is active in comparison with other skills that can be proved by examining

In most cases, children are trying with interest to learn new words, they like it, because the language is completely unfamiliar to them. Children don't even ask why they need to learn English; they are so captured by this process and more interested in the process of learning, of knowing, rather than the results. Psychologists recommend starting English classes at the age of

five. In this case, the children will quickly learn a new language for them. There are some ways in which English becomes much faster and easier to learn.

It is very significant to make the child have a desire to learn the language. That is, there must always be a motive for learning a new language. It is very useful for a child to peer into pictures at the moment of learning a new language. Playing with the child in the game, he or she quickly begins to master the world. Using cognitive activity, teaching children English is easy.

In this technological era, everyone has their own handheld mobile devices. Using these devices, with easy access to internet, they interact with people from anywhere in the world. Irrespective of time and place people chat or exchange information with each other. The very term “mobile” stands for the “mobility” or the ability to move freely and easily from one place to another. Mobile implementation of mobile devices in any branch of study. The features of mobile technology such as the portability and information accessibility plays enhancement of English language teaching and learning (El-Hussein & Cronje (2010)). Young generations from birth are being raised with smartphones on their hands. Using phones the best way to utilize in a descent and educational purpose. As the interest in vocabulary acquisition is growing, today various kinds of aids are available to the learners and students, among which mobile applications are one of the most effective and popular. Still research in English language teaching and learning has often underestimated the vocabulary resources of the language. The effectiveness of mobile learning in education is still in its first stages of implementation and concepts and instructional issues surrounding mobile learning are still evolving and require further research (Kukulska-Hulme, 2007).

A mobile app, as a computer program, is designed to run on mobile phones, tablet computers (like iPad) and other mobile devices. The word "app" is a shortening of the term "application software". Apps are easily available through application distribution platform called App Market, and these apps are typically operated by the owner of the mobile operating system, such as the Apple App Store, Google Play, Windows Phone Store, and BlackBerry App World. There are two main app stores: Google Play for Android and Apple App Store for iOS. Google Play, known as Android Market, is an international online software store developed by Google for Android devices (Chu, 2009). Apple App Store for iOS is the first app market, which set the standard for app distribution services (Rao, 2011).

Nowadays, in these mobile operating systems can be found a number of educational apps, which are helpful to acquire a language independently and easily. Let's have a look at one app that is appropriate to children to learn English. The app «ABC kids» where children are able to learn basic vocabulary in an interactive way, even without any assistance. It is divided into categories, for instance, family, animals and fruits. By entering the specific topic you come across pictures and words that are pronounced in English. In this way children are able to learn by repeating the words again and again. At the end of all topics there can be found quizzes, which are very effective method of reviewing all learnt words and assessing the learners' work. Examples of tasks may be matching words and colorful pictures, since most kids are not able to read, pronouncing and finding suitable units are very productive assignments. The can get presents or point to each correct answer and overall one mark. Using these kinds of apps attractive not only for children but you can still enjoy the magic of childhood to meet your language learning needs

because language learning resources for kids are some of the best out there. Educational apps are appropriate not just for children but also their parents are able to use them to acquire a language.

Language learning begins with listening and repetition. Therefore, any theory is inappropriate for preschoolers and younger students. Children should not be bored. If the child is still not interested, do not force it. Your task is to interest. Learn only what surrounds the child: family members, parts of the body, animals, and colors. You need to constantly engage with the child: even huge successes can be forgotten if you give your children a monthly break.

The emergence of apps about education has changed the traditional learning mode, gradually changing from the teacher-centered to self-regulated, learner changed into knowledge construction of the active learning (Yiping & Lei, 2010). The technology enriched learning is designed to enhance students' self-regulation and motivation (Kramarski & Gutman, 2006). According to López-Morteo & López (2007), it helps students improve their academic performance and increase positive attitudes towards learning. More and more studies show that using mobile apps can engage students in self-regulated cycles of learning (Kitsantas & Dabbagh, 2010). Relatively a decade ago teachers of kindergarten and primary schools were the only people who teach children, even pupils started attending classes without any basic knowledge. At the beginning it was difficult to pay attention to all children at the same time; however with the development of technology parent also became a teacher who teach their children using mobile apps and sometimes learn themselves together with them.

One more example is Busuu app forms a part of a website (busuu.com) that covers learning language of 12 countries. According to Busuu founders it was pleasure to them to replace traditional way of learning and teaching to modern one then they decided to create their own learning materials based on image and sound. It also consists of games and downloadable apps. The user receives busuu berries after finishing sections of the learning courses, and the result is visible to all community users that can be compared with others' progress. Busuu is ad downloadable app and does not require an Internet connection. The user himself has a chance to opt for a section of learning among the given ones. The app is divided into 4 proficiency levels (A1-B2) and within each there are multiple sections which cover various every-day life topics and grammar. Each unit includes 3 or 4 tasks. First there is an exercise that teaches vocabulary supported by cards containing images and written words.

There are diverse theories and approaches to instructions, such as teacher-centered approach, student-centered approach and self-regulated learning which belong to pedagogical approaches. The development of mobile technology and abundance of online learning resources are changing the pedagogical approaches and enhancing students' learning outcomes (Govindaswamy, 2002). Nowadays, teacher-centered class counts like traditional method of teaching for this reason modern teachers do not use it because they are less effective and entertaining to young generation. Mobile technology is one of innovative inventions that can be used in educational sphere productively, despite where and when the learner studies.

The developers of English course apps use different approaches and methodologies that all are supposed to guarantee a fun and easy learning process. Now there are a great deal of books available on the Internet instead of searching for the best one it is preferable to find an android app that include several books. Gamlo emphasizes the importance of motivation to learn English. The author believes in using mobile game-based language learning. Nevertheless, the apps

should be selected based on students' interests, needs and level. It means it causes no problem if a learner does not like the structure or used source there are a number of them that are attain enthusiasm of a user.

In current educational system it can be hardly seen traditional methods of teaching even in kindergarten. Even though there are some drawbacks of using phones to health, such as causing poor eyesight, its benefits are overweight. From early ages there is a point that teacher-lead classes can never been replaced by any source of technology however at this time information technology the thing that makes lessons flourishing and productive which is the main aim of teaching.

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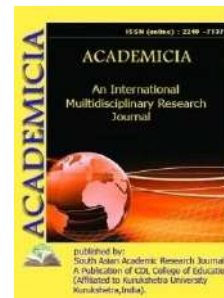
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# ACADEMICIA

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### DOGWOOD (CORNUS MAS L) PLANTS – MEDICINAL PROPERTIES AND USES

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#### ABSTRACT

*Dogwood food berry plants of god- biologically active substances. As a medicinal plant, fruits, leaves, dogwood bark were used in ancient medicine. Dogwood is a popular drug in modern folk medicine. Scientific research shows dogwood is promising in modern scientific medicine.*

**KEYWORDS:** *Dogwood, Cornus Mas L., No Planting, Fruit, Propagates Medicine.*

#### INTRODUCTION

Currently, herbal medicines are very widely used in world practice. Biologically active substances and extracts of plant origin are most popular in such developed countries as Japan, France, Germany, Italy. In many developing Asian countries (India, Sri Lanka, Mali), herbal medicines are of paramount importance. This "red doctor" is a truly folk healer — it has many useful properties and effects: normalization of blood pressure, prevention of atherosclerosis, elimination of diseases of the gastrointestinal tract, normalization of stool, increased activity of the pancreas, accelerated metabolism, antipyretic effect, excretion of uric acid and toxic substances, lowering blood sugar, increasing concentration, improving memory and attention.

Dogwood is a shrub or small tree (it all depends on the conditions in which the plant grows) from the genus Kizil and the Kizilovy family. Need to say. That in the forests of the Caucasus, dogwood is more often found in the form of a tree reaching a height of 8 m. It should be noted that dogwood belongs to the class of long-lived plants, since it can reach more than one hundred years of age (more often the plant's age varies between 100-250 years.) Dogwood bears fruit starting from the age of ten, while the last fruits are collected from this plant when its age reaches 100-150 years. Young dogwood shoots initially have a greenish-yellow hue, but eventually become covered by a cracking gray bark. The leaves of the plant pointed at the ends



are distinguished by a solid, elongated elliptical shape. I must say that the leaves of dogwood on top have a green color and a shiny surface, while below they are lighter. Dogwood bark has a reddish-brown color. The fruits of the plant are 1-4 cm and weighing 1-6 g, not only juicy and edible, but also healthy. Dogwood is a very ancient fruit, valuable food, medicinal, soil-protective and ornamental plant, undemanding to growing conditions, almost not damaged by pests and not affected by diseases. Dogwood fruits, according to the data, contain 7-15% sugars (glucose and fructose), 1.0-2.5% organic acids (malic, gallic, salicylic, etc.), 0.5-1.5% pectins, 60- 105 mg% ascorbic acid, 250-700 mg% Reactive substances. dogwood is a source of biologically active substances, which allows us to consider it as a valuable food, medicinal plant, serves as a raw material for the production of healthy foods. Due to its decorativeness, it can be used in landscape construction and landscaping, in soil-protective plantations, as well as as a honey plant and in turning and carpentry. Dogwood prefers the warm climate of the Caucasus and Transcaucasia, where it grows in mountain forests, on sunny edges, as well as in thickets of other shrubs.

## RESEARCH METHODS

The studies were carried out in laboratory and field conditions using morphological-biological, selection-genetic and other research methods.

Cornel-Cornus mas L. is a heat-loving plant and is most successfully grown in regions with a rather mild climate. In our conditions, the fruits of dogwood ripen in a warm, rainy summer. Plants are not demanding on the composition of the soil, although they feel better on lime-rich than on acidic soils, they are rather photophilous, but they also grow in the shade. Dogwood begins to bear fruit in the eighth year of life. Since that time, breeders from various parts of our planet have created a fairly large number of varieties, characterized by a whole set of useful qualities and properties, among which are large-fruited, highly decorative, resistant to temperature changes and some tolerance to cold. But most varieties of dogwood are intended for cultivation in the middle zone of Uzbekistan. Dogwood after transplantation grows slowly, there is a development of the root system, with age much faster. It tolerates urban conditions, haircut, is durable.

For pregnant and lactating women, cornel is also a very useful product - it not only replenishes the vitamin balance in the body, but also reduces fatigue, prevents the development of various infections and viruses, saturates the mother's blood with iron, which prevents the occurrence of anemia, and also normalizes digestion and bowel movements. Dogwood has an excellent anti-aging effect, so it has been added to the daily menu of long-distance sailors since the 19th century, and today it is also included in the diet of astronauts.

The concentration of vitamins in the wood is actively involved in strengthening immunity and the fight against viral infections. The following vitamin decoction helps to strengthen health and restore strength. To relieve a headache, you can use tea, decoction or stewed dogwood, or you can prepare the following external product. Dogwood jam is the best way to fight colds and viral infections. For treatment for hemorrhoids, dogwood is consumed fresh-a handful of berries per day. The following external remedy also helps. With diarrhea, indigestion is successfully treated with decoction. In the field of cosmetology, masks with crab from dogwood fruit are also actively used (bark is used only in anti-inflammatory masks). From the pulp of this plant, you

can make a natural, moisturizing and inexpensive vitamin mask for skin and hair at home, and a scrub for the face and body from the seeds.

All parts of the dogwood plant have healing properties: roots, flowers, fruit bones, leaves are widely used in folk medicine. The great Hippocrates mentioned the healing properties of dogwood. Dogwood is also used to make juice, syrups, compotes, preserves, marmalades, jelly, marinades, wine, tinctures, liquors and liquors. Dogwood is used as a seasoning for meat and fish dishes. In butter and coffee substitute. A piece of dogwood can be brewed instead of tea.

In conclusion, I would like to recommend it to everyone, it improves immunity and speeds up metabolism: dogwood contains vitamin C, so this berry can strengthen the immune system and increase the protective functions of the body, especially during autumn diseases, colds and viruses. It is enough to eat a handful of fresh dogwood berries every day for only one to two weeks. And in winter, dried dogwood is useful to you, from which you can make a decoction. Due to pectin substances contained in cornel, it cleanses the body, eliminating toxins and toxins, and also helps get rid of oxalic and uric acid. So, if you want to lose weight, include dogwood in your diet.

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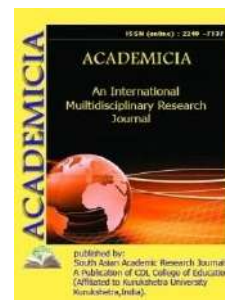
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# ACADEMICIA

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### PESTS AND CRITERIA FOR WHEAT DAMAGE IN THE CONDITIONS OF KARAKALPAKSTAN

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#### ABSTRACT

*In this article explained the results of researching about the bioecological developing of sucking pests in wheat, dominant kinds and theirs damage measures. Distribution areas, distribution and damage of wheat juice, which is the main type of damage, have been identified, and control measures have been recommended.*

**KEYWORDS:** *Sucking, Natural Habitat, Dynamics, Damage, Damage Measures, Fights, Effects, Decrease Of Harvest.*

#### INTRODUCTION

Wheat (*Triticum vulgare* L.), which is the main type of grain crops in Karakalpakstan, is grown annually on 53-55 thousand hectares in Krasnodar-99, Asr, Omad, Aral, etc. 289-290 thousand tons of varieties are planted and harvested. Mainly winter wheat varieties are planted, the biological characteristics of which are 280-300 days, the optimal sowing period is september, the green mass overwinters, hangs in early spring and begins to develop. The substitute for wheat flour from agricultural crops used for human consumption is an irreplaceable product. It is estimated that in order to be healthy, a person needs to consume 90.9 kg (159.8 thousand tons per year) of flour and flour products according to medical standards. However, due to the fact that today's harvest is slightly lower than the per capita norm, the area under wheat in the region's farms increased by 1.5-2.0 times, increasing the yield per hectare by 30 percent. An increase of - 40% is required.

One of the main abiotic reasons for the low productivity of wheat varieties grown in Karakalpakstan is the emergence of new species of fauna in the biocenosis in recent years, with some pests causing significant damage and reducing yields. Observations show that an average

of 10-20% of today's wheat crop is destroyed by pests in the agrobiocenosis. Despite efforts to control pests in the fields, there is an annual process of destroying crops that require protection.

It has been proven that the prevalence and damage of pests in the field, which are biotic factors affecting agricultural crops, depend on the emergence of factors of this biotype, the conditions of harmonious development of biological organisms. In addition, the bioecology of the development of pests, which are widespread in the types of crops grown, and the scientific basis for the application of coordinated control measures have been developed by studying the damage caused.

These peculiarities of the wheat plant create a microclimate in the field and prevent the fall of agricultural pests (*Agrotis segetum* Den. Et Schiff.) (Other species of rodents), wheat nematode (*Anguillutina tritici*). Steinb.), Italian locust (*Calliptamus italicus* L.), Asian locust (*Locusta migratoria* L.) noxious weevil (*Eurygaster integriceps* Put.), Wheatgrass (*Schizaphis graminum* Rond.), Wheat thrips (*Haplothrips tritici* Kurd. ), pyavitsa (*Lema melanopus* L.), Hessen fly (*Mayetiola destructor* Say.), Swedish fly (*Oscinosoma frit* L.), grain flea (*Chaetocnema hortensis* Geoffr, Ch. *aridula* Gyll.) [1; 2].

**Object and methods of experiment.** The main objects are autumn wheat and sucking pests found in the fields. In the wheat fields, the recommended agro-technical measures for the agro-climate and soil of the region were applied. Pest species in the field were identified visually by observing the dynamics of their distribution. The damage caused by pest species was studied in accordance with the method of VI Tansky [3].

**Results of the study:** The results of observations and research In the northern regions of Karakalpakstan, it was noted that wheat is planted in late August and fibrous grasses go to winter. As a result, pests of agricultural crops, including suckers, which had not yet overwintered in these fields, gathered in the fields in September and prepared for winter. it was found that the offspring would accumulate in the plants and continue to develop.

In late march, the years of growing out of winter and starting to develop, it was found that acacia, melon, apricot cane juice from sap appeared in the plants growing in the field in the first ten days of april, and in recent days steamed it was taken into account that with the formation of leaves and spikes of doy, the field was damaged by the proliferation of wheat juice, thrips and harmful weeds.

During the growth and development of wheat, the emergence of wheatgrass pests can cause significant damage. If the pest causes damage to the vegetative organs of wheat during the winter, the plant will not produce spikes, and the quality and quantity of the harvest will decrease as subsequent generations multiply among the grains and absorb the sap.

The morphology of the pest is that the body of the wingless surviving fin is 2.7-2.9 mm. , 6 mm., width 0.2 mm., green. In broad stripes, the whiskers are six-jointed, the tubes are slightly longer, the eggs are oval, 0.6 mm long and 0.2 mm wide, and green. These offspring quickly began to feed and multiply, forming herds.

The pest reproduces 10-16 times during the growing season, and those that emerge from the winter in early spring accumulate in the wheat field, and the wingless off spring of the next generation cause damage by multiplying their live offspring among the grains in the ears.

Special observations have been made in such a field since the second decade of May to determine the damage caused by the pest, which has multiplied to varying degrees with the appearance of the spike.

The results show that the emergence of wheat juice with the germination of wheat has proved to be very harmful. Because between 5-7 grains per grain (average 45.7-67.9 grains per grain), 35.6-42.8% of the crop was lost when fed, the number of pests. When it reached 8-10 units, the damage rate was 56.8-61.4%. As the number of pests in the spikes increased from 17 to 20, it was found that the spikes of the plants turned yellow and some of them withered.

The damage of wheat to the milk ripening phase with the emergence of wheat juice is to a certain extent, that is, when 5-7 pests appear and feed, 5.1-7.8% of the crop is lost, when the number of pests reached 8-10, the damage rate was 11.4-14.5% and when it increased by 15-20, it was 22.5-26.3%.

## CONCLUSION

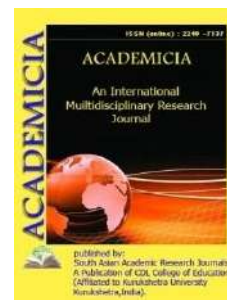
The results of research to determine the extent of damage to wheat juice in the conditions of Karakalpakstan show that the increase in wheat juice from the beginning of the field phase causes significant damage. When the number of insects increased by 15-20 per head, the crop was completely destroyed. This requires control measures from April, when the pest offspring appear.

Pest control from early spring requires an opportunity to increase the number of entomophagous wheat fields. With the emergence of sap in the field, it is advisable to use the biological method, which is one of the most effective methods of production, that is, the distribution of 1000-2000 pieces of goldeye entomophagy propagated in biolaboratories per hectare. The increased entomophagous nature of the three-fold distribution of the specified amount of goldeye in the field reduces the number of aphids and allows the number of pests to be kept below the specified norm until the wheat is fully ripe.

In areas where the number of pests exceeds the criteria for economic damage, high biological efficiency has been achieved through the use of chemicals recommended for wheat pests for an optimal period of time and in moderation.

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## THE PERIOD IN WHICH IMAM BUKHARI LIVED AND THE STAGES OF THE SCIENCE OF INTERPRETING THE QUR'AN AT THAT TIME

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### ABSTRACT

*The development of the science of tafsir after our Prophet (s.a.w.), its stages and types. This is due to the fact that he was free from the caliphate for a long time, that he lived longer than other caliphs, and that people of different nationalities also embraced Islam, and that there was a great need for the tafsir of the Qur'an during this period. The most famous scholars of Medina relied on narration to understand the meanings of the Qur'an. The situation was completely different in the cities of the Islamic world except Madinah. In search of knowledge, he traveled to cities such as Basra, Wasit, Kufa, Syria, Palestine, Beirut and Fustot. He spent most of his life (50 years) in Baghdad, where he wrote his tafsir.*

**KEYWORDS:** Caliphs, Palestine, Nationalities,

### INTRODUCTION

When Muslims were formed in the form of a socialized society in both Mecca and Medina during the time of the Companions, they did not have serious problems in the social sphere. They were not yet numerous in number at that time and lived under the same culture. The laws and restrictions of Muslims as a society were similar to the Qur'an.

The Qur'an was the solution to the small number of seemingly simple issues encountered at that time. However, over time, Muslims spread beyond the Arabian Peninsula to other areas.

The borders of the Islamic world have expanded. They began to rule non-Arab and non-Muslims nations along with Muslims.

Foreign religions and cultures began to exert their influence among Muslims. Translated foreign works and philosophical movement began to spread in the Islamic world. As a result, along with religious differences among Muslims, political differences also escalated, and religious sources began to be interpreted in a different way.



The economic situation changed and society entered the path of development. In the time of the Companions, during the lifetime of the Prophet Muhammad (s.a.w.), problems were solved by asking him.

**In the time of the Taba'ins, however, such an opportunity no longer existed<sup>1</sup>.**Traditionally, the Taba'ins used to turn first to the Qur'an and then to the Sunnah of the Prophet (pbuh) to solve their problems.As the problems of the Muslim community increased, so did the number of interpretations of the Qur'an compared to the time of the Companions.As the borders of the Islamic State expanded, the message from the Hijaz could not easily reach remote areas due to the limited possibilities of the time.

Therefore, due to the cultural situation of different regions, various interpretations of the tafsir of the verses of the Qur'an began to emerge, and personal views were not left out.

As the owners of these views grew up in different racial, linguistic, religious, and cultural environments, their views also varied.Thus, in comparison with the tafsir of the time of the Companions, more developed tafsir movement with different characteristics began to emerge.Among the Companions, there were minority people those who were famous for interpreting the Qur'an.

Suyuti listed the names of the commentators in his book "Al-Itqon". The previous ten included four caliphs (Abu Bakr, Umar, Uthman, Ali), Ibn Mas'ud, Ibn Abbas, Ubayy ibn Ka'b, Zayd ibn Thabit, Abu Musa al-Ash'ari, and Abdullah ibn az-Zubayr (r.a.).<sup>2</sup>.

Anas ibn Malik, Abu Hurayra, Abdullah ibn Umar, Jabir ibn Abdullah, Abdullah ibn Amr ibn 'As, and A'ishah were mentioned after them. But there are very few narrations in the field of commentary from the "later ones".

Their fame in this field is not equal to the previous ten.Although more and less commentaries were narrated from some of the Companions in the previous ten, they were known among the people for their good knowledge and good interpretation of the Qur'an.

Due to the fact that Abu Bakr, Umar and Uthman (r.a.) were more engaged in the work of the Khilafah, and their deaths were relatively rapid, there were many scholars and commentators at that time, and the Muslims' need for knowledge was met with them.

But many commentaries have been narrated from Ali ibn Abu Talib.This is due to the fact that he was free from the caliphate for a long time, that he lived longer than other caliphs, and that people of different nationalities also embraced Islam, and that there was a great need for the tafsir of the Qur'an during this period.It has also been narrated from Abdullah ibn Abbas, Abdullah ibn Mas'ud, and Ubayy ibn Ka'b.

Although it is known to the Muslims that the remaining ten (Zayd ibn Thabit, Abu Musa and Abdullah ibn Zubayr) are skilled commentators, there are not many narrations left from them.<sup>3</sup>.

Political differences between Muslims began to emerge in the 40s AH. The period of Taba'ins also coincides with this time. Foreigners and similar political movements like Shia, Mu'tazila, Murji'a dates back to these years.The actions of these movements were also reflected in the writing of commentaries on the verses of the Qur'an.Therefore, the study of the place of the taba'ins in the science of tafsir, in turn, is important in terms of an in-depth study of the science

of tafsir. In summary, while the Companions were the first generation in Islamic history, the followers (taba'ins) are the second generation.

Hakim an-Naysaburi (d. 405.1014) said that it is important to know about the descendants of the Taba'ind, and that a person who does not know them well will confuse the Companions, the Taba'ins and the Tabaa's.<sup>4</sup> Due to this, the place of the followers in the science of tafsir comes after the place of the Companions in the science of tafsir. Because of these factors, we are convinced that it would be beneficial to conduct research on the role of followers in the science of tafsir.

Just as not all of the Companions were aware of the science of tafsir, not all of the followers were aware of the science of tafsir. The following can be listed as followers of the tafsir of the Qur'an:

1. Alqama ibn Qays (died. 61/681)
2. Masruq ibn al-Ajda' (died 63/683)
3. Asvad ibn Yazid (died 74/693)
4. Murra ibn Shurahbil (died 76/695)
5. Abul Oliya ar-Riyohi (died 90-709)
6. Said ibn Djubayr (died 95/713)
7. Ibrahim an-Nakho'I (died 95/714)
8. Mujohid (died 103/721)
9. Dahhok ibn Mudhohim (died 105/723)
10. Towus ibn Kaysan (died 106/724)
11. Ikrima ibn Khalid ibn Said ibn al-As al-Makhdhumi (died 107/725)
12. Amr ibn Sha'bi (died 109/727)
13. Muhammad ibn Sirin (died 110/728)
14. Hasan al-Basri (died 110/728)
15. Atiya ibn al-Awfi (died 111/729)
16. Ato ibn Abu Rabokh (died 114/732)
17. Qatoda ibn Dhiyoma (died 117/735)
18. Nofi (died 117/735)
19. Muhammad ibn Ka'b al-Quradhi (died 118/736)
20. Qays ibn Muslim (died 120/738)
21. Qosim ibn Abu Badhdha (died 124/742)
22. Ato ibn Dinor (died 126/744)
23. Siddi al-Kabir (died 127/745)
24. Ibn Abu Nadjikh (died 131/749)
25. Zayd ibn Aslam (died 136/753)

Although most of the Companions were engaged in the science of tafsir, the most famous and leading among them were four. They were Abdullah ibn Abbas (d. 68/687), Hadhrat Ali (d. 40/661), Abdullah ibn Mas'ud (d. 32/652) and Ubayy ibn Ka'b.<sup>5</sup>

Among the same followers, the following four were famous for their commentary on the others:

1. Said ibn Djubayr (died 95/713)
2. Mudjohid (died 103/721)
3. Ikrima (died 107/725)

#### 4. Ato ibn Abu Raboh (died 114/732)

As we know, the Companions spread to different parts of the Islamic world, and those of them who were leaders in tafsir, hadith and jurisprudence made a huge contribution to the development of knowledge wherever they reached. They cultivated taba'in scientists in the areas they reached, and as a result, various scientific schools were established.

As a result of this development, the schools of Mecca, Medina, and Iraq were formed in the field of tafsir during the time of the Taba'ins.

Abdullah ibn Abbas (d. 68/687), one of the Companions who formed the school in Makkah, was also the master of great scholars such as Said ibn Djubayr (died 95/714), Mujohid ibn Jabr (died 103/721), Ikrima (died 104/722), Towus ibn Kaysan (died 106/724), Ato ibn Abu Rabah (died 114/732)<sup>6</sup>.

Ibn Taymiyyah (d. 720/1320) said: "Those who are famous in the science of tafsir among the Taba'ins are, without any doubt, the scholars raised by the Meccan school. Because they were taught by Abdullah ibn Abbas (d. 68/687)." He had praised the taba' in commentators who grew up in the school of tafsir.<sup>7</sup>

Az-Zahabi. At-Tafsir and al-mufasssirun, vol. -p.114.

At the beginning of the school of tafsir in Madinah comes Ubayy ibn Ka'b (d. 19/640), who was one of the Companions. Most of the descendants of the followers in Madinah became proficient learners in the science of tafsir and recitation. Among them Zayd ibn Aslam (d. 137/753), Abul Aliya (d. 90/708), Muhammad ibn Ka'b al-Qurazi (d. 118/736) and others were leaders.<sup>8</sup> It is known that the city of Madinah was the area where the Prophet Muhammad (s.a.w.) migrated to and where every branch of Islam flourished in the beginning. Even after the death of the Prophet Muhammad (s.a.w.), most of the Companions settled there. For this reason, the followers who grew up here had the opportunity to learn the Qur'an and the Sunnah more deeply from the Companions than the followers who grew up in other regions. The school of tafsir in Madinah is based more on narration than on others as the place where the prophet lived. It is known that the tafsir of the Qur'an came from the time of the Companions in two ways in the narration and opinion.

The most famous scholars of Medina relied on narration to understand the meanings of the Qur'an. The situation was completely different in the cities of the Islamic world except Madinah. In these areas, attention was paid to the interpretation of opinion, as was the interpretation of the narration. For example, Abdullah ibn Abbas (ra), the founder of the school of tafsir in Makkah, near Madinah, relied on opinion and ijtihad as well as narration in interpreting the Qur'an. For this reason, 'Abdullah ibn' Abbas (may Allah be pleased with him) also referred to Arabic poetry, dictionaries and some other aids in his commentary.<sup>9</sup>

The scientific character of the Madinah school of tafsir continued during the time of the Taba'ins. In later times, scholars and faqihs of other regions also considered the scholars of Madinah to be superior in knowledge and jurisprudence. In particular, Imam Malik (d. 179/795) in his letter to Lays ibn Sa'd (d. 175/791), who was one of the Egyptian scholars of the time, wrote:

“Know that the people are subject to the people of Madinah. Indeed, the migration took place there, and the Qur'an was revealed there. The Medinans are the ones who witnessed the revelation. The Prophet Muhammad (s.a.w.) conveyed to them the commands he had received through revelation, and they obeyed them. This situation continued until the death of Muhammad (s.a.w.)”

Lays ibn Sa'd also sent him the following reply: “According to what you wrote me, you seem to have proved it. Of course, people are subject to the people of Madinah, the land of migration and revelation. The city of Madinah is the city of the Prophet Muhammad (s.a.w.) and the area where the Qur'an was revealed and the Companions witnessed the revelation.”<sup>10</sup>

Abdullah ibn Mas'ud (d. 32/652), one of the Companions, is mentioned as the founder of the Iraqi school. Abdullah ibn Mas'ud (ra) had raised many disciples among the followers in the fields of tafsir, recitation and jurisprudence. Alqama ibn Qays (d. 61/681), Masruq ibn al-Ajda' (d. 63/682), al-Aswad ibn Yazid (d. 74/693), Murra al-Hamdani (d. 76/695), Amir al-Sha'bi (d. 109/727), Hasan al-Basri (d. 110/728), and Qatada ibn Diyama (d. 117/735) were some of his disciples. Likewise, Abdullah ibn Mas'ud (r.a.) also made many disciples in the science of recitation. Students who grew up in the field of recitation during the time of the Taba'ins were Abu Abdurahman as-Sulami (d. 73/692), Abu Amr al-Shaybani (d. 98/716), Zayd ibn Wahb (d. 84/692), Amr ibn Shurahbil (d. 63 / 683), Obida ibn Qays as-Salmani (d. 72/691) and others.<sup>11</sup>

Although the schools of tafsir in Syria and Egypt were not as popular as the schools of tafsir above, they flourished in their time and leading scholars were educated in these schools.<sup>12</sup> Naturally, the views of the scholars from these schools were not the same in every field, and there were some differences among them. The schools of tafsir in Makkah and Madinah did not pay much attention to opinions and comparisons, only the Iraqi school of tafsir paid more attention to them. However, the Israelites had become accustomed to interpretation in the schools of influence.

Although some scholars have tried to prove that the Arabs were superior to other nations in science, book writing, language, and poetry during the time of the Taba'ins<sup>13</sup>, the Arabs did not pay much attention to be engaged in religious knowledge.

Ibn Khaldun (died. 808/1406) described their condition like this: “Because new knowledge was in the form of art, they (the Arabs) did not begin to learn new knowledge, considering it inferior to them to engage in it. Because the leaders were always reluctant to engage in crafts, art and related things.”<sup>14</sup> A man from the Qurayshi tribe saw a young man from the tribe of Attab ibn Asid reading “al-Kitab” by Sibawayh and he said: “Woe to you! You want to master science with need and humiliation and spend time with it.” Saying this he had condemned his action<sup>15</sup>.

For this reason, most of those who were engaged in science during the time of the Taba'ins were “Mawalis” The Arabic word “mawali” is a plural of the word “mawla” and is used to mean helper, friend, comrade, slave, worker and so on.<sup>16</sup> The word “mawali” here refers to a slave who was bought and released at that time, or to a person who converted to Islam in his presence.<sup>17</sup>

In the time of Taba'ins the social status of the Mawalis was shaped by the people who cared for them. For example, Abdullah ibn Abbas (d. 68/687) was a scholar, so his mawla Ikrima also became a scholar in his presence. Likewise, the situation of Nofe', the Mawla of Abdullah ibn

Umar (d. 73/692), was similar to this.<sup>18</sup> When we study the works on the subject, we can see that most of the scholars who appeared in the tafsir, hadiths and jurisprudence of that time were mawalis.

Ikrima (d. 107/725) who was famous in the field of tafsir among Taba'ins, was the mawla of Abdullah ibn Abbas (d. 68/687), Ata ibn Abu Rabah (d. 115/733) was Banu Fihri's, and Abu Zubayr Muhammad ibn Muslim (d. 128/745) was the Mawla of Hakim ibn Hizam.

The same situation was observed in other regions of the Islamic world. For example, in Kufa, Sa'id ibn Jubayr (d. 94/713) was the mawla of Banu Waliba, and in Basra, al-Hasan ibn Yassar (d. 110/728) was the mawla of Zayd ibn Thabit.<sup>19</sup>

At that time Ata ibn Abu Rabah (d. 114/732) was the jurist of the Makkans, Tawus ibn Kaysan (d. 106/724) was the jurist of the people of Yemen, Yahya ibn Kathir (d. 129/746) was the jurist of the people of Yamama, al-Hasan al-Basri (d. 110/728) was the jurist of the people of Basra, Ibrahim al-Nah'i (d. 95 / 713-14) was the jurist of the people of Kufa, Makhul (d. 113/731) was the jurist of the people of Syria and Ata al-Khurasani (d. 133/750) was the jurist of the people of Khurasan. As we study the lives of these scholars, we find out that they were all mawalis.<sup>20</sup>

Just as it was painful for the Mawalis to be entrusted with this task due to the decline of Muslims' interest in the sciences at that time, even today it is also painful that those who practice the religion are made up of the poorest sections of society. Unfortunately, we are witnessing that most of those currently studying in madrassas and higher religious educational institutions are children of poor families. In addition to providing this information about the Taba'ins, we would like to emphasize that the Imams of the recitation are also descendants of them.<sup>21</sup> There is also information in the sources that the activity of writing commentaries began during the time of the Taba'ins. Although it was stated that it was controversial, the first written commentary, narrated by Rabi' ibn Anas, was the tafsir by Abul Aliya (d. 90/709).

It is narrated that Mujahid ibn Jabr (d. 103/721) gathered his students at home and he made them to write down the commentary on the Qur'an,<sup>22</sup> and also it is narrated that there was commentary designated him.<sup>23</sup>

According to some sources, this commentary by Mujahid was researched by Abdurahman ibn at-Tahir ibn Muhammad as-Surti and published in three volumes in Islamabad.<sup>24</sup> Scholars have praised the achievements of the Taba'ins in the science of tafsir, as well as their differing views.

According to some scholars, their interpretations are valid and accepted as evidence because the Taba'ins heard and accepted the interpretations and explanations of the verses of the Qur'an directly from the Companions. Some of the Taba'ins supported this view cited the narrations on this subject as evidence.

For example, Mujahid, one of the Tabi'een, narrates that he recited the Qur'an three times from beginning to end to his master Abdullah ibn Abbas (d. 68/687), and that he stopped at each verse and was asked questions about that verse.<sup>25</sup> Ikrima also said, "Everything I have told you about the Qur'an is from Abdullah ibn Abbas."<sup>26</sup> Qatada, one of the followers, said: "There is not a verse in the Qur'an about which I have not heard anything from the Companions."<sup>27</sup>

Some scholars have also argued that some verses of the Qur'an refer to the followers and there is praise for them in these verses. Here are some examples of these verses:



*“And the first forerunners (in the faith) among the Muhajireen and the Ansar and those who followed them with good conduct – Allah is pleased with Him, and He has prepared for them gardens beneath which rivers flow, wherein they will abide forever. That is the great attainment”<sup>28</sup>.*

There are various interpretations of the verse as “those who followed them with good conduct.” This notion is often described as pure faith and righteousness towards the Muhajireen and Ansar.<sup>29</sup> Some scholars emphasize that the Taba’ins and those who followed this path until the Day of Resurrection were assassinated.<sup>30</sup>

*“And (there is a share for) those who came after them, saying, “Our Lord, forgive us and our brothers who preceded us in faith and put not in our hearts (any) resentment toward those who have believed. Our Lord, indeed You are Kind and Merciful”<sup>31</sup>* There are also different opinions about the concept of “those who came after them” in this verse.

Some commentators say that this refers to those who came after the Companions and followed their path, who had pure faith and led a righteous life, while some scholars say that only the followers were meant here.<sup>32</sup>

In both verses it is informed about people who have faith and do righteous deeds, and praise those who live in this way. Such people, praised by Allah, are not limited to a specific time and place. This category of people can be recognized as people who lived this way of life until the Day of Judgment and will live in the future, along with people who lived a righteous life during the time of the Taba’ins. The Prophet Muhammad (s.a.w.) also used expressions of praise about the followers in some hadiths. The meaning of some hadiths in this regard is as follows: “Blessed is the man who sees me and believes! How happy is the one who sees me!”<sup>33</sup> “The best of my ummah are the Companions who lived in my time. Then there is the generation that comes after them, and the best of them is the generation that comes after them.”<sup>34</sup>

Al-Zarkashi (d. 794/1391), who conducted in-depth research in the field of Qur'anic sciences, also arranged the sources of Qur'anic commentary into four groups. The first is a commentary narrated from Muhammad (s.a.w.), the second and the third commentaries made with the views and evidence of the Companions and the followers, the fourth is that man interprets the Qur'an through meanings that arise in his heart.<sup>35</sup>

In his comments, al-Zarkashi stressed the importance of the tafsir made by the descendants of the Taba’ins.

Some scholars, on the other hand, argue that the interpretation of the Taba’ins is not taken as evidence, and emphasizing that there is no direct means of connection, they support the following view points as the evidence of their words:

“The followers did not hear anything directly from Muhammad (s.a.w.). What is taken into account in the commentary of the Companions is that they heard it directly from Muhammad (s.a.w.). It cannot be said that judgment is derived from the interpretation of the followers. While the Companions witnessed the causes of the revelation directly, the Taba’ins learned these messages only by hearing them from the Companions because they lived later. The texts on the justice of the Companions are not applied in practice for the followers. During the time of the Tabi’een, the Israelites became more widespread. Due to these factors, it is possible that the



followers may err in the process of interpreting the verses of the Qur'an and cite some non-evidence as evidence.<sup>36</sup>

It is also narrated that Imam A'zam Abu Hanifa (d. 147/767) said the following about the tafsir of the Taba'ins:

"It is welcome from Muhammad (s.a.w.). We are independent of what came from the Companions: we take what we need and do not take what we do not need. As for what is narrated from the Taba'ins, they and we are both human."<sup>37</sup>

Shu'ba ibn Hajjaj (d. 160/776) also said: "The words of the followers cannot be a proof against those who oppose them. So, how can it be accepted as evidence in the tafsir?" He said that it is not obligatory to be accept the words of Taba'ins as evidence in the tafsir. There is no doubt that their views on that subject will be accepted as a document only if the followers unite as a consensus on one subject. If the followers disagree on the interpretation of any verse, their views cannot be a proof for each other or for those who came after them.<sup>38</sup> The Companions were the direct witnesses of the causes of the revelation, vujud al-Qur'an (forms of recitation of the Qur'an) and similar events<sup>39</sup>.

Similar events took place in front of their eyes. For the Tabeis, this was not the case. Therefore, their attempts in the field of tafsir would not be equaled to the actions of the Companions in the field of tafsir. The praiseworthy expressions quoted above about the Tabi'een show that they are noble generation.

They, also, have expressed among themselves differing views on the interpretation and tafsir of certain verses. As in the case of the next generation of respected scholars, the views they have accepted in the field of interpretation may or may not be taken.

### **Prominent commentators on the science of tafsir in Imam Bukhari's period and their works on tafsir**

The stages of development of the science of tafsir can be conditionally divided into 3 periods, the first one is the period of the Prophet (s.a.w.) and his Companions. There are a number of peculiarities in the commentaries of this period, such as the Qur'an is not fully interpreted, some verses are interpreted, the meaning of the verses is explained in general, and the commentaries are not summarized in separate books. The second stage in the development of the science of tafsir belongs to the period of the Taba'ins, and by this time many Israiliyots and Christian narrations were included in the tafsir. This was due to the conversion of people in Judaism and Christianity to Islam. At the same time, not all the narrations related to tafsir had been collected, and the inhabitants of each city were studying the narrations they had heard from the Companions in that city. By this time, representatives of various groups and madhhab began to interpret the Qur'an according to their own views. For example, Qatada ibn Daoma Sadusi was devoted to the issue of qadha and qadar because he was one of the Qadaris.

The third stage of the development of the science of tafsir began at the end of the reign of the Bani Umayyads and the beginning of the Abbasid period. Initially, the Companions used to narrate tafsir from the Prophet (s.a.w.) and from each other, while the Taba'ins used to accept these narrations from the Sahabi and other Taba'ins. Hadiths began to be written during the time of the Taba'ins. All the hadiths are summarized in these books, and the science of tafsir is also mentioned as a part (chapter) of these books. However, no works dedicated to the interpretation

of the Qur'an have been created. Yazid ibn Harun Sulami (d. 117), Shu'ba ibn Hajjaj (d. 160), Waqi' ibn Jarrah (d. 197/813), and Sufyan ibn Uyayna (d. 197/813), Ravh ibn Ubada al-Basri (d. 205/820), Abdurazzaq ibn Humam (d. 211/826), Adam ibn Iyash (d. 220/835), Abd ibn Humayd (d. 249/855) were mentioned as the authors of the commentaries in this period.

These commentators have compiled the narrations on tafsir and placed them in a separate chapter in their books. By the end of the third stage, the sciences of tafsir and the narrations on tafsir have been separated and brought into book form. At the same time, all the verses of the Qur'an were now being interpreted. The narrations on the tafsir began to be arranged in the order of the mushaf. Ibn Majah (d. 273/886), Ibn Jarir Tabari (d. 310/922), Abu Bakr ibn Munzir Naysaburi (d. 318/930), and Ibn Abu Hatim (d. 318/930), Abu Shaykh ibn Hibban (d. 369/980), al-Hakim (d. 405/1015), and Abu Bakr ibn Marduwayh (d. 410/1019) were mentioned as the authors of the commentaries in this period.<sup>40</sup> It is important to study the activities of the scholars working in this field in assessing the development of the science of tafsir and the role of the muhaddithin in the period of Imam Bukhari's life, i.e. the last decade of the second century AH and the first half of the third century AH.

Muhammad ibn Sawr (d. 190/806), Waqi ibn Jarrah (d. 197/812), and Abu Bakr al-Asam (d. 200/816), Ravh ibn Ubaidah (d. 205/820), Abu Bakr ibn Abu Shaybah (d. 235/849), Ishaq ibn Rahawayh (d. 238/853), Ahmad ibn Hanbal (d. . 241/855), Duhaym (d. 245/859), Abd ibn Humayd (d. 249/863), Yaqub ibn Ibrahim Davraqi (d. 252/866), Yusuf Qatton (d. 253/869), Abu Said A'shaj (d. 257/871), Sunayd ibn Dawud (d. 266/880), Ibn Majja (d. 273/886), Baqi ibn Mahlad (d. 276/889), Abu Ali ibn Abdulwahhab Jubba'i (235 / 849-303 / 916), Riyazi (223 / 838-298 / 911), Abu Ja'far Tabari (224/839). -310/923), Abu Dawud Sijistani (203 / 818-316 / 929) were mentioned as the commentators of the science of tafsir on the sources of the history of the science of tafsir who were contemporaries of Imam Bukhari<sup>41</sup>. The following is a brief biography of them, as well as narrations and works on the science of tafsir. Abu Abdullah Muhammad ibn Sawr Sa'nani (d. 190/806) was born in the city of San'an in Yemen. Ibn Sawr, known as a commentator, muhaddith and jurist, was considered as "siqa", namely reliable narrator in the hadith.

Ibn Sawr narrated hadiths concerning tafsir on the authority of Awf A'rabi, Ibn Jurayj and Ma'mar ibn Rashid. And of Nuaym ibn Hammad, Muhammad ibn Ubaydullah ibn Hisab, Muhammad ibn Abdullah al-Sa'nani and others narrated hadiths from him.<sup>42</sup>

There is information that Ibn Sawr had a three-volume work on tafsir, and the sources state that his tafsir is authentic (sahih) and he is on the level of "siqa"<sup>43</sup>. At the same time, it is known that Ibn Sawr narrated the commentary of Abdulmalik ibn Abdulaziz ibn Jurayj<sup>44</sup>. There are many narrations made from him in famous commentary books. In particular, in Tabari's commentary, his narrations from Ma'mar are given in more than 550 places<sup>45</sup>.

Waqi ibn Jarrah ibn Malih Ruasi Abu Sufyan Kufi (d. 197/812) was born in Naysabur and learned from Abu Hanifa. He heard hadiths from Abu Yusuf and Zufar. Ibn Mubarak, Yahya ibn Aksam, Ahmad ibn Hanbal, Yahya ibn Mu'in, Ali ibn Madini narrated hadiths from him.<sup>46</sup>

In the hadith, "siqa" is considered one of the trustworthy narrators. There are also some legends that he was a pious man. In particular, Yahya ibn Aksam narrated to Waki that he was with him on a journey and he fasted constantly (sawm ad-dahr) and recited the Qur'an every night.<sup>47</sup>

Waqi' has authored several books, including "Tafsir al-Qur'an". This work was narrated by Muhammad ibn Ismail al-Hasani, and Salabi used it in his "al-Kashf wa al-Bayan"<sup>48</sup>. Zirikli gives information about his works such as "Tafsir al-Qur'an", "Sunan", al-Ma'rifa wa at-Tarikh and "az-Zuhd".<sup>49</sup> Although this commentary has not survived to this day, it can be seen in many tafsir sources that its narrations are quoted in the commentary of the verses.<sup>50</sup> Abu Bakr Asam (d. 201/817) is one of the leading scholars of tafsir, kalam and fiqh of the Mu'tazilites of Basra. He is considered the sixth strata of narrator among Abulhuzayl Allaf, Nazzam, Bishr ibn Mutamir along with Muammar ibn Abbad Sulamis.

He lived a poor life. His sources include 27 works such as "Tafsir wa Kitab al-Khalk al-Qur'an", 'Kitab al-Hujja wa ar-Rasul', 'Kitab al-Harakat', "ar-Raddu'ala al-Mulhida", "ar-Raddu'ala al-Majus wa Asma. al-Husna", "Iftiroq al-umma wa ashyo'idda", and only one of them, "Tafsir al-Qur'an" has survived to the present day.<sup>51</sup>

His unique views on the interpretation of the Qur'an have been narrated in many places by scholars such as Jubbai, Moturidi, and Razi. According to this, verses whose meaning does not need any proof or cause any objection are firm, and verses whose meaning need mental interpretation are called mutashabehat.<sup>52</sup>

He also has the idea that the Qur'an is a body, the unity of faith and action, that a person who commits a sin should not deviate from the faith while keeping it a secret, and that a believer should not be called a hypocrite or a disbeliever because of his sin, he can be called fasia instead.<sup>53</sup>

It can also be seen many of his views quoted in the description sources. In particular, Imam Moturidi quotes from the views of the Mu'tazilites in many places in the Tawheed al-Sunnah in order to express and refute their views.<sup>54</sup>

Fakhriddin Razi also narrated some narrations regarding mental interpretation of verses in many places of Mafatih al-Ghayb<sup>55</sup>.

Ravh ibn Ubaidah ibn Ala Qaysi al-Basri ibn Hassan ibn Amr (d. 205/820) is considered a "saduq" (truthful) in the hadith, and is estimated as a great Imam, hadith scholar and commentator. He narrated hadiths from Ibn Avn, Hisham ibn Hassan, Ash'as ibn Abdulmalik Humrani, Awf Arabi, Husayn Muallim, Usama ibn Zayd Madani, Ismail ibn Muslim Abdi, Ayman ibn Nabil, Zakariya ibn Ishaq, Abbad ibn Ishaq, Ibn Jurayj, Ubaydullah ibn Ahnas, Ali ibn Suwayd and many others. Ali, Ahmad, Ishaq, Ibn Numayr, Bundar, Abd ibn Humayd and many others narrated from him.

Ravh also paid great attention to the work of compiling hadith and was more advanced than others in this field.

This is confirmed by the narration of Ali ibn al-Madini, who said: "I saw more than a hundred thousand hadiths of Ravh ibn Ubaidah and wrote down ten thousand of them."<sup>56</sup>

It is narrated that Ravh classified the books on the Sunnah and compiled the narrations on the tafsir.<sup>57</sup> There are many narrations from Ravh in the sources of tafsir. For example, in the Tabari commentary Ravh's narrations can be seen in many places.<sup>58</sup>

Abu Bakr Abdullah ibn Muhammad ibn Abu Shaybah Ibrahim (159 / 849-235 / 849) was a famous muhaddith, commentator and historian of Kufa. Among the muhaddithin, the narrator,

known for his work al-Musannaf, traveled to Kufa, Basra, Ray, Baghdad and the centers of Hijaz to study. He attended the classes of hadith scholars such as Abdullah ibn Mubarak, Waqi ibn Jarrah, Sufyan ibn Uyayna, Yahya ibn Said Qattan.<sup>59</sup> Among his disciples were great hadith scholars such as Imam Bukhari, Muslim, Abu Dawud, Ibn Majah, Ibn Sa'd, Abu Zur'a Razi. Ibn Abu Shaybah, Ahmad ibn Hanbal and Yahya ibn Main mentioned him as "saduq", Abulhasan Ijli and Abu Hatim Razi as "siqa".<sup>59</sup>

He lived for many years in Baghdad and died there. Ibn Abu Shaybah has a work on tafsir, which is kept in the Sulaymaniyah Library of Turkey under the name Tafsir ibn Abu Shaybah.<sup>60</sup> He also has works "al-Musnad" and "al-Musannaf".<sup>61</sup>

Abu Ya'qub Iskhaq ibn Ibrahim ibn Mahlad ibn Ibrahim Hanzali Marwazi, who was known as Iskhaq ibn Rahawayh, was born in Marv in 161/778. He was one of the memorizers of hadith and got primary knowledge from Abdullah ibn Mubarak, Sufyan ibn Uyayna, and Waqi ibn Jarrah. Among his disciples, Baqiya ibn Walid, Yahya ibn Adam, and many others became famous in Islamic sciences.

In the narration by Ahmad ibn Hanbal from his father, in Hanbal's view, Iskhaq was the Imam of the Muslims. In search of knowledge, he traveled to Iraq, Hijaz, Yemen and Syria, and spent the rest of his life in Naysabur. His narrations on tafsir also contain mutashabehat verses, among which one can find intellectual evidence.

He authored the Sunan, the Musnad, and the Tafsir of jurisprudence, which have not survived to this day. Ibn Rahawayh died in 238/853.<sup>62</sup>

Ahmad ibn Muhammad ibn Hanbal ibn Hilal was originally from Merv. He was born in 164/790. Along with the hadith, he was educated by Ibn Hanbal Hushaym, Sufyan ibn Uyayna, Ibrahim ibn Sa'd, Jarir ibn Abdulhamid, Yahya Qattan and many other masters who were advanced in the sciences of nahv, vocabulary, tafsir and recitation. The presence of Imam Bukhari, Muslim, Abu Dawud and other great hadith scholars among his disciples testifies to his high status in the study and narration of hadiths. Among his works "Kitab at-tafsir", "an-Nasih wal-mansukh", "az-Zuhd" and "al-Musnad" are well-known in Islamic science. Ahmad ibn Hanbal died in 241/855.<sup>63</sup>

Abu Said Abdurahman ibn Ibrahim ibn Amr ibn Maymun Damashqi (d. 245/859) was known with the title "Duhaym". He was known as a judge, Imam, faqih, hafiz, and muhaddith of Sham (Syria). He traveled to Syria, Egypt, Kufa, Basra and other countries, heard and compiled narrations from Sufyan ibn Uyayna, Marwan ibn Muawiya, Walid ibn Muslim, Suwayd ibn Abdulaziz, Ishaq ibn Yusuf Azraq and many other hadith scholars. Duhaym did not limit himself to compiling the hadiths, but did research to determine the levels of its narrators in the jarh and modification, whether the hadith is authentic or flawed. Imam Bukhari, Abu Dawud, Nasai, Qazvini, Abu Hatim, Abu Zur'a Razi and many other famous hadith scholars narrated from him.<sup>64</sup>

Abu Muhammad Abd ibn Humayd ibn Nasr al-Kashi (d. 249/863) was one of the memorizers of hadith and was also known as a commentator. Abdulhamid, who studied hadiths from Abu Dawud, Muslim, al-Tirmidhi and many other hadith scholars, was known as one of the most famous hadith scholars of the Movarounnahr region. There is information about his works "Tafsir lil-Qur'an al-karim" and "Musnad". Some scholars point out that Abdulhamid's commentary is

one of the first stages in the formation of “al-Tafsir al-Masur”, that is, one of the books of tafsir divided into separate chapters in the books of hadith.<sup>65</sup>

The books of tafsir written at this stage include the commentaries of Waqi', Ravh ibn Ubaidah, and Adam ibn Iyas, discussed above. Dhahabi included “al-Muntahab” along with his works.<sup>66</sup>

Abu Yusuf Yaqub ibn Ibrahim ibn Kathir ibn Yazid in Aflah Davraqi Baghdadi (d. 252/866) is also mentioned among the hadith scholars and commentators.

Yaqub Maholimi who was educated by Ibn Aliya, Yazid ibn Harun, Ravh ibn Ubaida and many other muhaddiths and commentators, became a master of Qasim Matraz, Ibn Sa'a and many other commentators. According to the muhaddithin, the commentator, who was at the level of “siqa”, “aimma al-hadith”, “soduq” and “hujja”, wrote “Tafsir”, “Musnad”<sup>67</sup>. The authors of the “Kutub Sittah”, and famous hadith scholars such as Abu Zur'a, Abu Hatim, and Ibn Abu Dunya narrated from him.<sup>68</sup>

Abu Ya'qub Yusuf ibn Musa ibn Rashid ibn Bilal Kufi Qattan (d. 253/869) was born in the city of Ray and moved to Baghdad when he grew up and died there. He was engaged in the science of hadith and tafsir. He heard and narrated hadiths from Ahmad ibn Abdullah Yunus, Hammad ibn Salama, Sufyan ibn Uyayna, Sulayman ibn Hayyan Ahmar, Abu Nuaym ibn Dukayn, Abu Muawiya Darir, Abdurahman ibn Muhammad Muharibi, Amr ibn Khalid Osho, Mihran ibn Abu Umar, Abu Walid Tayalisi, Waki', Ubaydullah ibn Musa, Muhammad ibn Ubayd and Ibrahim ibn Rustam.<sup>69</sup> Imam Bukhari, Abu Dawud, al-Tirmidhi, Ibn Majah, Ibrahim Harbi, Qasim Matraz, al-Nasa'i and other hadith scholars narrated hadiths from him. Yusuf was famous in all fields of Islamic science, especially in hadith and tafsir, and his works include those related to tafsir.<sup>70</sup>

Abu Said Abdullah ibn Sa'id ibn Husayn A'shaj Kindi Kufi (d. 257/871) was mentioned among the famous hadith scholars and commentators of Kufa. He was educated by hadith scholars such as Hushaym ibn Bashir, Abdullah ibn Idris, Abu Bakr ibn Ayyash, Muhammad ibn Fuzayl. In the sources, Abu Zur'a Razi, Abu Bakr Razi and others are mentioned as his disciples. Dhahabi stated that he was the author of several works and that he saw a one-volume commentary by A'shaj<sup>71</sup>. He is mentioned in the sources as a trustworthy muhaddith with a strong memory. Yahya ibn Main stated that he narrated hadith from some weak narrators. Imam Bukhari narrates from him in his books “al-Jame as-sahih” and “al-Adab al-mufrad.” Imam Muslim narrated 70 hadiths from him in his “Sahih”<sup>72</sup>.

Abu Ali Hasan ibn Dawud (d. 266/880) is considered one of the hadith scholars of Saghr.<sup>73</sup> His nickname was Sunayd Mismisi and he was with his work “al-Tafsir al-Kabir.”

He heard hadiths from Hammad ibn Zayd Ja'far ibn Sulayman Zabi, Abu Bakr Iyash, Abdullah ibn Mubarak, Isa ibn Yunus and many other hadith scholars. Abu Bakr Asram, Abu Zur'a Razi, Ahmad ibn Zahir, Abdul-Karim Dir Aquli and many other commentators narrated hadiths from him. According to the muhaddithin, he was at the level of “soduq” and “laysa bi siqa”<sup>74</sup>.

Abu Abdullah Muhammad ibn Yazid Rabi 'Qazvini (d. 273/886) was born in 209/825 in Qazvin. He was known as Ibn Majjah. He heard narrations about tafsir from Muhammad Tanafisi, Abdullah ibn Muawiya and others. Among his disciples Muhammad ibn Isa Abhari, Abu Amr Ahmad ibn Muhammad ibn Hakim Madini are well-known.



His tafsir is the third stage in the development of the science of tafsir, that is, the tafsir is separated from the hadith collections and brought into a separate book, and all the verses of the Qur'an are included in the category of works in which they are interpreted.<sup>75</sup>

Besides Ibn Mojja Dhahabi mentioned Ibn Jarir Tabari, Abu Bakr ibn Munzir Naysaburi, Ibn Abu Hatim, Ibn Hibban, Hakim, Abu Bakr Marduwayh, and others in the aforementioned list. His works "as-Sunan", "at-Tafsir" and "at-Tarikh" are famous.<sup>76</sup>

Abu Abdurahman Baqi ibn Mahlad ibn Yazid Andalus Qurtubi (d. 276/889) is one of the most famous commentators. His sons Ahmad, Asam ibn Abdulaziz, Ahmad bin Khalid ibn Yazid and others were famous among Baqi's disciples, who learned from Abu Mus'ab Zuhri, Abu Bakr ibn Abu Shaybah, Ahmad ibn Hanbal. Ibn Hazm Zahiri stated that Baqi's "Tafsir" is very popular in the Islamic world.<sup>77</sup>

Dhahabi stated that he had reached the level of a mujtahid and he ruled on the basis of hadiths and did not imitate anyone<sup>78</sup>. It is known from the sources that he was the one who brought and spread the hadiths to Andalusia, and as a result, he was opposed by local Maliki scholars, was accused of heresy.<sup>79</sup> It is narrated that he wrote "al-Musnad" on the subject of jurisprudence and Ibn Hazm ranked it higher than Ahmad ibn Hanbal's Musnad.<sup>80</sup> Abu Ali Muhammad ibn Abdulwahhab ibn Salam ibn Khalid ibn Hamran ibn Aban Jubba'i (d. 235 / 849-303 / 916) was one of the famous scholars of the Mu'tazilites.

He learned from Yaqub ibn Abdullah Shahham Basri and others. His son Hashim was a mentor to famous scholars such as Abulhasan Ash'ari. Musalliti Shafei mentioned that he was a prolific writer, and said: "He wrote 40,000 pages in the Qur'an and 100-volume book in the interpretation of the Qur'an, and no one can approach him on this matter. It made it easier for people to accelerate (the science of debate)"<sup>81</sup>

Evaluating his interpretation, Imam al-Ash'ari said: "I saw Jubba'i writing a commentary that contradicted what Allah had sent down from the beginning. This book is in the language of his village of Jubba (the name of the place between Basra and Ahwaz) and not in the language of the people to whom the Qur'an was revealed. At the same time, he relied on his heart and the temptations of the devil, without narrating a single letter from any commentator in his book"<sup>82</sup>. Abulyusur Ibrahim ibn Ahmad Shaybani (d. 223 / 838-298 / 911) was known as "Riyazi" and was born in Baghdad. He was educated by Jahiz, Mubarrad, Sa'lab, Ibn Qutayba and others. In the sources, Abu Said Uthman ibn Said Sayqal and others are mentioned as his disciples. Riyazi, who became famous in the sciences of nahv and tafsir, died in Qirwan. He is the author of "Laqt al-Marjan" and "Siroj al-Huda" (about Qur'anic meanings) and "Qutb al-Adab."<sup>83</sup> Abu Ja'far Muhammad ibn Jarir ibn Yazid Amuli Tabari (224 / 839-310 / 923) was one of the most famous scholars of Baghdad in tafsir, history, hadith and jurisprudence. Several of his books, such as "Jame 'al-bayan" and "Tarikh al-umam wa al-muluk", have survived nowadays. Tabari studied first in Ray and then in Baghdad. He studied hadith, tafsir, recitation, maani, fiqh, Arabic literature and grammar, sarf and nahv, poetry, siyar and history from great scholars. In search of knowledge, he traveled to cities such as Basra, Wasit, Kufa, Syria, Palestine, Beirut and Fustot. He spent most of his life (50 years) in Baghdad, where he wrote his tafsir.<sup>84</sup>

Tabari, known as "Imam al-Mufasssin" with his tafsir, was the 6<sup>th</sup> rank muhaddith after Termidhi and Nasoi in the field of Sunnah and Hadith, a mujtahid Imam in the field of



jurisprudence, a “shaykh al-muarrikhin” in the history<sup>85</sup>. Abu Dawud Sulayman ibn Ash'as ibn Ishaq Sijistani Azdi (203 / 818-316 / 929) was known as both a commentator and a muhaddith. His book “Kitab al-Masahif” serves as a source for the books on the text of the Qur'an. His “Sunan” is included in the “Kutubi Sitta” collection. There are some reports that his great grandfather Imran stood by Ali in the battle of Siffin and was martyred. In search of knowledge, he traveled to Sijistan, Baghdad, Basra, Herat, Kufa, Balkh, Khorasan, Aleppo, Homs, Damascus, Egypt, Mecca and Medina. Ibn Hajar says he was educated by about 300 teachers<sup>86</sup>. Musa ibn Harun states that he was created for hadith and that he did not meet anyone more virtuous than him. Ibn Yassin Ibn Hibban and Abu Abdullah ibn Mandala, the authors of the “History of Herat”, state that the authenticity of the hadiths can be distinguished by Bukhari, Muslim, Abu Dawud, and Nasai. According to the Governor Naysaburi, Abu Dawud was the hadith Imam of his age. During his lifetime, Abu Dawud recorded 500,000 hadiths, selected 4,800 of them, and included them in “as-Sunan”<sup>87</sup>. There are many works by Abu Dawud, such as “as-Sunan”, “al-Marosil”, “Masail al-Imam Ahmad ibn Hanbal”, “Ijobaala sualat Abu Ubayd Muhammad ibn Usman al-Ajuri”, “Kitab az-Zuhd”, “Tasmiya ihwa allaziyna ruviya anhum al-hadith”, “Kitab al-ba's van-nushur”, “Kitab al-qadar”, “Nasih al-Qur'an and mansuhuh”, “Dalail an-nubuwwa”, “at-Tafarrud fi as-sunan”, “Fazoil al-ansar”, “ad-Duo”, “Ibtido al-wahy”, “Akhbar al-khawarij”, “Ma tafarrada bihi ahlu al-amsar and al-adab ash-shariyya”<sup>88</sup>.

In general, during the time of Imam Bukhari, tafsir developed not as a separate branch of science, but as part of the science of hadith. Scholars who lived during this period included chapters on the science of tafsir in their works, or enumerated the hadiths narrated by the Sahabah, Tabi'ins, and Tabaa Tabi'ins, which belonged to the Tafsir narrated by them.

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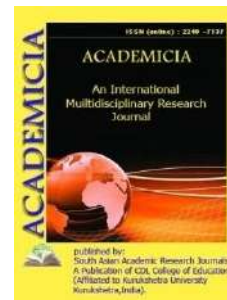
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## ANALYSING THE IMPACT OF COVID-19 ON STOCK MARKET USING FIBONACCI RETRACEMENTS

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### ABSTRACT

*The purpose of this study is to analyse the impact of COVID19 on stock market, presentation and description of technical analysis tools based on the Fibonacci sequence with an emphasis on price patterns created using Fibonacci numbers. It also presented the Fibonacci sequence and the golden ratios and found that metal stocks traded at lower valuation due to slumping metal prices and demand. Similarly, oil and gas stocks traded at trough valuations due to lower oil and gas prices, lower demand, and lower margins. Zee Entertainment's valuations have been lower due to weak business outlook, given the economic slowdown due to COVID-19 pandemic. It was also observed that due to this pandemic, investors do not want to invest in the shares because today everyone wants liquidity cash but for the new investors this is a good time to invest in the shares because all the shares are buying at less price and suggested that at this time investors have to buy the shares of the company which falls slowly and not always fall like a little bit falling.*

**KEYWORDS:** COVID-19; Economic Slowdown; Fibonacci Retracements; Nifty50; Pandemic; Stock Market.

### INTRODUCTION

Contributing to the securities exchange is related to facing challenges. Contemporary investors use various methods that support their decisions. Aside from crucial examination, the specialized investigation, wherein an assortment of apparatuses is utilized, considers an exact investigation of outlines and inclines and, accordingly, empowering anticipating future changes in the prices of financial instruments, becomes more and more popular. With that, investors can adequately react and maximize their profits or minimize risks on the stock market. A Fibonacci retracement

is a well-known device among specialized merchants. It depends on the key numbers recognized by mathematician Leonardo Fibonacci in the thirteenth century. The Fibonacci succession of numbers isn't as significant as the scientific connections, communicated as proportions, between the numbers in the arrangement. In the specialized investigation, a Fibonacci retracement is made by taking two extraordinary focuses (normally a significant pinnacle and trough) on a stock diagram and isolating the vertical separation by the key Fibonacci proportions of 23.6%, 38.2%, half, 61.8%, and 100%. When these levels are distinguished, flat lines are attracted and used to recognize conceivable help and opposition levels. Backing, or bolster level, alludes to the value level that advantage doesn't fall underneath for some time. A benefit's help level is made by purchasers entering the market at whatever point the advantage plunges to a lower cost. In the specialized examination, the straightforward help level can be outlined by drawing a line alongside the most reduced lows for the period being thought of. The helpline can be level or inclined up or down with the general value pattern. Other specialized markers and diagramming procedures can be utilized to recognize further developed renditions of help. Obstruction, or an opposition level, is the value point where the ascent in the cost of a benefit is ended by the rise of a developing number of merchants who wish to sell at that cost. Obstruction levels can be fleeting if new data becomes exposed that changes the general market's demeanor toward the benefit or they can be dependable. Regarding specialized examination, the straightforward obstruction level can be graphed by drawing a line alongside the most elevated highs for the period being thought of. Contingent upon value activity, this line can be level or inclined. There are, in any case, further developed approaches to recognize opposition fusing groups, pattern lines, and moving midpoints.

### ***Working of Fibonacci sequence***

The Fibonacci arrangement of numbers is as per the following: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, and so forth. Each term in this succession is essentially the total of the two going before terms, and the grouping proceeds endlessly. One of the surprising qualities of this numerical grouping is that each number is roughly 1.618 occasions more noteworthy than the former number. This regular connection between each number in the arrangement is the establishment of the normal proportions utilized in retracement contemplations. The key Fibonacci proportion of 61.8% is found by separating one number in the arrangement by the number that tails it. For instance, 21 partitioned by 34 equivalents 0.6176, and 55 isolated by 89 equivalents 0.6179. The 38.2% proportion is found by isolating one number in the arrangement by the number that is discovered two spots to one side. For instance, 55 partitioned by 144 equivalents 0.3819. The 23.6% proportion is found by separating one number in the arrangement by the number that is three spots to one side. For instance, 8 separated by 34 equivalents 0.2352.

### ***Fibonacci Retracement and Predicting Stock Prices***

For hazy reasons, these Fibonacci proportions appear to assume a significant job in the financial exchange, similarly as they do in nature and can be utilized to decide basic focuses that cause a benefit's cost to turn around. Fibonacci retracements are the most broadly utilized of all the Fibonacci exchanging devices. This is incomplete because of their relative effortlessness and mostly because of their appropriateness to practically any exchanging instrument. They can be utilized to distinguish and affirm backing and obstruction levels, put in a stop-misfortune request or target costs, and even go about as an essential component in a countertrend exchanging

system. Fibonacci retracement levels utilize flat lines to show where conceivable help and obstruction levels are. Each level is related to one of the above proportions or rates', demonstrating the rate is the amount of an earlier move the cost has backtracked. The course of the earlier pattern is probably going to proceed once the cost of the advantage has followed to one of the proportions recorded previously. The accompanying diagram delineates how a Fibonacci retracement shows up. Most present-day exchanging stages contain a device that naturally attracts the even lines. Notwithstanding the proportions depicted above, numerous merchants likewise like utilizing the half level.

### ***Fibonacci Retracement Pros and Cons***

Despite the prominence of Fibonacci retracements, the instruments have some calculated and specialized inconveniences that brokers ought to know about when utilizing them. The utilization of the Fibonacci retracement is abstract. Various dealers may utilize this specialized marker in various manners. Those dealers who are beneficial utilizing the Fibonacci retracement check its adequacy; the individuals who lose cash say it is questionable. Some contend specialized examination is an instance of an inevitable outcome. If dealers are on the whole watching and utilizing similar levels or similar specialized pointers, the value activity may mirror that reality. The fundamental rule of any Fibonacci device is a numeric oddity that isn't grounded in any consistent verification. The proportions, numbers, successions, and equations got from the Fibonacci arrangement are just the result of a numerical anomaly. This isn't naturally off-base; however, it tends to be awkward for merchants who need to comprehend the basis behind an exchanging technique. Besides, a Fibonacci retracement system can just highlight potential redresses, inversions, and countertrend skips. This framework battles to affirm some other pointers and doesn't give effectively recognizable solid or frail signs.

### ***The Difference between Fibonacci Retracement and Fibonacci Extension***

While Fibonacci retracements apply rates to a pullback, the Fibonacci augmentation applies rates to a move back in the inclining course. For instance, a stock goes from \$5 to \$10, and afterward back to \$7.50. The move from \$10 to \$7.50 is a retracement. On the off chance that the value begins mobilizing again and goes to \$16, that is an expansion.

## **REVIEW OF LITERATURE**

**Bhattacharya and Kumar (2006)** guaranteed that there was some prescient utility-related to Fibonacci successions utilized as channels in robotized exchanging frameworks. Nonetheless, it was additionally expressed this was only characteristic and in no way, shape, or form indisputable observational proof.

**Gupta (2011)** found that EMH is the main model that the information seemed to affirm. While there was restricted proof that Fibonacci retracements applied prescient control over trade rates, the size of this force was negligible (at most 4%). Extra tests found no proof to recommend that the constrained prescient intensity of Fibonacci proportions differed over the period considered or over the financial specialist time skyline, both as per the EMH.

**Otake and Fallou (2013)** presumed that the examination for Fibonacci retracement demonstrated the stock costs which were quite often switched around Fibonacci proportions. Although it was not satisfactory how to distinguish which Fibonacci proportions were the most successive, it was

seen that the Fibonacci exchanging can be a helpful apparatus for brokers in the African securities exchange.

**Hellal and Meyer (2014)** built up an extremely basic however tradable exchanging framework in which the passage guide was close toward the half Fibonacci retracement and the objective/stop was near the past variant 2 moderately high/lows. By shifting these parameters one can hope to improve the exchanging framework. Numerous different arrangements, in light of recursive adaptations, higher than variant 2, can almost certainly be used for a potential exchanging framework, including a more drawn out holding period.

**Alalaya and Almahameed (2018)** indicated when the financial specialist in ASE can purchase or – hold, and it appeared on a convincing proof of critical examination through this technique levels exchanging system, because of the investigation the speculators can be played out the way of ASE for future investors desires which reflected in the wake of bookkeeping to exchange cost and hazard. This examination concentrated on the example acknowledgment in the time arrangement of ASE with test reproductions, to bless the motivation behind the investigation that will introduce the patterns. Consequently, the consequences of this examination didn't dismiss the impact costs yet bolster it in managing purchasing or hold.

**Promen (2018)** secured the arrangement of candle designs and their utilization in value expectations just as the utilization of Fibonacci retracement lines and its association with general market designs, explicitly the Elliott wave hypothesis. It was noticed that the writing concerning specialized exchanging rules, (for example, the markers tried in this work) was predominantly composed by experts and investigators who execute exchanges on their customers' records as normal everyday employment. It was obvious that there was no accord on how solid prescient force Fibonacci retracements have and which of them are progressively "regarded" by the market.

**Shaker et al. (2018)** presumed that in four organizations of the concrete segment, there was an aggregate of 63 help levels out of which 17 (27%) and all-out 66 opposition levels from which 24 (36%) were followed Fibonacci retracements. Along these lines, the examination discoveries acknowledged the speculation that the pattern inversions in the Cement division recorded in PSX follow Fibonacci retracements somewhat. Examination of this investigation indicated that there are at any rate one in number help and one in number obstruction in each organization and some little opposition and bolster levels.

**Gurrib (2020)** found that the Fibonacci retracement tool captured the price movements of energy stocks better than energy cryptos. Further, price violations tend to occur more during downtrends compared to uptrends, suggesting the Fibonacci tool does not capture price increases during downtrends as well as price decreases during uptrends.

**Hartono (2020)** proved that provided accurate sell and buy signals to help investors invest in stocks, the combination of these indicators was only suitable for stocks that were experiencing a trend both uptrend and downtrend.

### **The rationale of the Study**

- It helps people who want to invest, and investors can know how to make their investment more profitable and to minimize risk for future investments.
- It also helps to give correct guidance to investors.

- It also tells investors at which time they can buy or sell the shares.

### Research Objectives

- To analyze the significance of Fibonacci retracement in predicting stock prices.
- To analyze the price movements of shares by using Fibonacci retracement.
- To interpret the impact of COVID-19 pandemic on the trading of shares.

### Materials and Methods

In the present study explanatory research design has been adopted and is based on secondary sources of data. The data is collected from the website of the National Stock Exchange of India from December 1, 2019 to April 20, 2020. Data were collected for all the 50 companies listed on the NIFTY index by using the census method.

### Analysis of Data

#### NIFTY 50

Nifty 50 consists of 50 companies, so to know the future movements of nifty 50 used a technical tool which is a Fibonacci retracement. The Fibonacci retracement helps us to predict the movement in Nifty 50. It also helps to trade simply and shortly. The site used for this is investing.com. And the picture is given below.



**Chart1:**

*Showing price movements of Nifty 50*

Source: <https://www.investing.com/indices/s-p-cnx-nifty>

After going on the site search for the nifty 50 and then go in indicators and prefer Fibonacci retracement to predict future movements. From there, found the points of swing high or swing low create Fibonacci retracement from 2 February 2020 to 18 April 2020. Track the future movements with the help of the Fibonacci retracement and as see in the Chart there are some levels of Fibonacci retracements 0, 0.238, 0.382, 0.5, 0.618, 0.786, 1, 1.618, 2.618 and so on. After crossing this level, we have decided the market is bullish or bearish.





**Chart2: Fibonacci retracement on Nifty 50**

Source: <https://www.investing.com/indices/s-p-cnx-nifty>

From now the future prediction of the market is that it goes upward and reaches the point 0.786 and then again goes upward and reaches on next level 1 but this time due to COVID-19 effect market cannot grow as fast so maybe this time it reaches to the point 0.786 and then goes down or maybe move upward a little.



**Chart3: Showing prediction**

Source: <https://www.investing.com/indices/s-p-cnx-nifty>

This is the time if investors want to invest in the market they can buy shares at a low price because at this time market is down due to COVID-19 and after few years when the market is stable investors got higher returns in the future. So according to me this the time investors buy more and more shares.

### Effect of COVID19 on Nifty 50

Half of the Nifty 50 stocks, barring financials, are exchanging at single-digit valuations as Indian value markets are about 33% off record-significant levels they scaled in January. The coronavirus pandemic, which resulted in the world's biggest lockdown and threatens the slowest growth since the global financial crisis, led to this fall in the market. Currently, of the 41 ex-financial Nifty 50 stocks, 21 are trading at single-digit 12 months forward price-to-earnings ratio. Commodity-metal and oil-stocks are the ones with the lowest valuations in the list, according to Bloomberg data.

Metal stocks like Vedanta Ltd., Hindalco Industries Ltd., Coal India Ltd., Tata Steel Ltd., and JSW Steel Ltd. are trading at lower valuation due to slumping metal prices and demand. Similarly, oil and gas stocks like ONGC Ltd., Indian Oil Corp. Ltd., and GAIL (India) Ltd. are trading at trough valuations due to lower oil and gas prices, lower demand, and lower margins.

Auto stocks-Tata Motors Ltd., Mahindra, and Mahindra Ltd. and Hero Motocorp Ltd. also trade at cheap valuations. While Lacklustre sales of jaguar Land Rover in China and elsewhere impacted valuations of Tata Motors, M&M and Hero MotoCorp were hurt by lower sales at home due to the lockdown.

Zee Entertainment's valuations have been lower due to weak business outlook, given the economic slowdown, pending receivables from group companies, news related to the investigation conducted by MCA, and TRAI's proposed tariff order changes.

At this time investors have to buy the shares of the company which falls slowly and not always fall like a little bit falling, ACC Ltd, Adani Transmission Ltd, Ambuja Ltd, Bajaj Holdings and investments Ltd, Godrej Consumer Products Ltd, HDFC Asset Management Company Ltd, Havells India, SBI Life Insurance Company Ltd, ICICI Lombard General Insurance Ltd, ICICI prudential life insurance company Ltd, L&T Finance Holdings Ltd, Marico Ltd, Piramal Enterprises Ltd, Shriram Transport Finance Co. Ltd and The New India Assurance Company Ltd. These are the companies which fall a little bit for new investors this is the time to invest in these companies and the investors who already invest in these companies can sell their shares because they buy shares at high prices so if the shares fall more than they can pay the more price in buying and less in selling, means suffer from the loss.

Ashok Leyland Ltd, Bandhan Bank Ltd, Bank of Baroda, Berger Paints India Ltd, Biocon Ltd, Bosch Ltd, Colgate Palmolive (India) Ltd, DLF Ltd, Divi's Laboratories Ltd, HDFC Life Insurance Company Ltd, Hindustan Petroleum Corporation Ltd, Lupin Ltd, Motherson Sum Systems Ltd, NHPC Ltd, and Vodafone Idea Ltd. These are the companies that fall more in this case Fibonacci retracement tells that the investor who already invests in that can sell their shares as fast as they can and the new investors can invest in these companies because in the future maybe these companies earn good profits when they start rising.

Aurobindo Pharma Ltd, Cadila Healthcare Ltd, Dabur India Ltd, General Insurance Corporation of India, Hindustan Zinc Ltd, Indiabulls Housing Finance Ltd, United Spirits Ltd, Oracle Financial Services Software Ltd, Page Industries Ltd, Pidilite Industries Ltd, Power Finance Corporation Ltd, and Punjab National Bank. These are the shares which are going continuously upward in this case the new investors do not want to invest in these shares because maybe in future after some time they start falling and new investors face losses, and for investors

who have already shares of these companies can sell the shares when they reach the highest point.

Avenue Supermarts Ltd, Container Corporation of India Ltd, Interglobe Aviation Ltd, NMDC Ltd, Petronet CNG Ltd, Procter & Gamble Hygiene Healthcare Ltd, Siemens Ltd, and United Breweries Ltd. These are the shares that are going upward but a little bit in this case the investors sell their all shares.

Due to this pandemic, investors do not want to invest in the shares because today everyone wants liquidity cash but for the new investors this is a good time to invest in the shares because all the shares are buying at less price.

## CONCLUSION

The business organization plays an important role in the development of the financial structure of the nation. The current study deal with the “Analyzing the impact of COVID19 on the stock market using Fibonacci retracement with special reference to Nifty 50” which will give an alert zone for buyers as well as sellers to purchase or sell the securities. They can take decisions on whether to buy or sell according to the ratios. These ratios act as a tool for indication. This study can talk about the Fibonacci, which covers all 50 companies of Nifty 50 from this year (2020) to get more reliability. The application of the Fibonacci extension gives more clarity to this. Here extension is applied in the combined share price of the NIFTY 50 which gave an exact result. We can conclude that the share prices of the companies are following the Fibonacci ratios. They act as an indicator for buyers and sellers either to buy or sell the securities. Impact on nifty 50 of COVID19, most global markets, including India; have gained ground over the past couple of sessions after a choppy week. Indian benchmarks, the S&P BSE Sensex and the Nifty 50 saw their worst week in a decade and slipped around 7 percent each. Commodity prices, too, were hit. While gold surged to a seven-year high of over \$1600 per ounce, crude oil slipped from \$68 a barrel to around \$50 a barrel. Oil prices, reports say, have corrected by around \$14\bar{barrel} year-to-date, leading to savings of \$20 billion.

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### APPENDIX



Chart4: Fibonacci retracement of ACC Ltd.



Chart5: Fibonacci retracement of Adani Transmission Ltd.



Chart6: Fibonacci retracement of Ambuja Cements Ltd.



Chart8: Fibonacci retracement of Aurobindo Pharma Ltd.



Chart7: Fibonacci retracement of Ashok Leyland Ltd.



Chart9: Fibonacci retracement of Avenue Supermarts Ltd.



Chart 10: Fibonacci retracement of Bajaj Holdings & Investments Ltd.



Chart 11: Fibonacci retracement of Bandhan Bank Ltd.





Chart 12: Fibonacci retracement of Bank of Baroda



Chart 15: Fibonacci retracement of Bosch Ltd.



Chart 13: Fibonacci retracement of Berger Paints India Ltd.



Chart 16: Fibonacci retracement of Cadila Healthcare Ltd.



Chart 14: Fibonacci retracement of Biocon Ltd.



Chart 17: Fibonacci retracement of Colgate Palmolive (India) Ltd.





Chart 18: Fibonacci retracement of Container Corporation of India Ltd.



Chart 19: Fibonacci retracement of DLF Ltd.



Chart 20: Fibonacci retracement of Dabur India Ltd.



Chart 21: Fibonacci retracement of Divi's Laboratories Ltd.



Chart 22: Fibonacci retracement of General Insurance Corporation of India



Chart 23: Fibonacci retracement of Godrej Consumer Products Ltd.



Chart 24: Fibonacci retracement of HDFC Asset Management Company Ltd.



Chart 25: Fibonacci retracement of HDFC Life Insurance Company Ltd.



Chart 26: Fibonacci retracement of Havells India Ltd.



Chart 27: Fibonacci retracement of Hindustan Petroleum Corporation Ltd.



Chart 28: Fibonacci retracement of Hindustan Zinc Ltd.



Chart 29: Fibonacci retracement of ICICI Lombard General Insurance Company Ltd.



Chart 30: Fibonacci retracement of ICICI Prudential Life Insurance Company Ltd.



Chart 31: Fibonacci retracement of IndiaBulls Housing Finance Ltd.



Chart 32: Fibonacci retracement of InterGlobe Aviation Ltd.



Chart 33: Fibonacci retracement of L&T Finance Holdings Ltd.



Chart 34: Fibonacci retracement of Lupin Ltd.



Chart 35: Fibonacci retracement of Marico Ltd.





Chart 36: Fibonacci retracement of Motherson Sumi Systems Ltd.



Chart 37: Fibonacci retracement of NHPC Ltd.



Chart 38: Fibonacci retracement of NMDC Ltd.

Chart39: Fibonacci retracement of Oracle Financial Services Software Ltd.



Chart 40: Fibonacci retracement of Page Industries Ltd.



Chart 41: Fibonacci retracement of Petronet LNG Ltd.



Chart 42: Fibonacci retracement of Pidilite Industries Ltd.



Chart 43: Fibonacci retracement of Piramal Enterprises Ltd.



Chart 46: Fibonacci retracement of Punjab National Bank



Chart 44: Fibonacci retracement of Power Finance Corporation Ltd.



Chart 47: Fibonacci retracement of SBI Life Insurance Company Ltd.



Chart 45: Fibonacci retracement of Procter & Gamble Hygiene & Health Care Ltd.



Chart 48: Fibonacci retracement of Shriram Transport Finance Co. Ltd.



Chart 49: Fibonacci retracement of Siemens Ltd.



Chart 52: Fibonacci retracement of United Spirits Ltd.



Chart 50: Fibonacci retracement of The New India Assurance Company Ltd.



Chart 53: Fibonacci retracement of Vodafone Idea Ltd.



Chart 51: Fibonacci retracement of United Breweries Ltd.

**Note:** All the charts were created with the help of <https://www.investing.com/>





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## THE IMAGE OF FERUZ IN THE DRAMA

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### ABSTRACT

*This article analyzes the works of art written about the king and poet Muhammad Rahimkhan II - Feruz. In the drama type of fiction, the spiritual world of the historical image, that is, Muhammad Rahimkhan II - Feruz, and its specific characteristics are studied in relation to other types and genres.*

**KEYWORDS:** Khiva Khanate, Historical Drama, Historical Image, Muhammad Rahimkhan II, Symbol, Teacher and Student, Russian Invasion, King and Poet.

### INTRODUCTION

"Famous people and world events in the interests of the motherland and the people are the subject of history. There is a special place in this series of works dedicated to creative historical figures. "This means that a historical figure who has become an artistic hero can be an artistic symbol with his character, deeds, positive and negative aspects. Such historical works are not only fiction, but also the revival of a forgotten history or a history that has not yet been studied by scholars. Many scientific and artistic works are being created about our world-famous historical figures such as PakhlavonMakhmud, JaladdinManguberdi, Amir Temur, Alisher Navoi, ZakhriddinMukhammad Babur. But there has been almost no in-depth research on a number of our historical figures, who have been worthy successors to our great men, and who have been instrumental in bringing the sources of their works and deeds to us. In particular, no major scientific research has been conducted on the khan of Khiva MukhammadRakhimkhan II. After all, this historical figure has made a great contribution to the material and spiritual development of the people.

## MATERIALS AND METHODS

In the history of Uzbek literature, there are many kings who have equal kings and poets. For example, ZakhridinMukhammad Babur, MukhammadShaibanikhan, Ubaydullakh, Amir Umar Khan are among them. MukhammadRakhimkhan II, who ruled the Khiva Khanate from 1863 to 1910, was one of the rulers who equated the kingdom and poetry. Muhammad Rahimkhan II created Devon under the pseudonym Feruz (Feruz - happy, prosperous) in history, sponsored many poets, historians, composers and architects, as well as made a significant contribution to the development of the Khorezm literary environment and led it. Muhammad Rahimkhan II succeeded his father Said Muhammadkhan in 1863 and succeeded him to the throne of the Khiva khanate. Dedicated to this event, the poets and fuzalas finished their history and poems, and created the Masnavi. The history written and written by Feruz's teacher Agahi is of special importance. "Agahi's poem dedicated to Feruz expresses the father's advice to his son, the teacher's student, his wishes and desires, his justice and people's intentions. Agahi's poem was a work of great instruction and an instruction to Feruz in governing the country.

Their teacher-disciple relationship was very strong. Agahi was also Feruz's closest political adviser. Scholars and poets who lived and worked at the same time as Feruz interpret him as one of his civic, just, and merciful kings. Feruz's poetry has reached us in its entirety in manuscripts and lithographs. The Beruni Institute of Oriental Studies has about a dozen collections of poems by the poet. At Feruz's initiative, the talented poet AkhmadjonTabibi composed the commentaries Majmuatush-shuaroyiFeruzshakhiy and Mukhammasatush-shuaroyiFeruzshakhiy. The MajmatushShuaro presents examples of the work of about thirty poets gathered at the Feruz Palace.

As a musicologist, Feruz, poet and composer Pahlavon Niyaz Mirzoboshi said, "He encouraged Komil to write a note for the Khorezmshashmaqom on the tanbur. Kamil created the "Tanbur line" called "Khorezm tanbur note". Muhammad Rahimkhan II organized a lithograph in Khiva and published a book. Feruz has compiled a list of works that need to be translated and has hired various translators. "As the famous translator N. Kamilov rightly pointed out, the Khorezm school of translation appeared during this period. Muhammad Reza Agahi's historical work, Iqboliferuzi (or Shahidi Iqbal), is dedicated to the events of Feruz's reign.

Feruz wrote poems, sang and composed music. He composed thirteen melodies for Shashmaqom. These melodies are still popular among music lovers in the West and East. At present, Feruz is published in the Academy of Sciences of the Republic of Uzbekistan, the Institute of Oriental Studies named after Abu RayhonBeruni, the Institute of Manuscripts named after H. Suleymanov, libraries in Moscow, St. Petersburg and other countries such as Britain, France, Turkey. such works are preserved.

In recent years, a number of studies have been conducted on Muhammad Rahimkhan II. And that serves as a resource for every creator. Literary critic M. Kushjanov noted that in our opinion, paying more attention to the environment in which a historical person lived and worked is an important aspect of creating the image of large figures. As a result of these efforts, we can see the image of the king and poet Feruz in a number of works of art. For example, in the drama "Agahi" by Kamil Avaz, the image of Feruz is portrayed in a unique way. Although the work is dedicated to Agahi, the image of Feruz is also mentioned in many places. For example, Feruz's royal duties, his teacher-disciple relationship with Ogahi, and others are covered. The drama is a

two-part, seven-act musical historical drama featuring Ogahi, Allakulikhon, Muhammad Rahimkhan II-Feruz, and Kamil Khorezmi.

The drama chronicles the years 1839-1840 and 1873. The first part mainly deals with Ogahi's youth, love affairs, and political processes related to Khiva khan Allakulikhan. Feruz's character begins to appear in the second part of the drama. It mainly describes Feruz's teacher-disciple relationship with Ogahi and the consequences of the Russian invasion. Agahi's following speech says that Feruz is also a good musician. "I have heard that the khan has finished a wonderful melody, and the poor man's insignificant essay has become even more melodious and cheerful" (p. 128). It is said that Feruz's teacher composed music for Agahi's ghazal, which quickly became popular. The name of this song is "Feruz" and it is known in the following speech of Kamil Khorezmi. "I am just happy to be here. Ghazal-u-navo merged to give birth to an immortal estate called Feruz" (p. 129). As mentioned above, Feruz was known as a patron of science and enlightenment during this period. He organized lithography in Khiva, collected and republished many works. In the following sentence from the speech of Kamil Khorezmi, we can see that Feruz's services were recognized. "As the khan entrusted you with the task of compiling Tawiz-ul-Ashiqin, so he entrusted me with writing down the maqams" (p. 129). Historical figures in works of art are transformed into characters based on life facts. That is, "the social position of historical figures in their time, their role in life, is preserved without distorting it in accordance with the historical reality, and is portrayed realistically in relation to the characters created by texture."

## RESULT AND DISCUSSION

In every age, kings have fought for the throne. Or they killed their brothers to save the throne. But the just and merciful Muhammad Rahimkhan II - Feruz did not do that. Even after the betrayal of his uncle and brother, he was not sentenced to death from a human point of view. The author claims that this is a trait inherited from Feruz's ancestors. The following passage from Agahi's speech in the drama also acknowledges Feruz's noble character in the memory of his ancestors. "Bless you! At all times, for the sake of the khanate, for the sake of the practice, they killed each other, hanged, ran, slaughtered each other, but this dynasty is pure! (Silence). Do you remember Rahimquli's generosity? After the death of his father, Allaqulikhan, my brother wanted Madamin to be a khan, but he said no, my brother wanted to be a khan. Isn't this a blessing from God for the prosperity of this new country?" (P. 129). The final seventh episode of the drama begins with a description of the damage caused by the Russian invasion. Here, through the speeches of other characters, it is said that Feruz has unseen qualities. While Siddiq and Jumaniyaz count the severe consequences of the Russian invasion, Feruz points out that he foresaw these days. "O Jumaniyaz, there is life in those who say that Hazrat Khan is prophetic. It is no coincidence that Figon recited the ghazal. Oh, say that, say it out loud! Hearts are bleeding! Let these disbelievers hear!" (P. 131).

"Russia's interest in Khiva began during the reign of Peter I. It is known from history that Peter I's expedition led by Bekovich-Cherkassky was crushed on the threshold of Khiva in 1714-1717, and later V.A. Perovsky's expedition (1839-1840) also failed.

In 1873, under Kaufmann, an army of 13,000 men, with 55 artillery pieces, marched against Khiva. On May 29, 1873, Khiva was captured. However, Feruzkhan pursued a number of policies in the interests of the people, so that they would not lose their identity and become

spiritually mature. In the drama, Feruz sees such difficult days as a test of God. The following is an example of Feruz's speech. "It simply came to our notice then that we were in for a rude awakening. May God protect you from this evil "(p. 132). Khorezm, which had not surrendered to the enemy for centuries, was saddened by the defeat during Feruz's rule. The following Feruz's speech reflected his anguish. "Alhazar! The Russians have done their best! Khorezm was humiliated and the country was trampled. Wealth will be found, but our heads are bowed before the spirits of our great ancestors, and our feet are straight! " (P. 132). Feruz regrets not the loss of the throne and wealth, but the loss of the services of his great ancestors.

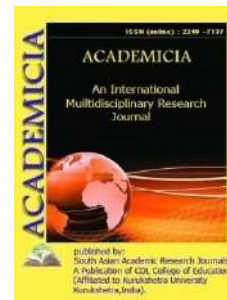
The tragedy that befell Feruzkhan left an irreparable wound in his heart. In the drama, Feruzkhan interviews his teacher, Agahi, in search of solace. Agahi, who has gone through many trials in life, gives the best advice to his student. "Sir, there is no need to be sorry. You are not the only loser. As a result of the unification, the whole of Turan was defeated. This tragedy was foretold by our servant Khodja AkhmadYassavi 600 years ago "(p. 132). Agahi's words are true. It is known from history that the Bukhara Emirate, the Kokand Khanate and the Khiva Khanate did not unite against Russia in time. Referring to this, Agahi says that Ahmad Yassavi predicted these events and cites the following poem by Yassavi as an example.

Ming ikkiyuzsaksonbirmungaerurdalil,  
 Paydobo'lg'ayo'zga el, islomqo'ldinketaro.  
 Kofirkelibqishlag'ay, ko'pmo'minlarocho'lg'ay,  
 Osonqilg'aybuishniyaratguvchisattaro.

Throughout the work, stunning sentences are uttered. The author refers to the year mentioned by Ahmad Yassavi through the speech of KamiolKhorezmi. That is, in the year Ahmad Yassavi said, Feruzkhan ascended the throne. "Vodarig! The year one thousand two hundred and eighty-one is the year of the mouse, the year when the khan ascended the throne. " (P. 132). Upon hearing this, Feruz confirms it. That is, he remembers that this year the Russians occupied Khojand and Tashkent. As Feruz said these words, he felt as if he had fallen into a deep abyss, feeling helpless and helpless. But Feruzkhan's tenacity and courage do not allow him to break his spirit. Feruz says he has found another way to fight for freedom, which means focusing on science and publishing many books and passing them on to future generations. After all, no invader can take away a person's knowledge.

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## CERTAIN ASPECTS OF REDUCING A SHADOW ECONOMY THROUGH THE MONITORING OF FOREIGN TRADE OPERATIONS COMMITTED BY CUSTOMS AUTHORITIES

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### ABSTRACT

*This article outlines some measures fulfilled by customs authorities through the monitoring of foreign trade operations due to decreases negative impact of “shadow economy” on integration of the Republic of Uzbekistan into the world economic community. Furthermore, below given a number of offers targeted improving this trend whereby legally coupled with international experience.*

**KEYWORDS:** *Foreign Trade Operations, Monitoring, Shadow Economy, Customs Authorities, Export, Import, Currency, Accounts Receivable, Accounts Payable, Invoice, Contract, Unified Information System Of Foreign Trade Operations (UISFTO), Smart-Contract.*

### INTRODUCTION

There are concealed trade operations, unofficial employment, illegal merchandise of specific commodities, black market of cash, money laundering and other patterns of shadow economy presented in whatsoever country. An underground economy is part and parcel of formal economy, furthermore might have extensive connections with a huge number of its sectors.

It is a different share of informal economy in various states, as well as different opinions of researchers. While some people consider that it is as a negative influence on economic



development, the negative impact on the management of the state economy and the basis of criminal activity, others feel that it is the basis for new directions of the economy and innovations, firstly concealed trend and subsequently an evident one.

Although crime and shadow economic activities have long been a fact of life—and are now increasing around the world—almost all societies try to control their growth, because of the potentially serious consequences:

- A prospering shadow economy makes official statistics (on unemployment, official labor force, income, consumption) unreliable. Policies and programs that are framed on the basis of unreliable statistics may be inappropriate and self-defeating.
- The growth of the shadow economy can set off a destructive cycle. Transactions in the shadow economy escape taxation, thus keeping tax revenues lower than they otherwise would be. If the tax base or tax compliance is eroded, governments may respond by raising tax rates—encouraging a further flight into the shadow economy that further worsens the budget constraints on the public sector. (On the other hand, at least two-thirds of the income earned in the shadow economy is immediately spent on the official economy, resulting in a considerable positive stimulus effect on the official economy.)
- A growing shadow economy may provide strong incentives to attract domestic and foreign workers away from the official economy. [9]

Although, in general, the impact of the shadow economy on society is more negative than positive.

Estimates of Central Asia's shadow economy vary depending on methodology – and simply because so much of the action takes place out of sight. These figures are measured against gross domestic product (GDP) for a sense of scale; activity in the shadow economy is not included in official calculations of GDP.

Among the states of the former Soviet Union in 1998–99, Georgia's shadow economy was the largest, at 64 percent of GDP; Russia's was 44 percent of GDP; and Uzbekistan's was the smallest, at 9 percent.[9]

According to a 2019 report by Kazakhstan's National Academy of Sciences, which cites data from the Commonwealth of Independent States' statistics committee, the “non-observed economy” was equivalent to 29-33 percent of the economy in Uzbekistan; 22-27 percent in Kazakhstan, Tajikistan and Turkmenistan; and 17-19 percent in Kyrgyzstan. [10]

However, according to the Ministry of Economy and Industry of the Republic of Uzbekistan at an international press club meeting in January 2018, the average share of the “hidden economy” in GDP is more than 50% in Uzbekistan. [11]

Furthermore, on the Appeal of the President of the Republic of Uzbekistan to the Oliy Majlis on January 24, 2020 provides for an in-depth analysis of the factors contributing to the emergence of a “parallel economy” and the development of a program to combat it.

## ANALYSIS AND RESULTS

One of the main components of the shadow economy is the illegal implementation of foreign exchange transactions in the process of export coupled with import of commodities, and the



analysis of the data available in the State Customs Committee of the Republic of Uzbekistan (SCC) in this area revealed the following:

According to paragraph 14 of the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 416 was dated the 30<sup>th</sup> of September 2003 “On measures to further improve the monitoring of export-import operations”, the period of total receipt or re-importation of goods on export operations (except certain categories of exporters) should not exceed 120 days from the date of actual export.

Actually, according to results of the implementation of export contracts by business entities, from last year till April 2020, overdue receivables amounted to \$ 733.6 million. [8]

Analyzed data of analogous period according to the Regulation registered by the Ministry of Justice of the Republic of Uzbekistan dated June 12, 2013 No. 2467 “On approval of the Regulations on the procedure for monitoring the validity of foreign exchange transactions by legal entities and individuals” showed:

- Imports of goods on three-party contracts are composed third of total imports, additionally reached \$ 6.5 billion (\$ 1.3 billion of them during 2020);
- Goods imported under contracts with residents of offshore countries amounted to \$ 590 mln. (\$ 94.1 mln. in 2020) or 2-3% of the total import amount;
- Cases of gratuitously over valuation assessment of imported goods amounted to \$ 838.7 million (2020 - 197.5 million) or 4% of total imports value. At the same time, an assessment of commodities indicated in exporter's documents amounted to \$ 656.2 million (2020 - \$ 153.5 million) and discrepancy during customs registration went to \$ 182.5 million (2020- \$ 44.0 mln.). [8]

Cases of gratuitously underreported figures of goods prices during import customs procedures amounted to \$ 7.4 million (1.0 million), owing to a reduction was filled in as a discount from the real price of the producer in the exporting country. [8]

The high share of imports, which is carried out through contracts of this type, leads to covert operations related to the actual turnover and concealment of money laundering crimes, unjustified misappropriation of funds for the purpose of money laundering.

An analysis of recent irregularities shows that the illicit circulation of cash currency values is on the rise. For instance, in order to cover receivable accounts in fact exported goods as a result of urgent measures taken by the responsible departments of the SCC of the Republic of Uzbekistan in 2019, a total value of illegal cash currency was \$ 20.9 mln. As a consequence, it was detected in several special operations by customs authorities through the falsification passenger declarations. In general, the customs authorities in 2019 elicited a total of equal 14.1 (2018 – 7.5) billion Uzbek sums (UZS) within the confines of 221 (2018 - 176) cases of customs violations. Therefore, the sum of infringements of an illegal transferring cash through the customs border for the last year compared with previous one has been grown almost double. [8]

Above given violations due to another element of the shadow economy. On purpose, the contract prices of imported goods are dropped, owing to the reason that a fee settlement on received goods is carried out in cash outside the bank accounts. In particular, there is accounts payable of \$ 14.8 billion for imported consignments within 96,144 contracts, till April 2020, including \$ 3.5 billion in 2019. Thus, detailed trend shows the following larger ratio among countries: China – 17%,

South Korea – 15%, Russia – 10%, Kazakhstan – 7.4%, Great Britain – 7.1%, Japan – 6.2% and Turkey – 5.3%. [8]

An increase in such cases can be seen in the large-scale measures taken by other public services and their results. In particular, during a number of measures in 2019, the State Security Service of the Republic of Uzbekistan arrested a total of \$ 8 million, which would be transferred by illegal ways through the state border to citizens of Kyrgyzstan. [13] Obviously, above written 17% rate of accounts payable between Chinese and Uzbek traders.

One of the major changes which took place for Uzbek business communities and even for all segments of the population had been realized in accordance with the Decree of the President of the Republic of Uzbekistan №5177 “On priority measures for the liberalization of foreign exchange policy” signed on September 2, 2017. In particular, the Central Bank's devaluation of the national currency UZS by 48% [12] along with the prudent policies in this direction are targeted to destroy, the most important elements of the country's shadow economy, currency black market.

The main purpose of announcing the new version of the Law of the Republic of Uzbekistan "On currency regulation" on October 22, 2019 was to reduce the influence of the shadow economy in the country by liberalizing the currency policy and bringing it in line with international standards. As a result, there were a huge number of innovations such as changes in the procedure for opening accounts in foreign currency, clearly defining the repatriation of assets for foreign trade operations, where new types of foreign exchange transactions were introduced and their list was expanded. Also, changes were made to cross-border transactions regulations (transfers between individuals in the amount of up to UZS 100 mln. (approx.. USD 10,000)). Separately, the New Law defines the Central bank, the Audit Chamber, the Ministry of Finance, the State Tax Committee and the State Customs Committee as authorized bodies in the area of foreign currency control. In particular, these state bodies are authorized to conduct currency control inspections and require relevant information in this respect.

## DISCUSSION AND RECOMMENDATION

Since has being the head of state, the President of the Republic of Uzbekistan Shavkat Mirziyoev realized a great liberalization of monetary policy in the country. Range of explicit examples for this would be transition to free currency conversion; achieving the market rate of the national currency, the “floating rate” of the UZS; cancellation of the requirement for the mandatory sale of foreign exchange earnings. Such kind of measures were a vast step for reducing the impact of parallel economy to country's development. Moreover, for contributing customs authority's mite for future expansion of the protection of economic interests of our state as well as studying the experience of foreign countries in this area below given a number of possible offers.

Firstly, the fact that cash still occupies a significant place in international trade is a reason for the expansion of the shadow economy. Supposedly, did fix the high rates for each transaction service in the implementation of foreign exchange transactions on the import and export of goods charged by commercial banks pose a certain financial challenge for business participants. These interest rates are reduced to an average of 0.3-1%, but other additional costs for remittances are also charged by banks as mandatory fees. Also, one of the problems with remittances is the time spent, which is one of the most important indicators of successful merchandise. Especially,

transactions under a foreign trade agreement take an average of 1 to 5 days. This, in turn, reduces the devaluation of the national currency, the attraction of free funds in circulation to the bank, bank turnover, financial attractiveness and activity.

One possible way to deal with this problem would be put in practice the “smart contract”, which fulfills the requirements of the contract in an automated algorithm on the basis of a block chain platform specializing in modern digital technologies. As a result, nowadays the smart contract technology saves the time of business entities if the conditions related to the human are fully implemented in a timely manner. Also, the smart contract will automatically transfer money from any risk-free system in digital form for about 1-2 hours, furthermore, the problem of accounts receivable and payable couldn't be mentioned as issue whenever. Additionally, using innovated systems in the government programs would be an alternative for operating in the country as a single system since 2003 – Unified Information System of Foreign Trade Operations (UISFTO). The introduction of the smart contract in the country was first mentioned in the Resolution of the President of the Republic of Uzbekistan dated 03.07.2018 No PP-3832 “On measures to develop the digital economy in the Republic of Uzbekistan”. However, there might be still numerous ado to put it in practical usage.

Secondly, an invoice is a document that is universal and contains all the necessary information not only for the customs authorities, but also for all entities engaged in foreign trade operations.

In international trade, the information required to obtain an invoice document is not based on a single general agreement, but over the years, the information required for trade has been recorded and formalized in various forms. In order to draw up such a travel document, each country has to make a decision on the basis of national legislation, if necessary. For instance, in the Republic of Uzbekistan the minimum requirements for foreign trade contracts and invoices are validated in accordance with the Resolution of the Cabinet of Ministers on September 30, 2003 No. 416 “On measures to further improve the monitoring of export-import operations”. However, the fact that the participants of the foreign trade in our country, based on domestic legislation, furthermore, dictating terms to the consigner would not have a positive influence on trade. In addition, most of the violations detected by the customs authorities are related to forgery or substitute of the invoice document.

In accordance with the Resolution of the Cabinet of Ministers No. 522 of June 25, 2019 “On measures to improve the usage of electronic invoices in the system of mutual accounts”, as of January 1, 2020, all entities are entitled to electronic accounts. This new procedure will create transparency for the conduct of trade operations in the domestic market and simplify the system of tax accounting in the near future. In addition, it will principally save a lot of time, effort and finance.

Such a system works effectively in many developed countries, as well as among large organizations and regulators of international trade. In particular, “SEEBURGER”, founded in Germany in 1986, now has more than 19 branches in Europe, Asia and North America, and has gained a lot of trust among business participants for the creation of numerous electronic systems. One of the most effective systems used by the company is electronic data exchange. One salient example for that is “E-Invoicing program”, when trade affairs between participants are carried out by means of electron certified documentation without using paper one. For more than 20

years, the world's largest 8,000 companies have officially entered into international trade practice-invoices. [14]

In June 2005 the World customs organization (WCO) Council adopted the SAFE Framework of Standards to Secure and Facilitate Global Trade (SAFE Framework) that would act as a deterrent to international terrorism, secure revenue collections and promote trade facilitation worldwide. In 2007, the WCO's flagship Customs-Business partnership programme - the Authorized Economic Operators (AEO) Programme - was introduced. It would be possible within the confines of that partnership programme to put in activity of business community single electron form of universal document – invoice, besides this to authorize restricted using for service aims by customs administrations. Such kind of possibilities would be a great chance to improve online monitoring fulfilled by customs services, to develop of the world trade operations, to increase the transparency of information on the border with the quick and effective customs control based on the first data transmission, as well as preventing violations of customs facilities.

## CONCLUSION

Taking everything into consideration, achieving a balance between a simplification of a monetary control coupled with strict control systems fulfilled by authorized bodies would be possible if each citizen of the state recognizes own's duty to fight against the “shadow economy”, which must be tackled only in solidarity and through the mutual integration of countries.

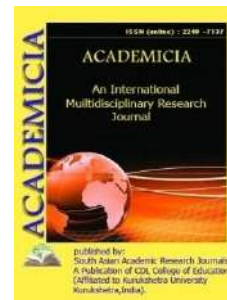
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## THE NEGATIVE IMPACT OF THE COVID-19 PANDEMIC ON GLOBAL FINANCIAL MARKETS

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### ABSTRACT

*Today, no country is immune to the negative effects of the COVID-19 pandemic, not only economically but also socially. This article analyzes the impact of the COVID-19 pandemic on the global financial markets, which has left behind all the financial and economic crises in history with negative consequences. In particular, the negative effects of the pandemic on international stock markets were presented, and the author made detailed analysis about these consequences.*

**KEYWORDS:** *COVID-19 Pandemic, Economic Recession, GDP, Financial Markets, Government Bonds, Advanced Economy, Emerging Market And Developing Economies, Monetary Policy.*

### INTRODUCTION

The COVID-19 pandemic poses unprecedented challenges to health, economic and financial sustainability. Of course, in such a situation, the primary goal is to save human lives. However, the necessary measures taken to limit the spread of the virus are leading to a sharp decline in economic activity. As a result, in just three months, the forecast for 2020 has shrunk sharply from the expected 3 percent increase globally to a negative 3 percent, far exceeding the product losses seen during the 2008-2009 global financial crisis. The extent of the impact of the crisis on the global economy and the timing of the economy's recovery are very uncertain. This crisis poses a serious threat to the stability of the global financial system. Following the outbreak of



COVID-19, financial conditions have deteriorated at an unprecedented rate, leading to some “cracks” in global financial markets. Volatility in the market has intensified and borrowing costs have increased as a result of widespread defaults. Tensions have arisen in key financing markets, including the global financing market for the U.S. dollar. The outflows of large capitals have also exacerbated various shocks in the domestic markets of countries in emerging market economies. These changes could put pressure on banks as borrowers become unable to repay their debts, leading to a halt in credit markets over a period of time. Long-term dislocation in financial markets can cause panic among financial institutions and in turn lead to a credit crisis for non-financial borrowers and exacerbate the economic crisis.

## LITERATURE REVIEW

The COVID-19 pandemic has affected all financial markets around the world, in particular, the stock price trend has declined significantly and steadily. The Dow Jones and S&P from the United States are among the financial markets facing such a situation. In Daily FT (March 2020) which is one of the most well-known financial magazines, it is supported the fact stating that, “The Dow Jones, and S&P both of which take into account the share prices of a variety of companies in the US have dropped by over 20%”.

Globally, financial markets are experiencing some closures and stock prices are falling significantly due to the COVID-19 pandemic. The pandemic has shifted financial markets to completely different trade routes that affect the world economy. In particular, Colombo stock exchanges sometimes close their businesses and stock prices fall significantly. In Daily FT (March 2020) it is suggested that, “Even the Colombo Stock Exchange has seen almost a 9% drop in its All Share Price Index over the course of the last week, and has been forced to close trading three times during this week”.

Another evidence of the impact of the pandemic on global financial markets is the Nikkei, which trades on the Tokyo Stock Exchange. The trend of market price of Nikkei as well experienced the volatility of the share prices and mostly a downward trend throughout since the outbreak of the COVID – 19. In Daily FT (March 2020) it is elaborated that, “Similarly, the Nikkei, which takes into account share prices of companies in the Tokyo Stock Exchange has also dropped significantly in the last few days”. The most well-known economic experts suggested that the current pandemic has a serious impact on the global economy, with the attention that the world is going to the global recession. A global recession is a situation where the world production goes down with the effect of employment which means companies production will be affected and falls down and people will lose employment while the import and exportation activities will be affected by the recession worldwide. In Euro New (March 2020) they have reported that, “A global recession is now a real possibility; central banks worldwide have slashed interest rates to record levels”.

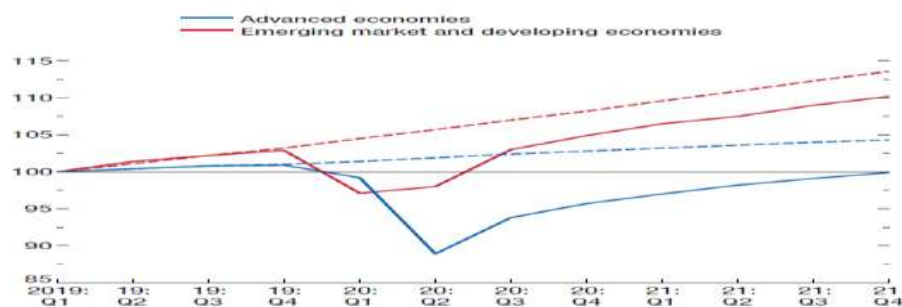
## ANALYSIS AND RESULTS

The coronavirus (COVID-19) pandemic is seen as a historical problem because it is the first-time humanity has encountered such an unprecedented problem. In mid-February, when financial market participants feared that the epidemic would turn into a global pandemic, stock prices plummeted from previous levels. The impact of the pandemic on credit markets, especially in risky segments such as high-yield bonds, leveraged loans and private debt, has been widespread, and the issuance of these segments has largely ceased. Oil prices fell as global demand fell and

OPEC + countries failed to reach an agreement to cut production, which further exacerbated the risky situation. These changing market conditions have led to a return to quality with a sharp decline in yields on secure bonds.

The negative consequences of this pandemic are causing enormous economic hardship to any category of states. According to the international organizations like the IMF, global economic growth in 2020 will be minus 3%, which is a negative decline. This situation is even worse than in the 2009 global financial crisis. According to the International Monetary Fund in October 2019, the growth forecast for the current year was 6%, but after the onset of the pandemic, the situation has changed radically, and the above data is re-analyzed. The slowdown in economic growth during the pandemic period mainly falls on the group of developed countries, and the growth rate for 2020 was minus 6.1 percent for this group of countries. In most developed countries, the decline is projected for 2020, which is as follows: The United States (–5.9 percent), Japan (–5.2 percent), the United Kingdom (–6.5 percent), Germany (–7.0 percent), France (–7.2 percent), Italy (–9.1 percent), and Spain (–8.0 percent). The impact of this pandemic is much severe in most European countries than in the rest of the world.

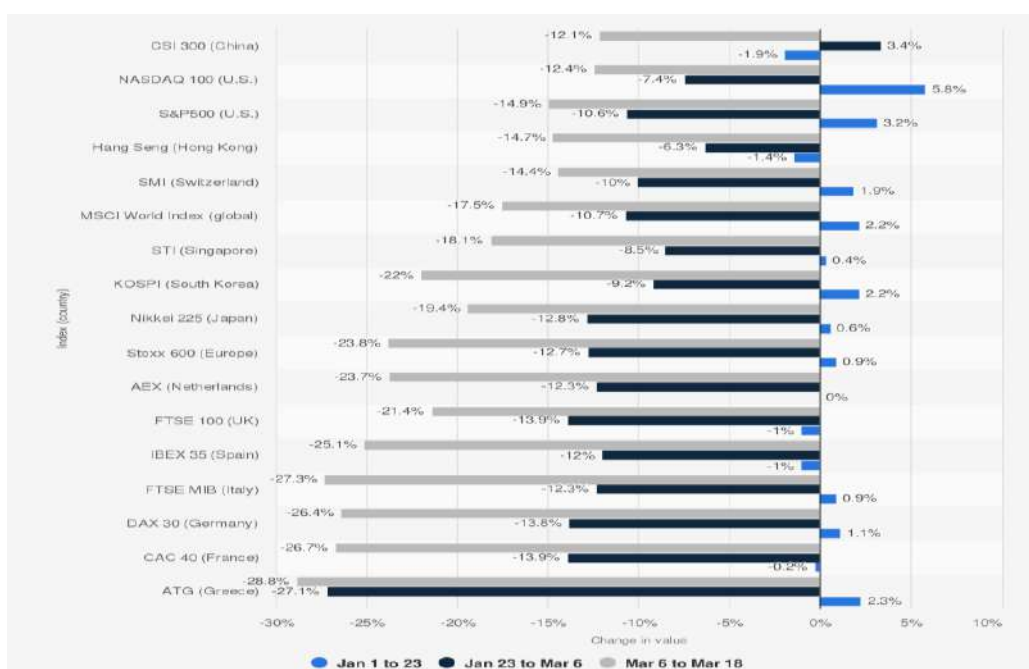
Global economic growth is expected to rise to 5.8 percent in 2021, which is a positive indicator, showing a return to normal levels of economic activity from very low levels of it. While the growth rate in the emerging market and developing economies is 6.6 percent, in developed economies it is 4.5 percent. For comparison, the global growth rate in 2010 rose from minus 0.1 percent in 2009 to 5.4 percent. The resumption of global economic growth in 2021 is due to the complete cessation of the pandemic in the second half of 2020, and the removal of strict restrictions on the pandemic will lead to a gradual return of consumer and investor confidence and which in turn restarts the laws of the market. Significant economic policy measures have been taken to meet the requirements of public health care by limiting to some extent the economic activity and the financial system around the world. The projected recovery assumes that these policy measures will be effective in preventing widespread bankruptcy, rising unemployment, and financial strains of firms. Nevertheless, Figure 1 shows that GDP levels in developed and emerging markets and developing countries are expected to remain below the pre-virus base by the end of 2021. As with the level of decline, there is extreme uncertainty in the recovery of the economy. Failure to implement some of the aspects that support recovery could lead to more negative global economic growth, depending on how the pandemic goes and the severity of the interrelated economic and financial consequences. For example, a further increase in restrictions in 2020 will lead to a lower rate of economic growth in 2021.



**Figure 1. Quarterly World GDP (2019: Q1 = 100; dashed lines indicate estimates from January 2020 World Economic Outlook Update)**

**Source:** IMF staff estimates

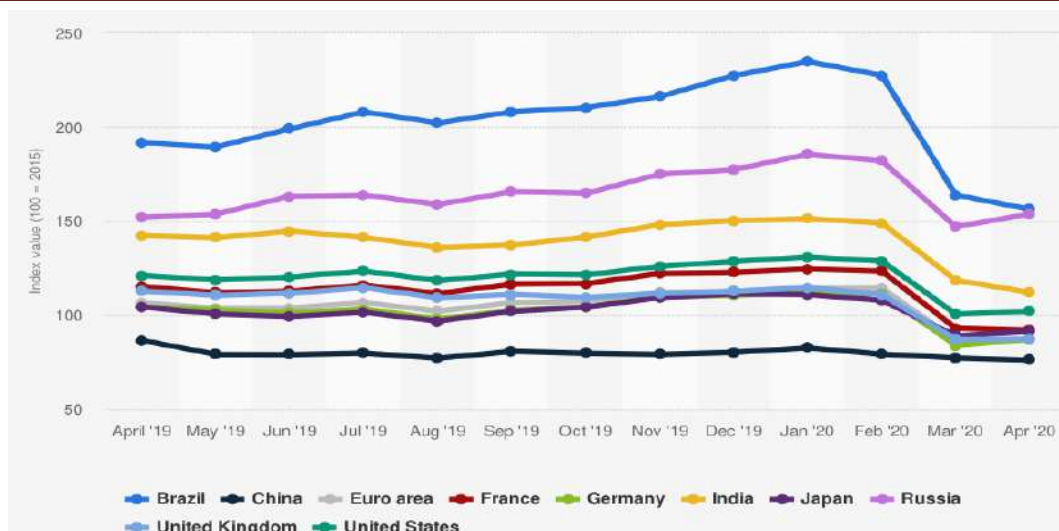
At the beginning of the year, a broad sense of optimism emerged against the background of monetary policy supported by financial markets, easing of trade tensions and the first signs of stability in the global economy. However, with the global spread of COVID-19, as the prices of risky assets and commodities began to fall at an unprecedented rate while the prices of safe assets such as gold and the U.S. Treasury rose as investors reassessed the economic consequences of the COVID-19 pandemic. The stock market experienced the fastest decline in history, with the S&P 500 falling about 20 percent in just 16 trading sessions. The decline in asset prices halved the level observed at the worst selling point in 2008–09, and the volatility between asset classes was, in some cases, the last to be observed during the global financial crisis. However, markets have recently reduced some losses as tough policy measures, including the aftermath of the pandemic, have stabilized investor sentiment.



**Figure 2. Change in value during coronavirus outbreak of selected stock market indices worldwide from January 1 to March 18, 2020**

**Source:** Statista 2020. Worldwide; Il Sole 24 Ore; January 1 to March 18, 2020

According to Figure 2 above, the world's most popular stock market indices experienced sharp negative changes between January 1 and March 18. In particular, China's CSI 300 stock market index value fell 1.9% as of Jan. 23, followed by a decline of 12.1% from March 6 to March 18. Compared to other stock market indices, the CSI 300 alone saw a 3.4% increase from January 23 to March 6. The NASDAQ 100 and S&P 500, two popular U.S. stock market indices, also fell sharply, falling 12.4% and 14.9%, respectively, from March 6 to March 18. The highest declines were recorded in the Italian FTSE MIB and the Greek ATG stock market indices, which were 27.3% and 28.8%, respectively.



**Figure 3. Share price index in major Developed and Emerging Economies from April 2019 to April 2020**

**Source:** Statista 2020. Worldwide; April 2019 to April 2020

Figure 3 shows the stock price index of developed and developing countries from April 2019 to April 2020. According to the figure, Brazil's stock price index was at its highest level for the entire period cited, reaching 156.2 in April 2020, up from 191.51 in April 2019. In second place is the Russian stock price index, which during this period was 151.89 and 153.7, respectively, almost reaching the level of Brazil in April. The lowest change during this period was recorded in the Chinese stock price index, which means that although it is at a low level, the country has not seen a sharp rise or fall. It is noteworthy that the stock price index of all these countries gradually increased from January to February 2020, then fell sharply from February to March, and again rose in April.

Figure 4 below shows the percentage of government bond yields in the United States and Germany for 2018-2020 with maturities of 2 and 10 years. In September-November 2018, the yield on bonds of both countries was high with the yield on 10-year U.S. government bonds was above 3%, and the yield on 10-year German government bonds was minus 0.5%. However, the 10-year bonds of the two countries have had a general downward trend during the given period.

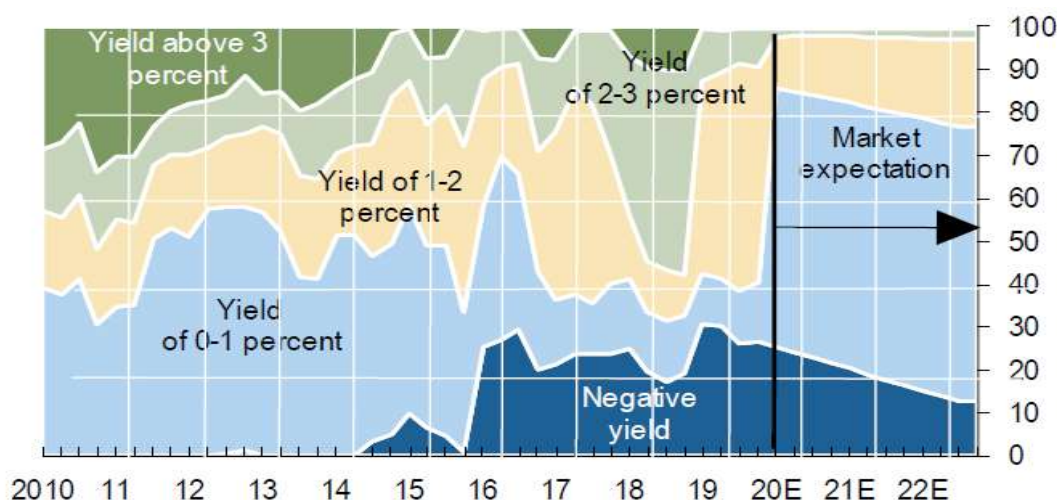


**Figure 4. Advanced Economy Government Bond Yields (Percent)**



**Sources:** Bloomberg Finance L.P.; and IMF staff calculations.

In March 2020, the yield of these bonds was about 1% in the US and 0.5% in Germany. The yield of 2-year government bonds of these countries was close to the yield of almost 10-year bonds. It is noteworthy that the yield of German 2-year government bonds during the years was only a negative percentage with almost 0.5%.



**Figure 5. Advanced Economy Government Bonds (Percent of bonds outstanding, by yield)**

**Sources:** Bloomberg Finance L.P.; and IMF staff calculations.

The changing market conditions in February and March have led investors to move towards safer and more liquid securities. Government bond yields in Germany and the United States declined sharply in net terms (Figure 5). In response to the easing of tight monetary policy by central banks, policy rates in a number of developed countries have approached zero, and government bond yields are expected to remain low. Government bonds with yields of less than 1 percent (shown in light and dark blue in Figure 5) increased from about 40 percent of bonds outstanding at the end of 2019 to about 80 percent in March.

## CONCLUSIONS

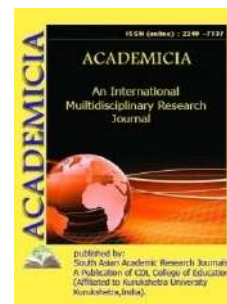
This crisis is not like any other one. First, the shock is huge. The costs associated with this emergency and the measures to prevent it are more than the losses caused by the global financial crisis. Second, as in a war or political crisis, there is a strong uncertainty about the duration and intensity of the blow. Third, there are different roles in economic policy in the current context. In normal crises, policymakers try to stimulate economic activity by stimulating aggregate demand as quickly as possible. This time the crisis requires a certain amount of preventive measures. This makes incentive activities more difficult and undesirable, at least for the most affected sectors. Countries are taking drastic measures to maintain economic and financial stability and prevent the emergence of negative macro-financial gaps. Central banks have eased monetary policy and are ensuring the liquidity of the financial system, including influencing the economy through currency exchange lines to maintain credit flows. As a result of these efforts, funding markets have retained their functions and have shown that investor sentiment has improved. Supervisors are urging banks to renegotiate loan terms with those who have problems repaying their debts to help reduce losses and overcome economic hardship. The country's government is

helping people and companies through large-scale, timely and targeted financial measures to limit the defaults of firms and households through moratoriums on payments and guaranteed loans. Multilateral cooperation has increased the available resources to support the most vulnerable countries and communities. The IMF, with \$1 trillion in available resources, is actively supporting its member countries. These policies are necessary to ensure that the suspension of production does not lead to further damage to the productive capacity of the economy, the financial system and the structure of society. Once the spread of the virus is under control, policies should be aimed at stimulating economic recovery, as well as assessing and treating the damage caused by the pandemic to the balance sheets of non-financial firms, financial institutions and governments.

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## TEACHING ENGLISH INDEPENDENTLY BY PARENTS TO DEAF CHILDREN

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### ABSTRACT

*This article promoted to deaf people especially hard hearing and deaf children. It is given general conception of teaching and learning English to children who are deaf. Moreover, effective methods and modern techniques is mentioned as way of teaching and learning English.*

**KEYWORDS:** *A Sign Language Alphabet, Physical Ability, Deaf, Hard Of Hearing, Blind, Demanding,*

### INTRODUCTION

Demanding for learning English is improving day by day all of the world. Because, if you can speak English you can speak with world. Also you will have chance to show your magnificent talent. So most philological researchers give their attention to improving consequences of teaching and learning English. They made lots of different methods, strategies and styles for English teachers and English learners.

Today's learners are very different: young, children, edult, man, woman, businessmen, doctor, teacher, builder and so on. They are also different from each other according to their age, gender, learning language ability, mental or physical skills.

There are many methods, research works for healthy people. They give their good results. But as healthy people, people with disabilities want to learn English. They should be have the same opportunity as healthy people to learning English. Nevertheless, there have lack of methods and styles to teaching and learning English to students who are disabilities. So in this article highlights the current problem's solutions in this field.

First of all, we must divide disabilities people according to their mental or physical ability [1]. They are:

- Hard hearing or deaf
- Blind
- chronicle disease
- Mental illness
- Physical illness

## Methods

What Parents should or shouldn't do?

If parents want to see their children's success in English language, they should work hard with their children and teachers as the same time. They should pay attention to children's spiritual and physical conditions. For deaf children their parents only people who are counted on. So it is important for them their parents' opinion about their chances. they believe their parents every words and they try to gain praise from their parents.

Many parents would like to teach their children English at home, or they want to give help to their English but don't know how to start. It doesn't matter if you own English is not perfect [2]. The most important thing is that you are enthusiastic and that you give your children lots of encouragement and praise. Your child will pick up on your enthusiasm for the language. Doesn't worry if your child doesn't start speak English immediately [3]. They will need a certain amount of time to absorb the language. Be patient, and they will begin to speak English in their own time. Most parent's think of their children cannot learn English because of being deaf. But it isn't wrong! First of all, parents must give motivation to their children. After that children begin to feel confidence in learning English.

There are given some important rules in order to teach children by their parents[4].

- Establishing a routine
- Using sign language alphabet
- Playing games
- Using stories
- Using everyday situations
- Work with a teacher and a psychologist as a partnership

Establishing a routine

Establish a routine for you English time at home. It is better to have short, frequent sessions than longm infrequent ones. Fifteen minutes is enough for very young children. You can gradually make sessions longer as your child gets older and their concentration span increases. Keep the activities short and varied in order to hold your child's attention. Try to do certain activities at the same time every day. Children feel more comfortable and confident when they know what to expect [5]. For example, you could play an English game every day after school, or doing exercise in the morning by showing finger spelling. If you have space at home you can create English corner where you keep any connected to English, for example books, games, DVDs or

things that your children have made. Repetition is essential - children often need to practice words and phrases many times before they feel ready to produce them themselves.

Using sign language alphabet

Parents should more practise finger spelling letters together with their child. Because, sign language alphabet is the only thing to communicate for deaf children. When their teacher begins to learn this alphabet, Parents must learn and try to teach their child to this. If parents give help children to doing homework, children feel free themselves.

### **Playing games**

Children learn naturally when they are having fun. Flashcards are a great way to teach and revise vocabulary and there are many different games which you can play with flashcards, such as Memory, Kim's game, Snap or happy families. Also watching videos of cartoons which are showed words and phrases using finger spelling by cartoon's heros.

### **Using everyday situations**

The advantage of teaching English at home is that you can use everyday situations and real objects from around the house to practise the language naturally and in context. For example:

- Talk about clothes when your child is getting dressed, or when you are sorting laundry (let's put on your red socks; it is Dad's T-shirt, etc.)
- Practise vocabulary for toys and furniture when you are helping your child to tidy their bedroom. (let's put your teddy bear on the bed!, where is the blue car?)
- Teach food vocabulary when you are cooking or going shopping. When you go to the supermarket, give your child a list of things to find (use pictures or words depending on their age.) Revise the vocabulary when you put the shopping away at home.

Using stories

Younger children love books with bright colours and attractive illustrations. look at the pictures together and say the words as you point to the pictures[6]. Later you can ask your child to point to different things, e.g. where's the cat? After a while encourage them to say the words by asking what's that? Listening to stories will get your child used to the sounds and rhythms of English.

Work with a teacher and a psychologist as a partnership

In order to gain the goal, parents, teachers and psychologists keep in touch very often. They should work together as a single team. They should aware of child's motions, spiritual conditions and physical conditions.

### **Results**

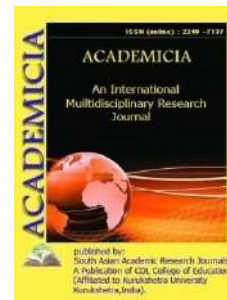
Following by these methods hard hearing and deaf students could achieve more success in English. Also their parents have the opportunity to teaching their English by independently. If children are learnt by their parents, it would be grateful chance to occupy new language.

**DISCUSSION**

To sum up, as a healthy children have opportunity to study a foreign language, it should be chance to deaf children for it. If we support them, even it must be very small detailed, deaf children can achieve success in their studying.

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## RISK FACTORS OF KIDNEY DAMAGE AT PATIENTS WITH RHEUMATOID ARTHRITIS

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### ABSTRACT

*The article presents the materials of kidney damage in patients with rheumatoid arthritis (RA). The most common cause of kidney damage among inflammatory joint diseases is rheumatoid arthritis, which increases the rate of occurrence of the kidney pathological process with an increase in the duration of the disease. Risk factors for kidney damage in rheumatoid arthritis are older patients with high activity, a disease duration of more than 5 years, a late clinical stage, and the seropositive type of RA. The basis of the work was the results of a comprehensive clinical, instrumental and laboratory examination of 60 patients with RA.*

**KEYWORDS:** Rheumatoid Arthritis, Inflammation, Kidney Damage, Microalbuminuria, Proteinuria, Glomerular Filtration Rate.

### INTRODUCTION

Rheumatoid arthritis (RA) is characterized by a high prevalence in the population, difficulty in early diagnosis, rapid development of disability and poor life prognosis [1,2]. A high risk of premature death in these diseases is associated with the development of cardiovascular diseases [2,3]. RA characterized by chronic erosive arthritis and systemic damage to internal organs [4]. The prevalence of RA is about 0.7% of the total population. About 0.02% of the population fall ill with RA each year [5]. In recent years, the attention of many researchers has been attracted by the prognostic value of kidney damage in rheumatoid arthritis, including at a subclinical level [6]. According to some estimates, kidney damage in RA can occur in more than half of patients

[7,8]. It is important to note that when considering kidney damage in RA, its systemic forms can be represented as glomerulonephritis, amyloidosis, drug-induced tubulointerstitial nephritis, and subclinical kidney damage, manifested mainly by functional disorders (chronic kidney disease) without a clearly defined nosological affiliation. Clinical diagnosis of kidney damage in RA is significantly difficult due to the paucity of symptoms. In the absence of an extensive clinic of amyloidosis, most patients may experience periodic or constant proteinuria [8,9]. According to Boers M., out of 132 autopsy cases in RA patients, changes in urine tests were recorded in 20% of them, initial functional disorders in 21%, severe renal failure with a serum creatinine level of more than 200  $\mu\text{mol} / \text{L}$  in 23% of patients [9,10]. The development of chronic kidney disease in RA can probably be associated with the active involvement of the kidneys in the pathological vicious cycle of endothelial dysfunction in RA. At the same time, there is still insufficient data on the variants of functional renal impairment in RA, approaches to the early detection of renal pathology and risk assessment of its progression in RA have not been fully developed.

### **Aim of the stud**

To study the prevalence of kidney damage in patients with rheumatoid arthritis (RA), to identify the main risk factors for the development of renal dysfunction.

### **MATERIAL AND RESEARCH METHODS**

The study was open comparative randomized. The basis of the work was the results of a comprehensive clinical, instrumental and laboratory examination of 60 patients with RA (40 women and 20 men). The age of patients in the clinical group ranged from 20 to 68 years, averaging  $50.2 \pm 1.1$  years. Criteria for inclusion of patients in the study were: age 18 years and older, verified diagnosis of RA in accordance with the criteria of the American College of Rheumatology (ACR-EULAR, 2010), informed consent. The exclusion criteria were clinically significant diseases of the internal organs - moderate and severe forms of chronic circulatory failure, organic kidney pathology not associated with RA, liver failure, diabetes mellitus, chronic kidney disease (CKD) stage 4-5 ( $\text{GFR} \leq 29 \text{ ml} / \text{min} / 1.73 \text{ m}^2$ ). Patients of the clinical group, depending on the presence or absence of clinical signs of kidney damage, were divided into two groups. Group 1 comprised 34 (57.0%) patients who did not have renal dysfunction, and group 2 consisted of 26 (43.0%) patients with renal dysfunction. Within the 2nd group among patients with RA, subgroups were distinguished with different involvement of the kidneys in the pathological process: depending on the value of glomerular filtration rate (GFR) ( $\text{GFR} \geq 90 \text{ ml} / \text{min} / 1.73 \text{ m}^2$ ;  $\text{GFR} 60-89 \text{ ml} / \text{min} / 1.73 \text{ m}^2$  and  $\text{GFR} 30-59 \text{ ml} / \text{min} / 1.73 \text{ m}^2$ ), the presence or absence of microalbuminuria (MAU), proteinuria, the level of excretion of albumin and protein in the urine. The study of the functional state of the kidneys included a general urine analysis, urinalysis according to the methodology of Zimnitsky, Kakovsky-Addis; determination of glomerular filtration rate according to Cockcroft-Gault and MDRD (Modification of Diet in Renal Disease Study) formulas. An ultrasound examination of the kidneys was also performed, the presence and severity of MAU, proteinuria were assessed. During a biochemical blood test, the determination of total protein, albumin, creatinine, uric acid, the ratio of albumin / creatinine, total cholesterol, glucose was determined.



### Characteristics of patients with rheumatoid arthritis

The characteristics of patients in the study group are presented in table No. 1.

**TABLE 1**

	Total	Gender		Average age Me	Average duration of diseases Me	Clinical types	
Groups		F	M			Seropositive RA	Seronegative RA
Patients RA with kidney damage	26	18	8	52 ±2.4 P<0.05	9,29±0.4P<0.05	12 (46%)	14 (54%)
Patients RA without kidney damage	34	22	12	50±2.5 P <0.05	8.9±0.5 P <0.05	22 (67%)	12 (33%)
Control healthy	20	15	5	50,3±2.2	-	-	-

Note: p-differences

Most were diagnosed with a late stage of the disease - 36 (60%), early - in 24 (40%) patients. The group was dominated by patients with high RA activity, the average value of DAS 28 - 5.91 (5.20 - 6.58).

The main goal of our work was to study the prevalence of kidney damage in patients with rheumatoid arthritis (RA), to identify the main risk factors for the development of renal dysfunction.

Statistical processing was carried out on a DELL personal computer using the Microsoft Office Excel - 2010 software package, including the use of built-in statistical processing functions. We used the methods of traditional variational parametric and nonparametric statistics with the calculation of the arithmetic mean of the studied indicator (M), standard error of the mean (m), relative values (frequency,%), the statistical significance of the measurements when comparing the average values was determined by the Student criterion (t) with the calculation error probability (p). For statistically significant changes, a confidence level of  $p < 0.05$  was taken.

### DISCUSSION

Among 60 patients of the clinical group, 34 (57%) patients did not show kidney damage (group 1). Accordingly, 26 (43%) patients were included in the 2nd group. Among patients of the 2nd group, among kidney damage with microalbuminuria (MAU), 16 (61%) patients were identified: in 4 patients on the basis of persistent MAU, and in one patient on the basis of persistent urinary syndrome in the form of erythrocyturia. In RA, various clinical and morphological variants of renal pathology are described (mesangio-proliferative glomerulonephritis, tubulo-interstitial nephritis, amyloidosis) [9, 10], most of which are accompanied by the development of proteinuria in the debut, which can remain the main diagnostic sign for a long time. Early

manifestations of functional renal impairment, especially with moderate severity of proteinuria, do not always attract the attention of clinicians, while the progression of CKD in RA can be rapid, especially in old age and in association with cardiovascular disease.

A slight decrease in GFR (60-89 ml / min / 1.73 sq. m) was observed in 16 (61%) patients with RA with kidney damage. 10 (39%) patients with nephropathy had a moderate decrease in GFR in the range of 30-59 ml / min / 1.73 sq. m. Normal or elevated GFR (90 or more ml / min / 1.73 sq. m) was determined in 3 patients of the 2nd group. Noteworthy is the small proportion of patients with RA with normal or elevated GFR (90 or more ml / min / 1.73 sq. m) among patients of the 2nd group with kidney damage. In general, the MAU group was observed in 17 (28%), and proteinuria was detected in 10 (16%) patients. In the 2nd group of patients, MAU was observed in 4 patients with a slight decrease in GFR, in 10 patients with a moderate decrease in GFR, and proteinuria in 1 patient with a 2nd and 10 patients with kidney damage. In total, in the 2nd group, MAU was detected in 18 (69%), and proteinuria in 8 (31%) patients.

The average creatinine level in patients with RA was  $82.6 \pm 1.6 \mu\text{mol} / \text{L}$ , the swing range was from 61 to 135  $\mu\text{mol} / \text{L}$ . Hypercreatinemia (in men above 115  $\mu\text{mol} / \text{L}$ , in women above 97  $\mu\text{mol} / \text{L}$ ) was observed in 8 cases (13%). In patients with RA, blood urea ranged from 2.9 to 13.7 mmol / L, averaging  $6.4 \pm 0.8 \text{ mmol} / \text{L}$ . An increase in urea above normal (8.3 mmol / L) was detected in 8 patients (13%).

At the next stage of the study, the main indicators reflecting the functional state of the kidneys were analysed separately in groups with the presence or absence of kidney damage.

In patients of the 2nd group, with the addition of kidney damage, there was a decrease in GFR by 48.7% ( $p < 0.001$ ), the level of daily proteinuria increased by 863.5 times ( $p < 0.001$ ), and the content of creatinine by 9.8% ( $p < 0.05$ ).

In a preliminary assessment of the specific gravity of urine according to the results of a general analysis, it was found that in the group, the relative density of urine ranged from 1005 to 1030, the average value was  $1018.2 \pm 1.2$ . In the 1st group, the relative density of urine varied from 1005 to 1030, in the 2nd group - from 1005 to 1020. The average specific gravity of urine in patients of the 1st group was  $1016.9 \pm 0.56$ , of the 2nd group -  $1018.7 \pm 0.59$ . The average value of the relative density of urine in patients of the 1st and 2nd groups, as well as in the clinical group in general, was slightly less than the lower limit of the norm. According to the results of the Zimnitsky test, it was found that in the whole group, as well as in the 1st group, the concentration and water excretion ability of the kidneys was normal. In patients of the 2nd group, the concentration ability of the kidneys was impaired; since the relative density of urine was lower than 1018. In patients of the 2nd group, the concentration index was lower by 35.7% compared with the 1st group ( $p < 0.001$ ).

## RESEARCH RESULTS

Thus, the group of patients with signs of kidney damage included older patients with high activity, a disease duration of more than 5 years, a late clinical stage, and the seropositive nature of RA. Early detection of kidney damage will provide timely intervention and a decrease in the rate of progression of kidney damage, therefore, the incidence of CKD is reduced.

According to modern concepts, the presence of protein in the urine is considered as the most important predictor of the development of functional renal impairment and increased mortality,

with various pathologies, including RA [10]. According to some researchers, microalbuminuria and proteinuria with normal or reduced kidney function can develop in the early stages of the course of RA, at the same time, its prognostic value may be ambiguous due to the variety of nosologically options for kidney damage. According to modern concepts, renal dysfunction lasting more than three months (the so-called chronic kidney disease), including without a specific nosologically diagnosis, it is considered as the most important prognostic factor requiring correction of therapeutic tactics, with various pathologies in the general population.

Thus, the determination of microalbuminuria can be a simple and sensitive marker for early renal damage, including drug-induced damage. A large amount of data on the most important prognostic significance of the determination of microalbuminuria (proteinuria) as an additional marker of functional renal impairment has been taken into account recently at the international level, which was reflected in the new classification of chronic kidney disease, in which the division at the stage was performed not only by assessing glomerular velocity filtration, but the significance of microalbuminuria (proteinuria).

So, patients with RA are a group of increased risk of renal pathology, the likelihood of developing which increases with a prolonged and active course of RA. Clinical symptoms of renal dysfunction in patients with RA with high activity and duration of the underlying disease, as well as in the detection of arterial hypertension and dyslipidemia, should be the basis for active clinical observation of patients. This approach will direct the efforts of clinicians in the timely treatment of kidney pathology in patients with RA, which will extend the life of patients and improve its quality.

## CONCLUSIONS:

1. Among patients with RA, the prevalence of kidney damage is 43% and is manifested by a decrease in GFR of less than 90 ml / min / 1.73 m<sup>2</sup> in 31%, MAU in 28%, proteinuria in 16%, hyper creatinemia and increased urea.
2. Risk factors for renal complications were established: age, high activity and duration of the disease, seropositive nature of RA.
3. In patients with RA, the development of kidney damage and the severity of its manifestations are determined by the duration and activity of the underlying disease and age.

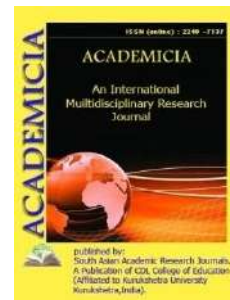
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## THE IMAGINE ALISHER NAVOIY IN OYBEK'S WORKS

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### ABSTRACT

*This article examines Alisher Navoiy's interpretation of fiction in fiction based on Oybek's novel Navoiy. Its place in the century as an artistic image, methods of depiction, character traits were studied. The artistic image is compared with the historical figure, and the similarities and differences between them are analyzed.*

**KEYWORDS:** *Oybek's Novel "Navoiy", Alisher Navoiy, Historical Novel, Historical Concept, Historical Image, Type, Specific Feature, Syncretic Image.*

### INTRODUCTION

In the literature of almost all the peoples of the world we encounter various myths about eternal life. As a means of eternal life, we see a flower growing on the bottom of the sea, another with the fruit of a legendary tree, and another with a magic glass of water. But it is important to note that these are just simple, woven details from the legend. Man has the opportunity to live forever without such magic. An example of this is Mir Alisher Navoiy, who took with pen the land that no king could occupy with a sword. Yes, Alisher Navoiy is still alive. Its impact on the future of humanity affects us more than you do. Many scholars have defended Navoiy's dissertations by studying Navoiy's works. His historical works have opened the doors of history that were closed to us, and through this we have gained a lot of facts. The wisdom and ideas put forward in his work have not lost their value and serve as the main program in educating young people. He made a great contribution to the Uzbek classical literature of his time, as a result of which our literature flourished. After that, Uzbek literature gained a special significance and gained its name and place in world literature. At present, statues, libraries and research centers named after Alisher Navoiy have been erected in the most developed countries of the world in honor of him. The most famous writers and poets of the world have created many works dedicated to Navoiy.

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## MATERIALS AND METHODS

Oybek, the son of Musa Tashmuhammad ogli, a powerful writer of 20th century Uzbek literature, also studied the life and work of our great ancestor Alisher Navoiy. He had a special love for Alisher Navoiy's work. Oybek says in an article: "Navoiy's poetry and Navoiy's image have always fascinated me like a strong sun. I had a great desire and desire to create the image of Navoiy in my works. From my youth I loved to read Navoiy's immortal, literary poems, his captivating poems became more and more ingrained in my heart, their form and content intoxicated and fascinated my heart... I always thought of Navoiy as I walked. I could feel his meaningful, intelligent eyes, his always kind, compassionate, noble appearance, his pure, great heart, I could see in my eyes. " Thus, in 1928, Oybek began to study the works of Alisher Navoiy. After that, his articles and works about Alisher Navoiy began to be published. As a result of Oybek's scientific research, in 1944 the novel "Navoiy" was created. Oybek won the State Prize for this novel. "Navoiy, Ulugbek and Babur emphasized the diversity and diversity of their images as artistic images, and that they are dynamic images that are hardened, improved and developed in action and struggle".

The novel describes the socio-political life of Movarounnahr in the 15th century. The main idea of the work is humanity. The lines of destiny of each image are revealed in direct connection with the image of Navoiy. The novel begins with a spring tariff. The beauty of spring illustrates the beauty of Herat. The birds in the bosom of nature are also symbolic and point to the conflicts in the political life of the Timurids. We can see this in the following sentences: "The debaters sometimes forgot themselves in the flames of debate, uttered harsh words to each other, and sometimes froze like an eagle, for a moment in an interesting situation, as if preparing to dust each other" (p 6 ). Navoiy was a man of knowledge, a man who respected knowledgeable souls. Oybek described this character in his conversations with his student Sultanmurod. When Navoiy and his eight-year-old Sultan Murad met for the first time, he noticed the young man's true talent. Realizing that the country's development requires young people like Sultan Murad, who prefer education to anything else, Navoiy pays him a lot of compliments. People around Navoiy wondered why this simple, poor, poor young student needed so much attention. This image of Sultan Murad is actually a textured image. The novel also features textured characters such as Arslanqul and Dildora. The author depicts the social life of ordinary people through these images. At the same time, they are important figures in portraying Navoiy's human qualities. Jami, Hussein Boykaro, Behzod, Nizamulmulk, Majididdin and other heroes are historical figures.

According to the poet and translator A. Naumov, in an interview with him, Oybek spoke about the history of the creation of the novel "Navoiy" and said: On my desk lay a map of medieval Herat that I had drawn myself. I would go to sleep in Herat and wake up in Herat, and only at night would I dream of Tashkent, where I live. " Such feelings must be born of a true artist

Only those who work day and night on the work, disconnected from the real life around them, feel their own destiny and the highest service to the people, can feel such feelings. As you read the novel, you will come across many historical facts about Navoiy. These include his father, Giyosiddin, a trip to Iraq, a meeting with Sharafiddin Yazdi, and more. The author was able to summarize all these facts and express them under one plot.



The play discusses the conflict between Darwishali and Navoiy between the two Shiite and Sunni sects in the Islamic world. Navoiy cites such conflicts as an obstacle to his work, saying: "My brother, there is nothing more enjoyable in the world than reading a book, thinking, and reciting poetry. My nature was more inclined in this direction. I wanted to live in a quiet place and swim in this river of pleasure" (p. 39). It seems that Oybek has introduced all the historical facts into the century without any changes, but at the same time, it seems that he has revived history by making it artistic and making it artistic. The whole world of Navoiy, which is in the center of the work, is revived, and a whole series of events is described through it. This means that Oybek was able to bring the image to a typical level in this work. The humanistic ideas of this typical image are embedded in the general events of the work. Indeed, "it is more difficult to generalize a real person and an event, to elevate it to a typical level, it is so valuable to know the facts, the idea is hidden in them".

The play also focuses on the relationship between Alisher Navoiy and Hussein Boykaro. We know that Alisher Navoiy and Hussein Boykaro have been friends since school. From that time on, Hussein Boqaro was also interested in writing poetry and was always on the move. Even after he ascended the throne, he continued to practice this custom. He was the first to teach his poems to Navoiy. In the novel we can find a description of similar situations. For example, Hussein Boykaro wrote a ghazal and showed it to Navoiy. Navoiy, who read and analyzed this poem, says the following. "How clean, colorful and potential our language is. This word can be used to describe any spirit or meaning. I am convinced that our language has more possibilities than the Persian language in gathering the pearls of thought, the thread of poetry. How dare the Persian (beautiful speakers) and our own Persians read these poems! " (P. 45). In this way, the author points out that in the XIV-XV centuries in the literature of Central Asia it is possible to give beautiful expressions in the old Uzbek language with the help of various figurative words to describe each situation, which is not inferior to Persian.

"Usually, the interpretation of historical works has two directions. The first accurately reflects the biographical interpretation of the historical figure, and historical events serve as a background. In the second, important socio-ethical issues are raised through the interpretation of certain events in the life of a historical figure or part of them".

## RESULT AND DISCUSSION

In the novel "Navoiy" we can find these two interpretations in a syncretic state. That is, from the beginning to the end of the work, along with information about the autobiography of Navoiy's life, the events that took place around him are described in a consistent manner. Also, almost all the images related to Navoiy show universal problems and their solutions. This means that the burden of an entire work is placed on the image of Navoiy. The author was able to infuse the main idea of the work in terms of form and content for each character, each event, no image was simply used.

Navoiy was a man who spoke the truth, even to the king, for truth and justice. In the play, we can see this character in his own words: "The truth is on the side of the crowd. It is not necessary to stone the lips of those who speak the truth, but to cut off the hands that are raised to destroy the foundation of truth. Gathering zakat is a state affair, but not a source of wealth for a few ugly creatures! ... I repeat, the anger of the people is justified. It is our duty to listen to his voice and listen patiently to his complaints" (p. 84). While speaking to the king and ministers, Navoiy said

that the images in his condition did not depict fear, excitement or similar feelings at all. On the contrary, he is portrayed as being overly restrained and frustrated by the hypocrisy of ugly ministers. Both the king and the people were well aware of Navoiy's actions in the interests of the whole society. For example, Sahib Doro's words in the play are an example of this: "The nation sees its only hope in Navoiy" (p. 199). They also slandered Alisher Navoiy's brother Darweshali and ordered the king to imprison him. Worst of all, the decree was written by Alisher Navoiy himself. As Navoiy reluctantly obeys the king's order, his situation is described as follows: "They want revenge for our truth! He said, gnawing in agony. "What more deceit, what hypocrisy!" Indeed, the ancients did not make a mistake: "The choir that brings water is hard, the saint who breaks the jug!" Let the mountains of oppression fall on my head, but you will not include me in the ranks of your executioners, looters and mastitis! I agree to give up my life, to leave this country, which is dearer and sweeter than my soul, but I will not choke the word of truth! " (P. 399). So, in the novel, Alisher Navoiy knows the truth more than his soul. In the eyes of the reader, he is a real person who can tell the truth, even if it means ruining his life.

Throughout the work, Navoiy goes through many classes. The only thing that comforted him in those difficult times was creativity. After each tragedy, it is beautiful to describe how he took a pen in his hand to comfort himself and loved to share his feelings. The conditions of his work are as follows: "Navoiy was able to work quietly for a few months. He worked with great pleasure on the "bird's tongue" and rejoiced in the power and beauty of the mother tongue "(p. 458).

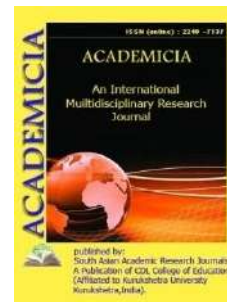
## CONCLUSION

There is a big problem with the end of the play. The king and his son are at loggerheads. Because King Hussein Baykaro unknowingly sentenced his grandson to death under the influence of alcohol. In such a precarious situation, Navoiy's words to Badiuzzaman seem to have been addressed to an entire ruler: "It is not necessary for a man to be crowned, but to have a conscience and a sense of responsibility to society!" (P. 481).

This novel is the greatest work of Alisher Navoiy's life dedicated to goodness. There are still many works about Alisher Navoiy, both today and in the future.

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## **TYPES OF LOGICAL THINKING AND METHODS OF ITS DEVELOPMENT**

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### **ABSTRACT**

*In this article consider conception of thinking, types of thinking operations, opportunities for development of intellection through using tasks in empirical, abstractive, and theoretical conceptions. Author proposed tasks which conduce for development of brainwork.*

**KEYWORDS:** *Thinking, Intellectual Operation; Comparison, Analysis, Synthesis, Abstraction, Generalization, Concretization.*

### **INTRODUCTION**

Human quality which being formed educative process, divides into general and special. Of course, thinking refers to common quality and its formation occurs in tuition process of whole educational subject, in process of whole life learners. Thinking presents active purposeful activity where obtained information materialized, revised and new incoming information, abjection external, casual, peripheral elements from fundamental, internal, rejecting essence of investigated situations; disclose logical connection between them.

Role of mathematic in evolution of logical thinking is prime importance. Historical experience confirms that teaching meth played paramount and especial main role in forming of intellection. On this matter academician V.V.Davidov wrote; "Solution of particular tasks of modern schooling, eventually connected with change of type of thinking, projectable aims, content and methods of teaching. It is necessary to reorient the whole educational system with forming among children rational empirical thought to evaluate modern research-and-technical intellection." That's why it is indispensably to establish which investment could bring solution of this task to organize research-and-technical intellection in teaching meth, how it should be organized, which content and methods of teaching should be.

In order to puzzle out in all this thinks it is necessary previously explore wherein essence of thinking, its peculiarity and types, how process of forming of thinking of children are occurs.

Trough thinking human learns out world. However, cognition can be fulfill without intellection by the agency of sense organs (sensual learning), which gives to human different kind of feelings, perception and carried through direct contract, his sense organs with learning objects. Meantime, brainwork is mediate learning of objects because it is accomplishes through sense perception by another object, regularly connected with cognitive object or though mental conversion species.

Thereby, thinking based on species, however, it is go beyond and that's why let to find out objects which are unavailable to sense organs. Brainwork permits to identify in cognizable objects not only their particular qualities and sides, which being established by feelings, but references and regularly connections, and relation between features and parts.

There through, thanks to intellection man learn general property and attitude excrete significant determinative character of object among these qualities. It's allows to man to forecast the results of observable events, phenomenon and own acts.

So, if species gives initial information about outward things in a separate qualities and demonstrative presentation (images) about them, that thinking convert this information, revealed features and conscience of general concept, submission of representations which were based, build ideal operations with these objects and by that predict possible result of operations and transfiguration objects, allows to plan self-actions with these objects.

Whole this tremendous work accomplish thanks to mental operations; comparison, analysis, synthesis, abstraction, generalization, and concretization.

**Comparison** is purposely matching objects of cognition, finding similarities (distinguishing general properties) and differences (distinguishing particular properties) of each identifiable object among them. This operation is the basis of others mental operations.

**Analysis** is mental dismemberment objects on pieces.

**Synthesis** is mental connection of single parts or elements in organic unity. In real mental process analysis and synthesis are accomplished jointly.

**Abstraction's** mental distinguishing any significant properties and mark of object in simultaneous distraction against all features and signs. As a result underlined word or sign in abstraction became itself object of thinking. All mathematic conceptions present abstract objects. For example, conception of geometrical figures are being organized by emphasizing shapes of observed things, extension and mutual position in space and distraction from all other qualities (material, color, mass etc.). In this case, is being produced not only abstracting of segregated specified qualities and discarding all the rest but also idealization these characteristics by mental transition to limit forms, which in real are not exist, of course (ideal right line, point ellipse, planar surface etc.)

**Generalization** is being used in 2 different forms; 1- as mental segregation of general property (invariant) in 2 or more objects and junction these objects in group based on segregation of invariants (empirical generalization). 2-as mental segregation of volume or several objects which

are under consideration, in result of analysis their significant property in the form of general concept for whole object class (scientific-and-theoretical generalization).

**Concretization** also can be used in 2 forms; 1- as mental transition from common to private. 2- as ascension from abstract-and-common and concretely-and-private by detecting different features and signs of this abstract-and-common as filling, enrichment of abstract-and-common by specific content.

Depending on connection between sensory and abstract elements, distinguish 3 types of thinking;

1-graphically-effective;

2-graphical-imaginative

3-Theoretical (abstractedly, conceptual)

Ability to think distinctly, logically perfect and make oneself clear in real time are required for everyone. As for me, math is for training habit to strict thinking has more opportunities, from psychological point of view it is psychological reflection process of reality, higher model of human's creative efforts. School must teach how to think. Accordingly, digestion process should be organized in order to make a child to train not so only memory as capacity to solve tasks by himself, requiring brainwork and independent judgment. Should be developed ability to raise a question properly, teach how to see contradiction which often lead to "problem situation", practice at the lessons educational psychology and development of intellection by practical tasks and didactic games.

Given tasks are designed to control ability of logical reasoning of students by using theoretical and empirical knowledge as is also forming skill in acquirement process of new experience by them. Their solution lay not only to obtain profile information as in work with routine problem. They accomplish more wide function, transform subject of educational activity of student, forming new method of operation, develop independence of brainwork, creativity to nonstandard, unordinary, unexpected tasks. Accordingly, solving one or the other task with students, teacher should look forward to 2 tasks. First, help to student to solve exactly given task, teach him how to solve it, to observe analogous. Second, evolve capability of student in order to solve in future any task independently. Undoubtedly, these 2 aims are connected, because after coping with sufficiently target hard task for him, learner develops his problem solving ability generally.

Current aims will be achieved only if following conditions are created;

- Creating atmosphere which is favorable to emerging of new ideas and opinions.
- Supporting each attempts of children to independent thoughts and all conditions directed on organizing their thought, not to hold back initiative of learners.
- While estimating students it's necessary to remember that every student is in collective.
- Encourage learners in their attempts a hard task.
- Habituate children not to afraid mistakes

**1) Tasks on logical reasoning in empirical ideas.** For such kind of tasks can be refer tasks with arithmetic ideas which I use in soirees, competitions, begin from 5<sup>th</sup> grade. They are not requiring

knowledge of math, that's why they should be solved without using any algebraic approach only by logical reasoning. And they are quite hard for those who cannot think. Yes, while solving such kind of task it's probable enumeration of possibilities but then intellectual activities are considered as discourses of search.

### Examples;

**1-** One herdsman said; "Give me 8 sheep and we will have them equally". But another herdsman offered; "Give me 8 sheep and then I will have twice as much as you have". How many sheep have every herdsman?

**2-** In the yard hens and rabbits are running. They have 35 heads and 94 feet. How many hens and rabbits there?

**3-** For the space of 155 meters laid 25 tubes their length 5-8 meters. How many others tubes were laid?

**4-** How heavy is fish if its tail weighs 4 kg, head weighs as much as tail and half of the body, but body weighs as much as head and tail together?

**5-** How many natural numbers exist? How many natural numbers exist less 100 which;

A) Divides simultaneously into 2 and 3?

B) Divides into 2 but does not divide into 3?

C) Divides into 3 but does not divide into 2?

D) Divides into 3 or 2 (at least into one of this 2 numbers)

**6-** How many gray mice does Josef have? Jose has 100 mice, some of them are white and others are gray. It's known at least 1 mouse is grey when of 2 mice one is white. How many gray mice does Josef have?

**7-** Bucket of water. For dad 1 bucket of water is enough for 2 weeks, but together with son it's enough for 10 days. How many days 1 bucket of water will be sufficient for son, if he drink it alone?

**8-** Receive one million. Give an instance of 3 positive integers amount of them should be equal to 407 but intersection should be ended with 6 zero.

**9-** Together – faster. Horse eats haystack in 2 days, cow in 3 days, and sheep in 6 days. How many days they will eat a haystack if they eat it together?

**10-** How many pages in a book? For numbering pages of schoolbook were need 534 numbers. How many pages in a schoolbook? **Answer;** For numbering first 9 pages had been used 9 numbers. Following 90 pages numbered by two-digit numbers. For this was needed  $90 \times 2 = 180$  numbers. The rest, coming on number of three ciphers constitute  $534 - (180 + 9) = 345$  numbers. From this numbers constitute  $345 : 3 = 115$  numbers of three ciphers. In total numbers of pages in schoolbook equal  $9 + 90 + 115 = 214$

### 2) Logical tasks in abstract ideas.

Some of the task can be unsolvable which students should find and prove that tasks cannot be solved because they are illogical.



Examples;

- 1) A is bigger than B in 5 times, when C is smaller than A in 2 times. How many times C bigger than B?
- 2) A is smaller than B in 4 times, when C is smaller A in 2 times. How many times C is smaller A?
- 3) A is smaller than B in 5 times, but bigger C in 2 times. How many times B is smaller than A?

Here is given simple tasks, by this model can be make infinitely many tasks. To my mind, such kind of task forms cognitive interest of learning new scientific knowledge in training activity and get into a habit to set a questions for thinking.

### 3) Logical tasks in theoretical ideas.

Such kind of tasks measured for reproduction learned tasks by memory. Learners should solve these exercises independently, relying on theoretical knowledge (determination, conception, laws, rules, theorems, formulas) earlier learned in a moment of solving these tasks.

Examples;

- 1) 2 angles are given with common top. One of them is equal 100, another 80. Will these corners be adjacent?
- 2) 2 angles are given with common top, they are equal. Will these corners be vertical?
- 3) 2 intersecting lines are given. Will they be perpendicular?
- 4) There are 2 vessels with volume 1 and 2 L. From the contents of these vessels can be prepared 0.5L. of mixture, contained 40% apple juice and 2.5L mixture, contained 88% juice. What's the percentage of juice content in vessels?

### 4) Tasks which lay to identify abilities of students to distinguish complex of interconnection of mathematical value.

Task;

A) Determine in which given tasks below missed some important data, as a result correct answer for this task is impossible.(Missed data given in brackets).

-Train consists of cisterns, goods wagons, and platforms. Cisterns are 4 times less than platforms and 8 times less than goods wagons. How many cisterns, goods wagons, and platforms in train? (total quantity is unknown).

B) In the task question is missed. Phrase it (answers for teacher are typed in brackets)

-For the space of 155 meters laid 25 tubes their length 5-8 meters.( how many tubes were laid?)

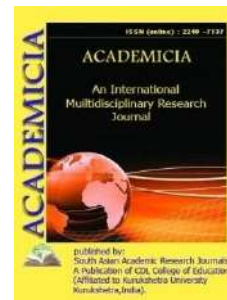
- In a square of cloth was 15 m material. One customer bought 5m, another 4m. (How many meters remained in a square of cloth?)

During the process of solving tasks it's necessary to accustom children to stick neck out because fear of making mistake, interchain initiative of learners in problem solution. It is indispensable to encourage children in their attempts to take any difficult exercises.

Finally, it is indispensable to note that the most important task of mathematics education is gaining general techniques of thinking, extensive imagination, evolution of ability to understand the meaning of assigned task, ability to close reasoning, take in algorithm of thinking by learners. It is necessary for everyone to learn to analyzed, distinguish hypothesis from fact, distinctly express own ideas, on the other side expand imagination and intuition (spatial representation, capacity to foresee the result and predict issue). Exactly math represents favorable opportunities for education of the will, laborious, insistence of overcoming problems, persistence in achieving aims and developing mathematic skill well then logically and consciously investigate phenomenon of natural world. Realizing this goal may and must be redound the solution of various nonstandard logical tasks on math lessons. That's why using these tasks by teacher on the lessons are not only desirable but also necessary element of teaching mathematic.

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## PSYCHOLOGICAL CONDITION OF DEAF CHILDREN IN TEACHING ENGLISH

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### ABSTRACT

*This article highlights the current problems and their solutions to psychological condition of deaf children in teaching English. Also, author pay attention to the strategies which are helpful for deaf children in learning English.*

**KEYWORDS:** *Psychological Condition, Deaf Children, Complex Mental Action, Speech, Sign Language Alphabet.*

### INTRODUCTION

As you know, hard hearing and deaf people can't hear and speak. But they can communicate to out by their another skills. Their others senses doing work instead of ears and mouth, such as, their hand speak ( it does different techniques and motions); their lips show their words and their eyes, skins can hear.

If parents know their children are deaf or hard hearing they should begin teaches them to communicate with out immediately. Unless Children lost their skills of getting information to out. It is very bad. So parents must be aware of the situation with their children.

### Theoretical Basis

Speech is complex mental action. It effects to growing to children with mental and general mature. Speech is based on hearing organ and it becomes developing the way of comparison. Hearing analyser, the moving speech analyser which effects of speech. The moving speech analyser works with hearing analyser as a companion. Developing of the hearing analyser depends on pronunciation. Developing speech of children belongs to speech sounds, physiological and phonetical progressing[1]. Most importantly, it is also characterized by the ability to distinguish the structure of words in one's own speech and the speech of others, the structure of sound. Both signals systems, as well as the interaction of speech with cognition,

form the basis of mental development. According to defectologists (T.A. Vlasova, R.M. Boskis, D.V. Neumann, etc.) [2], The level of development of a child with hearing impairment depends on the stage of the child's life and the severity of the defect. In deaf pedagogy, children with hearing impairments are studied as a group of children who become deaf, hard of hearing, and later deaf. Absolute deafness in both ears during congenital infancy leads to deafness. Children with speech impairment as a result of partial hearing impairment are included in the group of hearing-impaired children. Children who become deaf after speech development are later included in the group of those who become deaf. Even if the defect occurs after the speech has been composed, there may still be hearing loss due to a defect in the ear.

Deafness can be congenital or acquired due to the causes of permanent hearing loss 25-30% of deaf and dumb children have congenital hearing loss [3]. This due to various disease of the mother during pregnancy, such as influenza. Acquired defects in hearing may be due to defects in the structure of the ear or hearing analyser. This is caused by changes in the upper nerve center, conduction pathways, or the ear itself. Children with hearing impairments are included in the category of anomalous children. Because this defect has a negative impact on the child's overall development and mastery of the application materials. Causes a number of specific difficulties in mastering kindergarten and school programs. After hearing development in young children, for example, after the age of two, the child does not hear the speech of others as a result of deafness. He even slowly forgets what he knows. The deafness in the child gradually merges with the deafness and he becomes deaf and dumb. Teachers and educators in special instructions should help such children to receive an appropriate education. If the child is not given special care in time, he will also show signs of mental retardation. However, a positive result is achieved if the necessary measures are taken to compensate for the defect. Children with mild hearing impairment hear a spoken speech at a distance of 6 to 8 m from the ear suoras 3 to 6 m [4]. Hearing-impaired children, in turn, are divided into children with mild to moderate hearing loss, depending on the degree of hearing impairment. A pre-school and a boarding school for children with hearing impairments have the necessary facilities. Children with moderate hearing loss can hear a spoken word in a loud whisper from a distance of 1 to 3 m [5]. As mentioned above, in deaf pedagogy, hearing-impaired children include children who were born deaf and later became hearing-impaired. Hearing impairment results in a number of deficiencies in the child's speech Poor spelling Poor grammatical component Words in a sentence Misuse of words inability to connect them inconsistent word-formative modifiers inability to use suffixes.

In severe hearing loss, the child hears a moderately spoken speech from a distance of 0.5 m. Misleading similar - sounding consonants, and so on. Some educators and teachers mistakenly treat the child as a lazy, irresponsible bully, as a result of which the child's whimsical cries become slurred, which leads to secondary mental changes. However, special treatment is required to create a conducive environment for them. There are special groups for children with hearing imperilments in pre-schools and vocational colleges in Uzbekistan. Children with mild hearing imperilments can be educated in public preschools and Scholl's along with their healthy peers. Education in these institutions is based on the state requirements and programs of 11 year general education. Deaf educators are making great strides in working with children with hearing imperilments. Boarding school for this category of children have a pre-school education department. This category of anomalous children successfully graduates from higher education

after studying in special evening schools and works equally with everyone in various enterprises of the country. The main task of educators and teachers is to separate healthy children from hearing-impaired children and to ensure that they receive education in special institutions or are involved in integrated education, if they need a special approach. Hence the elimination of hearing loss can compensate for the fibers. A student who feels he or she is unable to express himself or herself orally in a private institution should be able to express himself or herself in writing.

### **Results**

To this end, students are taught to express themselves orally and in writing on the basis of practical speaking skills and competencies. In deaf and hard of hearing Students, teachers and student activities are organized on the basis of exercises in a certain system of lessons and classes on the formation of spoken and written speech. In order to ensure the practical acquisition of speech materials, situations that require special written problem-solving and written explanations are planned in advance. It is required to be able to adapt all types of didactic tools to the speech process. In this case, the speech materials are predetermined in the planning of the curriculum of correctional pedagogical process is carried out on the basis of a certain system. Speech materials for each lesson are prepared in strict accordance with the principles of the correctional utility systt. A wide range of conditions are being created for students to be able to do it in practice without fear or shame. Pupils' pronunciation is clear and their range of hearing is chosen from light to complex. Their extensive communication and warm relationship with a deaf child develops the child's ability to receive and transmit speech information to the neat deaf and hard of hearing Children. Nuturing the need for conversational speech begins in the family. The speaking skills and competencies acquired in the new school should strengthened in the natural environment of the family. In addition, the development of deaf and hard of hearing children requires the use of loudspeakers in special institutions. These conditions are created with the participation of family members. Deaf and hard of hearing children acquire their mother tongue on the basis of corrective communicative principles adapted to the mental and speech abilities of the child, arising from the features of the laws of this language.

### **DISCUSSION**

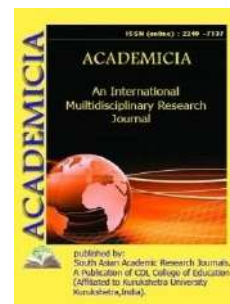
Classroom are specially equipped, the formation of boarding school in accordance with the direction of the material and technical base increases the effectiveness of educational content. Because, now, he has the skills on how to receive information. It is also possible to learn foreign language in the same way after mastering one's mother tongue. They should be able to motivate children when needed. Deaf and dumb children need to be in constant contact with their parents and teachers to prevent them from developing depression when they reach adulthood. This means that the mental state of children is priority in order to achieve positive results in learning foreign languages. Learning foreign language seems a little easier for a child than learning his or her mother tongue. Teachers and educators have a great responsibility. If the child is approached with the right intention and strategy, he will develop positive qualities and will be able to learn foreign languages fluently. Because at that time, he has the skills on how to receive information.

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## MOLECULAR GENETIC FACTORS OF BREAST CANCER DEVELOPMENT (REVIEW)

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### ABSTRACT

*The problem of timely detection of breast cancer is not only in its asymptomatic development, but also in the absence of reliable diagnostic markers that contribute to the early detection of the neoplastic process. The main objectives of oncogenomics are to study the molecular mechanisms of carcinogenesis and develop optimal methods for preventing, diagnosing and monitoring cancer. One approach to solving this problem is to analyze the epigenetic characteristics of the tumor genome.*

**KEYWORDS:** *Breast Cancer, Heredity, Prevalence, Mutations*

### INTRODUCTION

It is known that malignant neoplasms are socially significant diseases. mammary cancer (MC), in turn, is one of the most common types of oncopathology, and hereditary forms of breast cancer are often associated with a high risk of developing the primary multiplicity of malignant tumors.

Of great importance in the diagnosis and treatment of breast cancer today are biological markers that are determined directly in the tumor tissue. These markers characterize the individual characteristics of the tumor: a tendency to invasion, metastasis, hormonal sensitivity, etc. [8]. Clarification of the molecular biological and pathogenetic characteristics of MC allows us to come closer to the individualization of systemic therapy and, in some cases, abandon the obviously ineffective, toxic and expensive treatment. The development of an individual approach to the treatment of MC improves the prognosis of cancer itself and the quality of life in patients [5].

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## MATERIALS AND METHODS

The social importance of MC is so great that research in order to solve this problem occupy one of the leading places in modern oncology. It is believed that over the course of life, one in 8 women in the United States will develop breast cancer and one in 30 patients with MC will die.

MC is the most commonly diagnosed cancer and accounts for 23% of all newly diagnosed cases of cancer and 14% of the total mortality from cancer [11,12]. These neoplasms are characterized by an aggressive course, difficulty in predicting the outcome of the disease and high mortality.

The reasons for the rapid increase in the incidence of MC today include global urbanization of the environment, population aging, deterioration of the general environmental situation, technological disasters, all these factors lead to a steady increase in the number of oncological diseases observed over the past decade [4], including primary multiple malignant tumors (PMMT).

## RESULTS AND ITS DISCUSSION

At present, under the PMMT, they understand the independent occurrence and development of two or more neoplasms in one patient. In this case, not only different organs of various systems, but also paired organs, for example, mammary glands and ovaries, can be affected. The phenomenon of PMMT can occur as a result of various hereditary syndromes that are the result of specific hereditary mutations that determine the risk of cancer in 50% of offspring, with organ damage associated with these syndromes. One of the most common family oncological diseases in women is hereditary breast cancer, the frequency of occurrence of which is 5-10% [2, 15].

Despite the fact that in terms of the growth rate of incidence, MC is a leader among malignant neoplasms, real tests for early detection of breast cancer do not exist to this day [3].

The problem of timely detection of MC lies not only in its asymptomatic development, but also in the absence of reliable markers that contribute to the early detection of a neoplastic process. According to statistics, 80% of patients randomly discover a tumor in themselves, which in half of cases refers to a common stage [9].

The main tasks of oncogenomics are the study of molecular mechanisms of carcinogenesis and the development of optimal methods for the prevention, diagnosis and monitoring of cancer. One approach to solving this problem is to analyze the epigenetic characteristics of the tumor genome.

The purpose of this review was to study the candidate genes of the SFRP family in terms of their potential use as epigenetic markers of MC.

A number of methods have been developed to identify abnormal methylated loci in the tumor cell genome. Analysis of methylation markers is a fairly informative tool for molecular genetic diagnosis and monitoring of malignancy of tumors.

The pronounced heterogeneity at the clinical, histopathological and molecular levels has led to the creation of numerous markers of the disease, which, however, do not always provide a sufficient level of diagnostic efficiency. This explains the need to develop more modern multi-gene marker panels, including methylation marker panels. Modern studies indicate the

fundamental possibility of using both marker panels and single methylation markers as prognostic and predictive in MC.

The use of the optimized method of unbiased screening of differential genome methylation in MC research has led to the identification of a number of new methods that are being studied both from the point of view of participation in carcinogenesis, and from the point of view of diagnostic applications. The development and implementation of more advanced differential methylation screening protocols and the characteristics of new abnormal methylation markers should increase the efficiency of creating breast cancer diagnostic marker systems.

Like most malignant tumors, breast cancer have a multifactorial nature. Most women diagnosed with MC are of sporadic origin, rather than an inherited form of oncology. It is known that the proportion of hereditary MC is at least 10-15% of cases of ovarian cancer [2], which is associated with the presence of genetic mutations in one of the two genes for susceptibility to MC BRCA1 or BRCA2 [16]. It should be noted that mutations of these genes at the population level are very rare (1 in 400 individuals) and even less so in sporadic forms of these diseases [14]. Rarely, MC is caused by other hereditary syndromes [17].

Along with oncogenes, the tumor suppression genes of TSGs (Tumor Suppressor Genes) play an equally important role in the pathogenesis of MC [11]. The inactivation of TSGs, the selective growth of malignantly transformed cells, is based on genetic changes, including point mutations, deletions, rearrangements, as well as epigenetic lesions that affect the temporal and spatial control of gene expression without changing the DNA sequence [3]. The epigenetic mechanisms of reversible changes in the work of the genome do not affect the nucleotide sequence of DNA. The most well-known epigenetic mechanisms include DNA methylation, post-translational modification of nuclear proteins (histones) and post-transcriptional regulation of the stability of messenger RNA - mRNA [1]. Disturbances in the functioning of epigenetic mechanisms for controlling transcriptional activity of the genome play an important role in the process of neoplastic transformation [7].

Methylation is understood to mean a reversible chemical modification of the DNA structure by attaching a methyl group to cytosine as part of a CpG dinucleotide, where a pair of cytosine - guanine are sequentially located in the same DNA chain [6]. DNA methylation is one of the main mechanisms for controlling gene expression; a change in the structure of cytosine affects the efficiency of binding of transcription factors to regulatory regions of DNA. In the process of neoplastic transformation, cytosine hypermethylation is often observed in certain loci, and this phenomenon is called global hypomethylation or a uniform decrease in the degree of methylation of the entire genome. A global decrease in the degree of methylation of genomic DNA is associated with pathological activation of oncogenes and the accumulation of chromosomal aberrations, while local hypermethylation may be accompanied by inhibition of TSGs gene activity and genomic instability [6].

One of the earliest and most frequently encountered epigenetic events observed at the initial stages of the development of tumors of different localization is a violation of the epigenetic regulation of gene activity based on their abnormal methylation / dimethylation of both one and both alleles, which makes it possible to differentiate certain types of tumors [10] .

Epigenetic modification of the regulatory regions of genes disrupts their interaction with transcription factors, blocking these regions with proteins (Methyl CpG binding proteins) that

specifically bind to methylated CpG pairs and, in addition, makes changes in the surrounding chromatin, transferring it to a stably repressed state [18]. This phenomenon is practically not observed in normal tissues, and is called abnormal methylation of genes in the tumor.

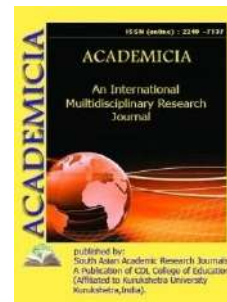
## CONCLUSION

Unlike mutations, changes in DNA methylation profiles associated with loss of gene expression occur in a specific region of the gene, for example, in the promoter region or the first exon. To date, it has been established that gene methylation is associated with an aggressive form of the tumor and disease progression [13]. Since abnormal methylation is one of the earliest events in the genome of a transformed cell, the nature of the methylation of tightly-associated genes can provide the possibility of diagnosing oncopathology at the earliest stages of its occurrence, i.e. long before clinical signs, which in turn will allow for timely preventive therapy [13].

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## LEARNERS AND LEARNING: MOTIVATIONAL STRATEGIES & THE ROLE OF TEACHERS

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### ABSTRACT

*Learners and learning in the context of 21<sup>st</sup> century pedagogy need to be defined afresh. Today's learners are tech savvy and knowledge is at their fingertips. The smartphone genie serves its masters at the slightest rub. Teaching and learning profile has changed dramatically. This paradigm shift has narrowed its focus on learners and learning rather than on teachers and teaching; but it doesn't, in any way, mean that teachers and teaching have been sidelined. On the contrary, teachers and teaching have tactfully withdrawn to peripheral roles letting the floor for learners to flourish and create. It is only a change of roles- from active teachers to passive observers and from passive learners to active participants. This methodology in fact is child-centered pedagogy in current orthodoxy, and not teacher-led frontal teaching. Anecdotal evidences show that this method has immense potential to motivate and engage learners, provided teachers devise fresh motivational strategies and avoid harping on the same age-old, hackneyed methodology. This paper explores the various dimensions of this role reversals and its fit ability to 21<sup>st</sup> century pedagogical principles.*

**KEYWORDS:** 21<sup>st</sup> Century Pedagogy, Motivational Strategies, Learner-Centered, Teachers' Role, Learner Autonomy, Teacher Autonomy

### INTRODUCTION

21<sup>st</sup> century is a digital age and today's learners are digitally literate while the bulk of teacher community is still struggling to be digitally efficient. Our students are not the students of yester-century. They are smart and tech savvy. Knowledge for them is almost a free commodity, just Google and get it. In this fast and ever- changing world knowing what needs to be learnt is of lesser importance than how it should be learnt. Learning is now an ATM available anytime,



anywhere and on any device. This paradigm shift in approach to learning requires sincere involvement of all stakeholders especially teachers of the institution in the process of change. The old, traditional pedagogies are no longer relevant in preparing learners for 21<sup>st</sup> century skills: critical thinking, collaboration, communication, creativity and problem-solving. A close look at the 21<sup>st</sup> century skills indicates that to cope with the demands of new global economy, educational institutions must gear towards change for learners to survive in their future life. Technology is a tool to bolster the 21<sup>st</sup> century teaching-learning process (Dede, 2000; Voogt, 2008), provided that teachers see themselves as learning ‘enablers’ and not learning ‘transmitters’ (Lambert & Cuper, 2009).

Teaching English as a second or foreign language (ESL/EFL) has witnessed a phenomenal change over the last two and a half decades with greater thrust on learners and learning rather than on teachers and teaching. Curriculum, teaching methods, and teaching materials have been prepared to accommodate to the fast changing needs of the ESL/EFL population. This seminal change requires reformulating the role of teachers, teaching strategies and the learning materials. Learning doesn’t occur in vacuum and learner autonomy doesn’t happen automatically. Teachers play a major interactive role with both the learners and learning environment. They use effective strategies and suitable materials in a stress-free ambience to enhance the learning process but at times with little success. What is required is the proper groundwork, the platform, the launching pad which will encourage the students to open up, act freely and autonomously. CSRE approach might help in preparing and fostering the students’ motivational level. CSRE stands for CARE, SHARE, RAPPORT and ENGAGEMENT. Teachers’ caring and sharing attitude establishes a rapport with the students, a bridge of trust is built and the two-way traffic opens up. This two-way traffic slowly facilitates teaching learning process. This is an all-inclusive approach that not only serves the average learners but also encourages the slow learners to participate in the classroom activities. This approach provides teachers the tools to personalize teaching learning activities as co-learners by stepping down from ‘the sage on the stage to the guide on the side’ image (King, A. 1993).

In the formal and informal interaction with the teaching community at various forums, it came to the notice that most of the tutors feel that in spite of technology-equipped classroom, they are not welcomed by the learners. The most common problem for the ESL/EFL teacher is interacting with a dull, unresponsive class which most of the time avoids communicating with the teachers. The whole class appears to be silent spectator and this is truly a very frustrating experience for both the teacher and the taught. It further adds to teacher’s woe when the students who understand the question even do not answer and keep quite. This happens because of in conducive classroom environment, unapproachable teacher image, shyness, lack of confidence, lack of proper support, fear of making mistakes or fear of embarrassment before the class.

This paper endeavors to assimilate and analyze the teachers’ experiences during the interaction sessions on various forums and dive deep into the problem and its possible solution. It is widely accepted that nobody can teach if the learners are not ready to listen or learn. It is the responsibility of all the stakeholders especially the teachers to make them ready before sowing the seed of learning. Tutors knowingly or unknowingly ignore the basic principles of care, share, rapport and engagement which this article emphasizes; might provide the platform or the launching pad which can energize, activate and motivate the class to participate.

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### **Dull and Unresponsive Language Classroom**

Tickling learners' interest and sustaining their motivational level is the key to all learning. It has massive effect and creates wonder in language learning. Let us see and examine in brief what is motivation and how does it work? Motivation is indeed a complex, multifaceted concept. This article describes how motivation manifests itself in the modern classroom and how motivation can be applied positively to the arsenal of tools used by educators in an effort to develop the optimal learning environment. The underachiever problem that seems to be pervasive in classrooms around much of the world is poorly understood. Teachers interpret underachievers as a challenge to their authority. They react to this problem by enforcing punitive measures which usually create a vicious circle of behavior violations and punishments. The final result is an exacerbation of the classroom disruption. The underlying reasons for under achievement are either not understood or simply ignored by many teachers. Underachievers can thrive in the secure, supportive environment that motivates them to be bold and confident.

### **What does motivation mean?**

Motivation means "impetus, incentive, activator" in literature (Bentley, 2000; Luthans, 1992). Thus, motivation is a way of inspiring or inducing learners to do something with interest to achieve what they want to get. It is a dynamic force urging a learner into action. A learner is motivated or set into action either by extrinsic rewards or by intrinsic needs. Motivation is, thus, an art of stimulating people to take desired course of action. Some people may be motivated by the rewards while others are self-motivated. It is in fact very difficult to have a single definition of motivation, but a few of the well-known definitions might feed us the flavor of the pudding. The main idea of motivation is to capture the child's attention and curiosity and channel their energy towards learning. According to Gardener (1985), motivation is concerned with the question, "Why does an organism behave as it does?" Dornyei rightly notes, "Teacher skills in motivating learners should be seen as central to teaching effectiveness." (2001:116). According to the Webster's, "to motivate means to provide with a motive, a need or desire that causes a person to act." "Motivation determines the extent of the learner's active involvement and attitude towards learning." (Ngeow, Karen Yeok-Hwa, 1998). "Motivation has been identified as the learner's orientation with regard to the goal of learning a second language." (Crookes & Schmidt 1991). Last but not the least, "Teacher behavior is a powerful motivational tool." (Dornyei, 2001:120). According to Balçık (2004: 135), motivation is "a person's willingly spending effort for the desired result or to reach a goal, which satisfies his/her needs". These quotes from various educationist and researchers clearly indicate the importance and effectiveness of motivation in teaching and learning activities. "Many researchers consider motivation as one of the main elements that determine success in developing a second or foreign language; it determines the extent of active, personal involvement in second language learning." (Oxford & Shearin, 1994).

### **Factors Affecting Motivational Activities**

Motivation is affected by many variable factors "teacher roles, class organization, interaction and class atmosphere" in a learning environment (Lumsden, 1999: 35). According to Selçuk and Güner (2000), lack of motivation affects the academic success of students. As a result of low level of motivation, students become less attentive to various activities, receive lower grades and display ignorant behaviors against academic subjects. Thus, the individual lives in anxiety and stops trying (Selçuk and Güner, 2000). Lack of motivation is perhaps the biggest obstacle faced

by language teachers. Behavioral problem in the classroom often or always **is** seen to be linked to the lack of motivation. It would be difficult to point to a single factor which would account for the apparent changing levels of motivation and involvement. There are many factors which affect students' commitment level to language learning. Some of these factors are:

- ❖ Unsupportive classroom environment
- ❖ Unfriendly peers & classmates
- ❖ Unapproachable teacher with 'a sage on the stage' image
- ❖ Difficult subject material
- ❖ Students see little value in the course & its content
- ❖ Improper teaching strategies
- ❖ Fear of failure and mistakes
- ❖ Unclear about learning goals
- ❖ Responsibilities other than study
- ❖ Feeling confused & isolated
- ❖ Previous negative experiences
- ❖ Mismatch between the knowledge, beliefs & interests
- ❖ Family or personal problems
- ❖ Poor health condition
- ❖ Lack of proper support at home
- ❖ Lack of confidence
- ❖ Low self-esteem
- ❖ Poor language skills

These above factors in many ways interplay and multiply day after day and lead the students to a state where they might experience anxiety, confusion, uncertainty, isolation, frustration and depression. These negative feelings force them to be aggressive or behave like a silent spectator or withdraw to their cell-the safe zone. Such conditions are the clear indicators that the learners are suffering from lowered self-esteem and here comes the role of all the stakeholders especially the tutors to bolster their low confidence by appreciating them and their work.

### **Learners & Effective Motivational Eco-System**

Disinterested students often have callous attitude or aggressive behavior towards teacher and teaching which multiplies their problems as well as of the tutors. Teachers are at crossroads as how to motivate these learners. Since motivation is an intrinsic and internal drive process, many teachers think that it is beyond their reach of influence. However, teachers can devise effective strategies for students to engage in learning, triggering motivation for learning (Deci and Ryan, 2008; Ormrod, 2008). In these situations a good teacher's role expands multifold to contain these demotivating factors and bring the students back on the track where they might feel like learning

and participating in class activities. Teachers should resort to different, new, fresh methods and techniques to energize the class and make the learners confident of what they are learning and achieving. It is not so easy for a teacher to create a sustainable motivational eco-system for learners, but not impossible to achieve.

Teachers' skill in motivating students to learn is of paramount importance. They can employ a variety of techniques, strategies at the Language level, the Learner level and the Learning situation level in order to motivate their students. Here are some of the main strategies and techniques that teachers have in their arsenal to use at the right moment and at the right target. Careful attention to these factors in the instructional setting enhances the possibilities for creating and ensuring conducive learning environment. When learners realize that their teacher recognizes their individual differences in abilities and their experiences are valued, respected, and incorporated in learning tasks and contexts, their level of motivation and sense of achievement are enhanced. In short, teachers' quality personal relationships with students establishes rapport, builds trust, increases learners' sense of belonging, self-respect, self-confidence and provides a positive ambience for learning. Some of these strategies are:

- ❖ Create stress-free environment
- ❖ Make the language class interesting
- ❖ Set a personal example of good behavior
- ❖ Develop peer-support network
- ❖ Present the task properly in a simpler way
- ❖ Promote learner autonomy
- ❖ Inculcate a sense of responsibility of their own learning
- ❖ Increase learners' linguistic self-confidence
- ❖ Personalize the learning process
- ❖ Increase the learners' goal-orientedness
- ❖ Take care of learners' needs, interests & motives
- ❖ Recognize the learners' 'little successes' & reward with words of appreciation
- ❖ Be approachable and maintain 'a guide on the side' image
- ❖ Use appropriate & interesting course materials
- ❖ Identify learners' individual differences
- ❖ Inculcate that success comes in, 'CANS' not in 'CANTS'
- ❖ Respect & accommodate their choice and voice
- ❖ Promote collaborative team work
- ❖ Encourage self-reflection on their daily activities
- ❖ Develop a sense of belongingness
- ❖ Let learners be in charge of their activities

### Learners & CSRE Approach-The Groundwork:

Tutors like farmers should plough the land before sowing the seed of learning. Anecdotal evidences show that the best of strategies fail in the absence of learners' readiness to listen and learn. Motivational strategies cannot work in a vacuum. There are certain preconditions to be met before any attempts to generate motivation can be effective. This approach focuses and emphasizes the teachers' attitudes towards their students. Teachers' caring and sharing attitude reduces fear and anxiety, encourages reciprocity, promotes autonomy and builds a rapport between the teacher and the students. This relationship further creates interest, generates motivation among students and helps teachers to engage students meaningfully. Quality personal relationships provide stability, trust and caring can increase learners' sense of belonging, self-respect, self- acceptance and provide a positive climate for learning. This is the beginning of a teaching-learning process in a stress-free atmosphere of trust and respect. Hence, this approach prepares the soil before sowing the seed of learning.

## CSRE APPROACH: THE LAUNCHING PAD

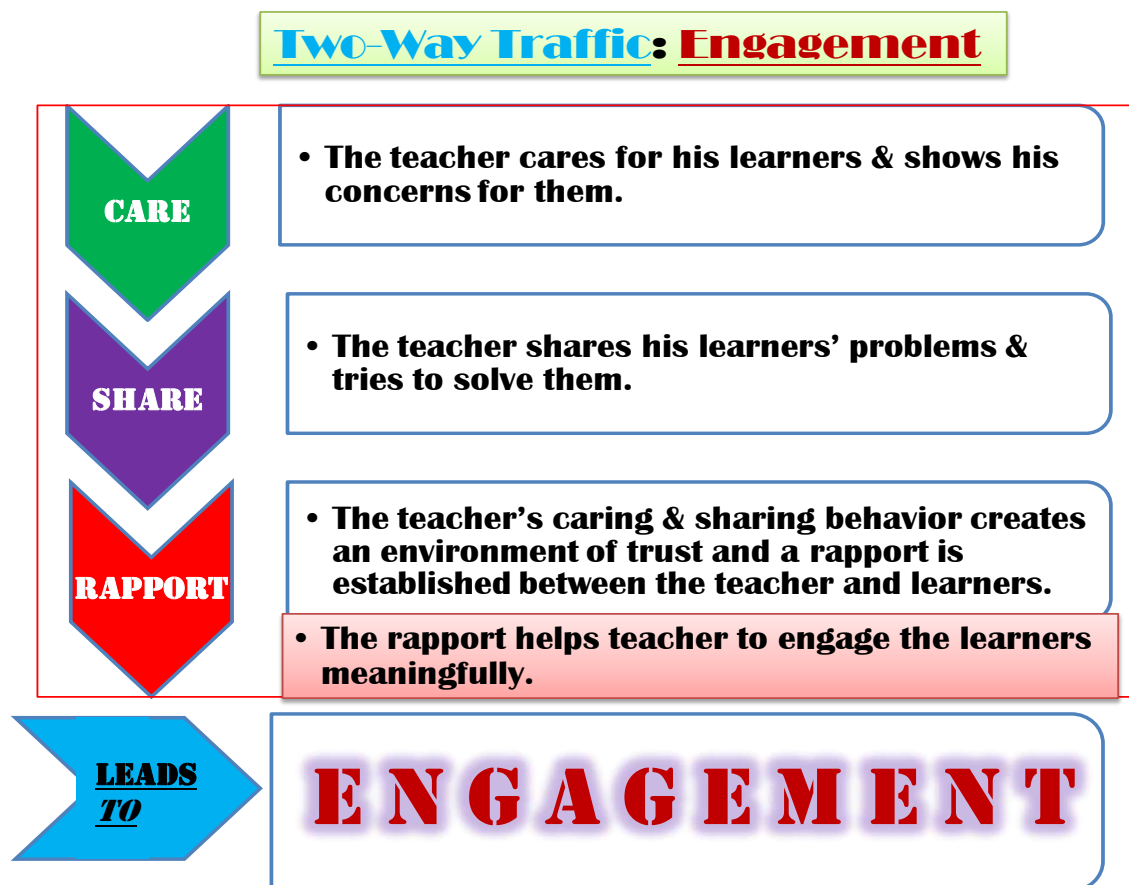


(Diagram 1, CSRE Approach: The Launching-Pad)

### Learning Takes Place: A Two-Way Traffic

It stands reasonably true that a tense classroom climate can undermine learning and demotivate learners. (see MacIntyre, 1999 and Young, 1999 for further details). On the other hand, learner

motivation will reach at its maximum level in a safe, secure classroom environment in which students can express their opinions freely and feel that they do not run the risk of being embarrassed or ridiculed. To be motivated to learn, students need both ample opportunities to learn and steady encouragement and support of their learning effort. So, the onus primarily is on the teachers to organize and manage the classroom as an effective learning environment because anxious or alienated students are unlikely to develop motivation to learn, it is important that learning occurs within a relaxed and supportive atmosphere (Good and Brophy, 1994:215). In such conducive, stress-free environment, the two-way traffic starts and the shyness, the inhibitions, the fear, the choking situation slowly evaporates. The students feel bold, confident and get motivated towards learning the target language.



(Diagram 2, Two-Way Traffic: Engagement)

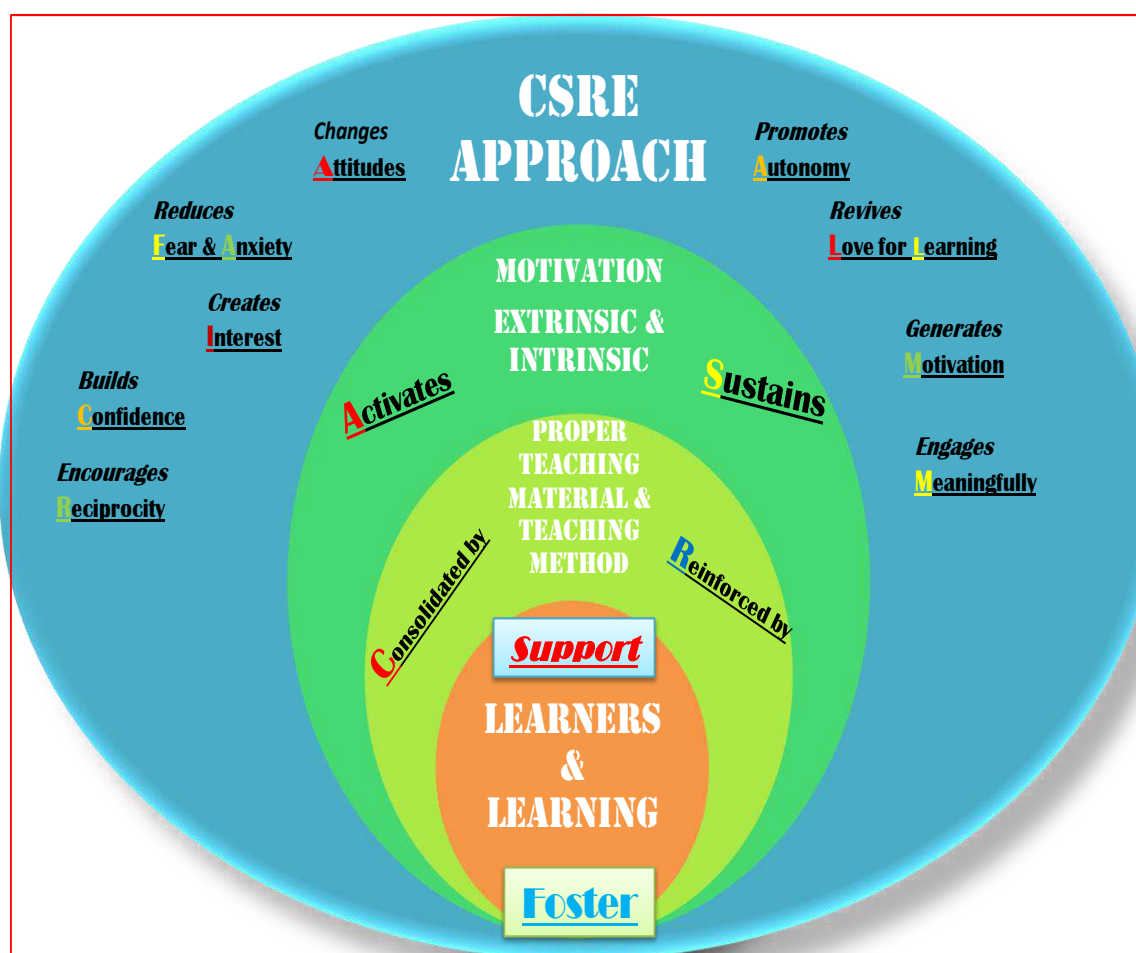
The Fulcrum of Teaching-Learning Process:

Teaching-learning process is not a one way traffic, it is a two-way traffic. The interaction between the tutor and the taught and among the learners themselves initiates learning. The teacher has to ensure a safe, secure environment of mutual trust and establish rapport with the learners who feel free to express and participate the class activities. The groundwork is done, the platform or the launching pad is ready and the plane of teaching-learning process takes off smoothly. The students are ready to listen, to learn, to participate. This is the time for the teacher



to use his strategies tactfully to exploit maximum of opportunities of teaching-learning process. In fact, resourceful and effective teachers do not use different strategies and techniques; they use the same strategies and techniques differently. The two-way traffic encourages the teachers to delegate slowly the learning autonomy to the students who now with their own desire share the responsibilities of learning activities. Thus, it sustains learners' intrinsic and extrinsic motivation, which is further strengthened by teachers' suitable teaching materials and easy-to-understand teaching techniques. All these, in turn, support and foster language learning. Cook rightly remarks (1991:82), "It is the learners' involvement, the learners' strategies, and the learners' abilities to go their ways that count, regardless of what the teacher is trying to do." In short, learners' involvement and participation is of paramount importance in teaching-learning process to be meaningful.

### The Fulcrum of Teaching-Learning Process



(Diagram 3, The Fulcrum of Teaching-Learning Process)

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### The Evolving Role of 21<sup>st</sup> Century Teachers:

The shift of focus from teachers and teaching to learners and learning doesn't minimize the role of teachers; on the contrary, it extends it manifold. CSRE approach bestows more sincere effort and responsibilities on language teachers. In general, the teaching profession is a profession that bases much of its methodology on tradition. Many teachers teach one year thirty times instead of teaching thirty different times. There is some degree of security gained from "doing what worked in the past," however; the 21<sup>st</sup> century demands that teachers take risks in order to develop strategies that benefit their today's students. In the words of the great educationist, John Dewey, "If we teach today as we taught yesterday, we rob our children of tomorrow." Teachers should transform their role into that of leaders and coaches as opposed to bosses and disciplinarians. Many researches serve as an outstanding study in support of the teacher as a change agent for the educational process.

The teachers are usually seen today as: facilitators of learning, the guide on the side, great motivators, role models, innovators, resource providers, lifelong learners, adaptive, tech savvy, creators of enabling environment, promoters of collaboration, great communicators and what not. Looking at the above roles teachers have been or are playing through the ages, it seems that they are what not personalities. There is no doubt; teachers play an important role in shaping learners' behavior, and motivating them to learn and making them better human beings. They as learning physicians help students to identify their cognitive and affective ailments and suggest courses of treatment. At the same time as agents of social change share the responsibilities to model society in classroom and to promote an ethical learning curriculum in addition to cognitive and affective ones. The teacher-controlled environment, which translates every aspect of life in an educational institution, in fact stifles creativity, and encourages students to abdicate decision-making and problem solving to an authority-figure who prescribes, restricts and evaluates. However "benevolent" such an autocracy might be, and however much this might be deemed to be in the students' "best interests", such a situation cannot be expected to promote and develop critical thinking skills, or a responsible attitude to life and society.

A close look at the conditions for learning that were researched and identified by Rogers (1951) over half a century ago, it is interesting to note the key words that appear: active, personal meaning, subjective nature of learning, difference, the right to make mistakes, tolerates ambiguity, cooperative, self-evaluation, openness of self, trusted, respected, accepted, permits confrontation. In other words, teachers can focus their attention on making the classroom into an environment that is conducive to learning. 'Irrespective of teaching method or lesson content, we can make our classrooms into places where students are confident, respected, and motivated'. As can be seen from Kelly's (1996:96-96) macro and micro-skills of language counseling; this environment will require the teacher to become an affective and cognitive counselor. Once more exciting keywords appear: introducing, promoting, helping, reduce uncertainty, enable, offering advice, suggesting, demonstrating encouragement, reinforcement, constructive reaction. We thus have now a revised view of the teacher as a learning counselor, helping students to feel good about them and to maximize their learning capabilities.

Teachers are the people who can inculcate the skills and characteristics of responsible citizens, and can use the micro-society of the classroom as a model for the greater society that students will meet when they leave school or college. They can focus on the sort of problem-solving skills

and critical thinking skills that students will need when they enter that society, and can create environment in which students can experiment with the social skills that they will need to develop. In short, teachers can promote the sort of positive qualities that are needed in society. Humanists, philosophers and educationalists (e.g. Bruner, Dewey, and Krishnamurti) have been making these points for more than a hundred years, and it is noticeable now that a number of government-based policy statements cite holistic and humanistic principles as educational goals. Teachers are agents of social change and they can do things in the context of humanistic goals through promoting a non-threatening learning environment.

CSRE Approach which respects the students and places them at the center of teaching-learning process has an inevitable impact on the lesson content and on teacher / student roles. Thus the teacher being in the background of teaching-learning process, a large variety of activities can occur simultaneously, and the ability of the student to become concerned and committed is an important gauge of growth. Teachers have been portrayed in many different roles so far. Let us now go even further in terms of role change.

#### CSRE Approach: Teachers as Co-Learners

CSRE Approach stresses on personalization of teaching and thus adds a new feather into the role-cap of the teachers. This is: the teachers are all the above but above all these, they are CO-LEARNERS. Yes, teachers are co-learners who learn every moment, every second, every minute, every hour, and every day about their students, their problems, the classroom environment, their own teaching techniques and the teaching materials. They reflect on every aspects of teaching-learning process on daily basis. They learn and improve and it goes on. Yes, teachers are co-learners, ever learners. They learn with their own students in the classroom. The students learn the language and the teachers learn how best they can facilitate them to learn. In a learner-centered classroom the teacher is very much present as a fragrance that exalts, activates, energizes and relaxes. The teachers' role as co-learners takes the pall of heaviness, strain and stress off the classroom environment, which is a primary factor in the process of learning to take place.

#### Learners' Autonomy Mandates Teachers' Autonomy

All through previous decades educational pundits have talked a lot about learners' autonomy but they have written very little about teachers' autonomy. Johnson, Pardesi and Paine, 1990, cited in Gathercole, 1990:51, "To posit ways of fostering learner autonomy is certainly to posit ways of fostering teacher autonomy, as teachers' autonomy permeates into learners' autonomy." As learners' autonomy is a step further in the direction of motivating the students to achieve their desired goal initiating their own interest and sustaining it, teachers' autonomy gives them the freedom to choose their techniques and materials according to the need of the learners and their goals. Teachers are ever learners. They learn and experiment in the classroom to improve their teaching and sustain the learners' motivation. Thus the teachers need to be autonomous to freely make a choice of strategies or materials that can charge the imagination of the learners. Prescribed books and norms most of the time hinders teachers to invent and explore the greener pastures where they can do even better justification with their learners as far as their improvement is concerned. This part needs to be discussed in detailed in national and international conferences.

## CONCLUSION

This study concludes the investigation spread over scores of discussions, debates and interviews from teachers, learners and other stakeholders of HEIs nationally and internationally on various forums. One thing that every one sticks to is: motivation is the key to all learning. Teachers resort to various teaching techniques and strategies to motivate the learners to learn the second language. They are not always successful; on the contrary, it can be said that most of the time they fail in tickling the learners' imagination. Though the teachers employ their best of strategies, the result borders below their expectations, they fail to motivate the students. It does not mean that the teachers are incapable or the techniques used are not proper. This happens because the teachers straightway jump on the business of teaching without prior & proper groundwork. Here comes the CSRE approach, which if the teachers follow, prepares the soil before sowing the seed. If the soil is not ready to receive the seeds to germinate, it will not work. Strategies or materials will not work until the students are ready to listen and learn. The teachers should first care and share about their learners' needs and interests which, in turn, win the confidence and trust of the learners. This ambience of care and share leads to rapport between the teacher and the taught. This bridges the distance between the teachers and learners and establishes a bond of trust and confidence. The learners, even the slow-learners feel confident and the teacher succeeds in shading off the halo of a teacher that restricts students to freely approach with their problems. Now, they feel that even the teacher is among one of them and their friend.

The groundwork is the preparation of soil to receive the seeds of learning. This preparation gives the teachers the platform from where they can take their students to any height and sustain their motivation which helps learners to learn better. The rapport between the teachers and students fosters the level of motivation. The learners attain autonomy and without any inhibitions approach teachers, discuss with peers and manage their learning of English as a foreign language. Here it would be right to mention that learners' autonomy leads to teachers' autonomy. CSRE approach advocates that teachers' autonomy facilitates learners' autonomy. Teachers can't invent and explore within the boundaries created by fixed techniques, strategies or curriculum. The teachers should have the autonomy to learn and experiment the strategies or materials that they think are in concert with the learner's needs and interests. Old, stereotype techniques and methods lead to boredom and demotivation of learners. CSRE Approach humanizes the teaching-learning process by delegating the teachers to the level of co-learners who reflect on every aspects of the learning trajectory and adapt to evolving, refreshing changes leading to spin better environment which facilitates better leaning for the learners.

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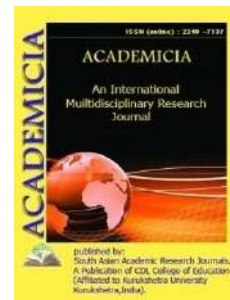


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**BIOGRAPHY:**

Dr. Mohammed Quamruddin Ansari is a well-known English language teacher. He has been in this profession for the last thirty-five years including twenty-five years of tryst with the Arab students at the tertiary level. He has served in several educational institutions of repute. He is a regular presenter at the national and international conferences, workshops and symposiums. He is a writer and the author of 'Motivation: CSRE Approach-the Launching Pad'. This book contains a multitude of worthwhile observations regarding English language teaching-learning techniques. Practical techniques are offered that if followed would produce positive tangible changes in the confidence and motivation level of the learners. Delving deep into classroom mechanics and teacher involved motivational strategies, Dr. Ansari's book has been an exhaustive probe to redefine teacher-learner engagement. It is a meaningful eye opener to those teachers in search of value-oriented teaching methods as well as learner-based learning consideration. He firmly believes; 'Good teachers do not teach something different; they teach the same thing differently.' His areas of interests are: Teachers & Motivational Strategies, Learner Autonomy, 21<sup>st</sup> Century skills, Teachers as Co-learners, Curriculum Development, Teacher Autonomy, Quality Assurance in HEIs, 21<sup>st</sup> Century Skills: Future Employability, and Technology Assisted Language Learning (TALL).



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## COVERAGE OF THE THEME OF THE WAQF (FOUNDATION) IN THE NOVEL "AL-HIDOYAH" BY BURHONIDDIN MARGHINANI

**Rakhshona Kenjaboeva Mirzaevna\***

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### ABSTRACT

*In the IX-XIII centuries, Movarounnahr became one of the most important centers of development of jurisprudence, where thousands of Islamic jurisprudences worked. Our compatriot BurhoniddinMarginoni has a special place among Movarounnahr jurists. As a great representative of the Hanafi School, he made a great contribution to the development of jurisprudence. BurhaniddinMarginoni's work "Al-Hidoyah" is the main textbook, manual, program in all madrassas and Dar al-Funun of the Muslim world. State and religious leaders, public figures, scholars and scholars used the work of BurhaniddinMarginoni and relied on him. Social welfare institutions have existed for a long time. They were first carried out in Islamic society through waqfs. As the waqf institution expanded, special jurisprudence books were classified about it, and separate chapters were devoted to the subject of the waqf in each general jurisprudence book. In the tenth and thirteenth centuries, the science of jurisprudence was particularly advanced, and during this period many works on Islamic law were written. One of such books is "Al-Hidoyah" by BurhaniddinMarginoni. The article deals with the coverage, arguments and methods of the waqf in the work "Al-Hidoyah".*

**KEYWORDS:** *BurhaniddinMarginoni, Kitob Al-Hidoyah, waqf, inheritance, obligatory of waqf, waqf of its share from the property of the unallocated partnership, waqf of mosque and cemetery.*

### INTRODUCTION

Burhoniddin Marginoni was born in the village of Rishtan in the Fergana region and lived in the city of Margilan for thirteen years. He wrote the first part of his famous work "Al-Hidoyah" here. He spent most of his life in Samarkand. In April 1178 he completed the work "Al-Hidoyah". In this play, some of the jurisprudential views of the Hanafi School are compared in

some places with those of the Shafi'i school. The book mentions the names of many scholars, including Imam Abu Hanifa and his two disciples, Imam Abu Yusuf and Imam Muhammad. Also, the names of Quduri, Qazikhan, Sarakhsi, Tahavi, and Imam Shafii appear several times in the book, especially in the chapter on waqf. There are also examples from books on jurisprudence in "Al-Hidoyah". These include the "Al-Mabsut" [1], the "Mukhtasar al-Quduri" [2], and the "Fatwa of India" [3].

Burhaniddin Marginoni's novel "Al-Hidoyah" contains the following issues related to the ownership of waqf: 1. The lexical and terminological meaning of the word waqf. 2. Whether or not the property of the waqfis disposed of by the waqf, whether the waqfis obligatory or not. 3. Ruling on bequeathing property. 4. Whether it is necessary or not to transfer the property of the waqf to the trustee. 5. Endowment of undistributed, divisible and indivisible, share property. 6. Whether or not it is permissible to link a waqf to a period or purpose. 7. Provisions related to the waqf of movable and immovable property. 8. Non-sale, gift and inheritance of endowed property. 9. Provisions related to ensuring the validity of waqf property. 10. To establish a waqf and to be a trustee. 11. Replacement of waqf property.

### THE MAIN PART

In "Al-Hidoyah", the chapter on the waqf begins with an interpretation of the lexical and terminological meaning of the waqf [5]. The word "habs" was used in the interpretation of the word "waqf" to mean "holding". In the following places, the author quotes the opinion that Abu Hanifa's waqf property remained in the hands of its owner and his interests were given as alms as in the Aryan [6]. Another important point in this regard is that Marghinani stated in Al-Mabsut that waqf is not permissible in the eyes of Imam Abu Hanifa, but in fact waqf is permissible in his opinion (Abu Hanifa) and is not only obligatory.

In Islamic law, the word waqf is consistent with both views. According to "Al-Hidoyah", this is based on historical evidence. In the "Al-Hidoyah", the evidence of the imams is also cited, after linking it to the historical evidence. The evidence of the two Imams is the hadith that when the Companions' Umar wanted to give alms to a garden called Samgh, the Prophet (saas) recommended that his original alms be given on the condition that it should not be sold, inherited or gifted; Abu Haneefah's evidence is the hadith of the Prophet (saas) that says, "There is no imprisonment in the sight of Allaah" [7].

After quoting the opinions and arguments of the scholars of jurisprudence in the "Al-Hidoyah", a fatwa has been issued stating whether the property of the waqf will remain in the possession of the waqf: "Despite the disagreements of the Imams, when a waqf is accepted as sahih (it is called *mustahaq* in "Al-Hidoyah"), it becomes the property of the waqf, but it is not given to the person who is waqf".

The issue of endowment of property on divisible and indivisible goods is another of the topics mentioned in "Al-Hidoyah". According to Imam Abu Yusuf, it is permissible to endow undistributed property [8]; Imam Muhammad, on the other hand, stated that the distribution of property was obligatory first. This dispute applies to goods that can be divided, and it is stated in the "Al-Hidoyah" that a waqf is permissible for non-divisible goods, even in the sight of Imam Muhammad, even if it is a joint property. Because this property is also a gift and a charity given to certain people. However, this type of property is not endowed for a mosque or cemetery. For Imam Abu Yusuf, the foundation of a mosque and a cemetery is an indivisible partnership. The

continuation of the partnership will prevent that property from being used for the sake of Allah, and its use for other purposes is a very unacceptable act. It is as if burying corpses in such soil one year, planting crops the next year, praying in it at another time, and feeding animals in it at another time. This is an illegal move.

Another issue mentioned in the text of “Al-Hidoyah” is the waqf of property for a certain period of time. According to Imam Abu Hanifa and Imam Muhammad, the endowment of a waqf does not take place without an indefinite term or purpose, and according to Imam Abu Yusuf, a waqf takes place even if it is bound for a temporary period or purpose.

Regarding the endowment of movable and immovable property, “Al-Hidoyah” states that it is permissible to endow real estate [9]. In several places above, we have considered examples of many Companions endowing their own real estate. The issue of real estate is interpreted differently in “Al-Hidoyah”: “It is not permissible to endow goods that can be transported or exchanged”. The author emphasizes that this view is the absolute opinion of Abu Hanifa. The two imams have different views on this issue. According to Imam Abu Yusuf, a person can endow his real estate with the animals inside and those animals with their shepherds who are their slaves. Similarly, the tools needed for planting on the ground can be endowed with the land. That is, the foundation of movable property will be possible together with the real property to which it belongs. Some cases that are not directly permissible are sometimes indirectly permissible. For example, drinking water sold along with the land, as well as the foundation building. Imam Muhammad agrees with Imam Abu Yusuf on this point. Commenting on the movable property, Marghinani said: “In our opinion, the waqf of non-traditional movable property (waqf) is not permissible”.

The issue of endowment of the partnership's property is also considered in “Al-Hidoyah”. In fact, this issue can be equated with the endowment of undistributed property. However, partnership property is understood to be a current situation. In the case of undistributed property, the issue of division may be raised later by the heirs after the death of the founder, or by his heirs after it becomes clear that the property has not been distributed.

The text of “Al-Hidoyah” goes on to say: “It is not permissible to sell or transfer property to another person after the foundation has been established. However, according to Imam Abu Yusuf, if the property of a waqf is a partnership property that can be divided, the partner may demand a division, and its division is valid [10]. We have already mentioned the reason why it is not permissible to give waqf property to anyone. Sharing is permissible because it is a separation and an exaggeration. In the case of waqf property, the main focus is on separation, that is, the separation of waqf property. “Al-Hidoyah” states that if a person donates his share in the partnership's real estate, he will settle the division with his partner. Because in this case, the authority belongs to the founder, and in case of his death, to his guardian. If a partner makes a waqf after his death, he shares it with his partner's guardian, that is, the person authorized by the deceased. If someone donates half of a property he/she owns, it can be done in two different ways. 1. Carries out the division work in interaction with the judge. 2. The other half of the property is shared with him, and then he buys back what he sold to him. In “Al-Hidoyah”, this issue is explained by the fact that “a person cannot be both a sharer and a shareholder”.

When the money is different in the division, it is not permissible if the founder is given money in exchange for the property of the foundation. However, if the endower gives money, it is permissible and the goods are purchased at the price of the money given.

One of the most important aspects of a foundation property is that it is usable so that it can serve its intended purpose. Who will be responsible for the repair of waqf property is one of the important issues of Islamic law.

In “Al-Hidoyah”, it is stated that the waqf trustee must first make the property of the waqf valid, whether or not the waqf makes a condition [11]. Because the goal of the founder is to ensure that people continue to use the income of the foundation. It is impossible for the income of a foundation property that has not been repaired and made usable to continue. Therefore, the condition of foundation repair arises spontaneously. In other words, the trustee (trustee) will have the authority to generate income for the foundation and spend it, as well as to repair it.

“Al-Hidoyah” also has the following issue: “The governor uses obsolete buildings and equipment of the foundation for the repair of the foundation. If there is no such need at that time, keep them until the need arises. When the need arises, he will use it there again”. This measure is to ensure the continuity of the foundation. But if the equipment cannot be used in its old place, they are sold and the money is spent on the needs of the foundation. In this way, the money is transferred to that device. “Al-Hidoyah” states, “This material will not be distributed among the waqfs”.

Another important issue of the topic of waqf is self-waqf. In addition, the ability of the founder to manage a foundation made in another way is another question.

It is noted that it is not permissible for Imam Muhammad to self-assign the income of the waqf, which is a waqf, to which it is permissible under Imam Abu Yusuf if he calls himself the income of the waqf in this regard in “Al-Hidoyah” [12].

Imam Abu Yusuf relies on the narration that Muhammad (saas) ate from his alms in this regard. The purpose of the charity in the narration is the endowed charity. This narration is strange. Ibn Abu Shaybah narrated the following narration in the chapter on the hadiths that the Musannafthemselves and Abu Haneefah objected to: “In the waqfs of the Messenger of Allaah (saas) there was the phrase “Owners can eat enough of it, not too much” [13].The endower can eat from his charity only on condition. As an example, the author mentions that a person who builds a caravanserai or irrigation facility will naturally use it himself, and as another example, a person who has buried his husband can be buried in the same cemetery.He emphasized that this is the main goal of the waqf, which is to attain rewards and intimacy with Allah, which can also be achieved by spending for oneself.

The evidence given in the “Al-Hidoyah” is as follows: The Prophet (saas) said: “What a person spends for himself is charity” [14].

Another issue related to waqf management is the issue of waqf husband replacement. This change may be based on a condition set by the founder or on demand. The waqf's imposition of such a condition is due to the fact that the waqf wants to give another land belonging to him instead of the husband. This can happen for reasons related to the founder himself.



“Al-Hidoyah” mentions that the founder of the foundation should stipulate the replacement of the husband. According to the play, according to Imam Abu Yusuf, it is permissible for the waqf to condition that the waqf land be exchanged for another land at any time. Imam Muhammad, on the other hand, stated that the waqf made in this case is valid and the condition is not valid. According to Imam Abu Yusuf, if the waqf adds a condition for him to return from the waqf within three days, then both the waqf and the condition are valid. According to Imam Muhammad, the waqf is not valid.

After mentioning the diversity of views in “Al-Hidoyah”, the author expresses his opinion. According to him, the trustee himself acquires the quality of trustworthiness only with the permission of the founder. It is a matter that another person cannot be a trustee himself unless he can be a trustee only with the permission of the founder. In addition, since he is closer to the foundation than others, the trustworthiness of the foundation is first and foremost his right.

If the founder of the waqf has stipulated that the trust should belong to him, but he is not a trustworthy person, the governor can take the trust from the waqf in order to protect the rights of the poor. Under the terms of Islamic law, the governor will also be able to remove the guardian (the person caring for the children of the deceased) for the benefit of the orphans. If, in order to prevent this, the waqf stipulates that neither the sultan nor the ruler should exempt himself from mutawallism, and then this condition is void, that is, void, because it contradicts the tools of jurisprudence [15]. This rule was introduced to protect both the property of the waqf and the rights of its users.

In Burhaniddin Marginoni's work “Al-Hidoyah” there is a special section on the foundations of mosques and cemeteries. Because the foundation of such places is not like other types of foundations, their origin is the foundation, not the income. In addition, it will never be possible to use them for other purposes, even temporarily.

Modern scholars have divided foundations into two types according to their economic content. They are direct and indirect foundations. Direct foundations include properties that are actually used, such as mosques and cemeteries, which are the subject of our subject. Indirect foundations, on the other hand, include properties such as shops and gardens, the profits of which are actually used to generate income, the benefits of which are spent in the ways determined by the founder.

In “Al-Hidoyah”, as mentioned above, there is a separate section for mosques and cemeteries in the Foundation. At the same time, in other parts of the “Waqf Chapter” there are places where the subject of these direct foundations is addressed in the sense of comparison. For reasons such as not being able to use direct foundations for other purposes and not being similar to other types of property in matters such as heirs claim, partnership ownership, we have called these types of foundations conditionally immovable foundations. Below we will look at the views and rulings on property donated for such purposes in “Al-Hidoyah”.

“Al-Hidoyah” states that when a person builds a mosque, his property rights in the mosque do not expire unless he separates it from the road and allows the people to pray inside it. That is, this foundation will not be realized. According to Abu Haneefah, when a person prays in it, he leaves the ownership of the founder of the mosque.

According to “Al-Hidoyah”, if a person builds a mosque with a well under it or a house above it, and he opens the door of the mosque and takes it out of his possession, he can sell it at any time



and leave an inheritance behind. That is, such a foundation will not be realized [16]. This is because the slave has the right to remain in it, so it does not meet the condition of presenting it for the sake of Allah. However, if the well is for the improvement of the mosque, as in the Bayt al-Maqdis mosque, the waqf is valid.

Hasan ibn Ziyad narrated that Abu Haneefah said: If a person builds a mosque on the lower part of a building where the upper part is a house, it will be a real mosque. Because the duration that should be in the mosque is at the bottom of the building. In addition, the lower part can continue to exist without the upper part. Imam Muhammad, on the other hand, narrated the opposite: Because a mosque is great, and the presence of a house or a place for bathing on it undermines its greatness.

## CONCLUSION

It is narrated that when Imam Abu Yusuf came to Baghdad and saw that the land was scarce, he said that the waqf was valid in both cases. It is narrated that Imam Muhammad also said that when he entered Rayy, the waqf was valid in both cases for the same reason, out of necessity. The "Al-Hidoyah" states, "Whoever makes his husband a mosque, he cannot take it back from him, nor can he sell the mosque, nor can he inherit it". "Al-Hidoyah" also states: "If someone builds a drinking water facility for Muslims, or a caravanserai, where passengers stop, or a cemetery for his husband, these properties will not be taken out of his possession until the governor decides in the sight of Imam Abu Haneefah" [17].

Because they have not ceased to be slaves and he can use them himself. For example, he could stay in a caravanserai, drink water from a building, or be buried in a cemetery.

In "Al-Hidoyah", the rulings on waqf are briefly described, and for a better understanding of them, one can refer to the commentaries written in the book. Alouddin AbulQasim Mahmud ibn Abdullah ibn Sa'id Ruzi Hanafi (d. 606 AH) "Khulosa an - nihoya Fi favoid al-Hidoyah", Hamiduddin Ali ibn Muhammad ibn Ali Zarir Bukhari Romishi (d. 666 AH) book "Al-Favoid al-Bahiyah", "Nihoya al-kifoya Fi diroya al-Hidoyah" by Toj ash-Sharia Umar ibn Sadr ash-Sharia Mahbubiy (d. 673 AH) and "Sharh al-Hidoyah" by Ali ibn Muhammad ibn Hasan Alouddin (d. 708 AH) are among them. Using similar commentary books, it will be possible to explain the topic in more detail with evidence and examples.

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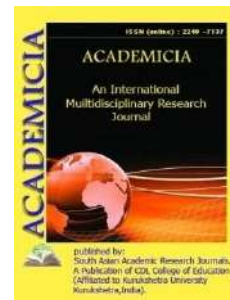
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## LOVE AND ENLIGHTENMENT - A COMMON CONCEPT

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### ABSTRACT

*This article focuses on the interpretation of mystical meanings in the example of Alisher Navoi's work, the description of the highest human qualities inherent in the lover. At the same time, this article examines the general and specific qualities of a wise lover based on sources.*

**KEYWORDS:** *Mysticism, Love, Beloved, Enlightenment, Maruf, Wise, Enlightened.*

### INTRODUCTION

Love is the first quality that leads to the appearance of the Truth in the terminology of the Sufis [1, 1952] [Mahmud Shabustari. GulshaniRoz. 1952, page - 47.]. The people gave the following definitions of love as follows: "Love is aexperience, and it is the passion of lovers and beloveds. Love also comes in the sense of companionship and longing for a friend. Love is derived from the root of the word "ashaqa", which is the name of cocaine. Ashaqa is such a drug that it wraps itself around the plants around it, absorbs the water in their bodies and turns them yellow and dries them prematurely. Love also turns the color of the lover yellow, separates him from the people of the world, and separates him from worldly interests. "Love" is a fire that appears in the heart and burns the body of the beloved. The calamity of love is divine, the river and the juniper are divine, and jam is a means between the heart and the lover. [SayyidJa'farSajjodiy. "Mustalahotiurafo and Sufism". Hijri-1339, pp. 275-276; Sheikh NajmiddinKubro. Mystical life. 2004, pp. 224-225.] The sages called for complete zeal and perseverance, and those who were in love with divine glory and beauty were called "lovers" [1, 1952] [Mahmud Shabustari. Gulshani roz.1952, p. 65].

### THE MAIN FINDINGS AND RESULTS

Orifijom (wisdom) - According to Abdurahman Jami's "Nafahatul-Uns" on the history of Sufism, one of the first to speak of the high rank of love, that is, true love, was the Sufi rabbi al-Adawiyah (713-851). She is the first female wise lover, who spoke of the essence of the original enlightenment with pure love, saying that the beginning and the suicide of creative aspirations

and pleasure pursuits are a matter of God. Robiya ad-Adaviya condemned the worship of God in the hope of paradise happiness or the intention to survive the fire of hell, saying, "it is necessary for a person to act faithfully and to remember in his heart a lonely friend appointment, in order to purify his soul perfectly from any (worldly-spiritual) goals or fears"[1, 1952] [DiloromSalali. *Mysticism and artistic creativity*. 2018, page-24-25]. In our opinion, such progressive ideas, which move the hearts with wonder and excitement, served as a divine beacon and a source of love, passion and inspiration for the leech people during their journey to the original destination.

For example, it is stated in *Manaqibi Hazrat Ghawsul-A'zam*: That is, love is a grass, it appears in the heart, and everything except the lover burns. And the remembrance of the lover will be food for the beloved. And the lover's opinion is the lover's salary. And the beauty of a friend is the peace and comfort of a lover [1, 1952] [Sheikh KhudoydodVali. *The great saint*. 2017, page - 39]. Perhaps it can be concluded from such thoughts that a person without love is spiritually dead, and because of his inaction, his complete cessation of the pursuit of the essence, he becomes a worthless person in the eyes of the people and the Truth.

AlisherNavoi also interpreted love in the following verses as the highest peak of perfection, the source of bright light and the glorious foundation:

Otherwise, love is not two worlds,

Two worlds means no life

Without love he is a tank, he has no soul,

Whatever you do, if you don't

Love is the heart and the heart is the zodiac sign

Maybe the sun loves the zodiac sign [1, 1952] [AlisherNavoi. *MAT*. 1991, page - 179].

Indeed, as is argued by logical denials, the inviolable condition and essence of perfection is the degree to which a person rises from love to enlightenment in the process of healing in the fire of love - the enlightened becomes the lover and reaches the essence of divine enlightenment. In other words, Navoi emphasizes that if a lover suffers from pain, suffering and sorrow, and burns in the fire of love and is able to create a fiery heart, he will begin to move towards perfection like the sages. For example, in the famous *Masnavi* of Sheikh Jalaliddin Rumi, it is not for nothing that it is said; "Ruzhabosozihohamrohshud" There is an important aspect to which we pay special attention to this. This is because the poet is convinced that "love can enlighten a disbeliever, a Muslim, or any rebellious and insane lover". Perhaps this is why Navoi, enjoying the flame of love in the following lines, put forward the idea that "In the hope of getting one step closer to Jonah, sacrificing one's life a thousand times, if possible, is a hundred times better than wishing for a life as good as Hizr's":

One hundred Hizr is more than life, giving a thousand lives,

It will be possible to take a step towards Jonon [1, 1952] [AlisherNavoi. *MAT*. 1987, page - 571]

As can be seen in the works of the great Sufi scholars of the East, in the works of the great thinker and poet AlisherNavoi, the most honorable and the greatest of all creatures created by God is Man, whose perfection is admired by everything, even the mind [1, 1952] [Ibrahim

Haqqul. Identity in the word. 2013, page - 34.], is repeatedly emphasized. The main purpose of this was to accustom people to live within the bounds of human virtue and morality due to various desires, and to harmonize all needs, goals, and inclinations with the eternal Essence with vigilance and patience. Or, it can be said, to repel the black clouds of the cunning amulet from it by discovering the sun of love in the sky of the so-called “heart” with the joy of enlightenment and the lightning of sincerity. At the same time, it is not a mistake to say that as a result of upbringing, human beings are elevated to the ranks of *lavvoma*, *mutmaina*, *mulhamina*, *roziya*, *sofia*, and *komila* by bringing them to light and freeing them from the low qualities that lead them to the abyss of darkness. After all, only one human being in the world has been given the opportunity to live freely and consciously, and the real goal is to ensure that everyone enjoys the bliss of perfection or grace because of his ability to discover himself with the pleasure of love and enlightenment. So, the main goal in a person’s life is to achieve perfection. Knowledge, on the other hand, is one of the highest levels of perfection. From time immemorial, humanity has been given the opportunity to rise in this high position, along with other mature positions. It is possible for anyone to seize this opportunity because he or she is constantly striving for the full acquisition of knowledge and enlightenment by suffering with love and devotion.

According to Jami in “Nafahotul-Uns”, the leader of the Sufis, Zunun Misri, was the first to speak about mysticism and to introduce the concept of enlightenment in his teachings. In his view, there are two paths to the tax that seek enlightenment. The first is to abstain from sinful deeds, to give up worldly desires, and to control one's self. The second is to completely give up everything and completely liberate oneself from the worldly fantasies. Sheikh Zunun made extensive observations on the Egyptian concepts of science and enlightenment and tried to explain their level and difference in our opinion as follows:

Science is the product of impressions and information perceived as a result of the influence of the external world on the five senses of man.

Enlightenment is a strange gift of pure light for the pure heart, or more precisely, only for the perfect human soul, which is a complex of light created by God, with which the mysteries of the nature, attributes and actions of the Creator are observed or discovered [1, 1952] [Dilorom Salohi. Sufism and artistic creation. 2018, page - 24].

Indeed, mysticism is a doctrine aimed at discovering a new world in its time - a world of truth and beauty that symbolizes the harmony of God, man and being. The basic source of this teaching is Islam, which is a science based on the Qur'an and the Hadith. The reason for this is that the verses and hadiths contain divine instructions that warn us of the content of dozens of basic concepts related to the essence of this enlightenment, such as **laduniyilm**, **zikr**, **valiylik**, **tavba**, **zuhd**, **tavakkul**, **riyozat** and **mushohada**.

According to the people of meaning, enlightenment is the ability of a person to know himself and his Lord. That is, they are a light of enlightenment, through which the believers draw closer to the Creator and attain eternal bliss. At this point, it is worthwhile to pay attention to the following descriptions of enlightenment by some Sufi scholars.

Abdul Karim Qushayri said: “Enlightenment means knowledge in the language of the scholars. To them, every knowledge is an enlightenment, and every enlightenment is a knowledge. Anyone who is knowledgeable about Allah is also knowledgeable. Every sage is a scholar”. Sufis call those who know the Truth by heart and discovery “enlightenment” and those who



know it by intellect and understanding "knowledge". Enlightenment represents the concepts of familiarity, knowledge and understanding. It has been variously interpreted and defined by the people of meaning: Enlightenment is the knowledge of man himself and his Lord. According to the author of *Kashf al-Mahjub*, other people, such as the fuqaha, also called the knowledge of Allah "enlightenment." The sheikhs of the sect called the state of health about Allah "enlightenment." And according to this, "Enlightenment is many times superior to knowledge". According to Imam al-Ghazali, "When enlightenment arises in the heart, the state of the heart changes. As the state of the heart changes, so do the actions of the members. That is, action depends on action, the state depends on knowledge, and knowledge depends on thinking. It is possible to reach the level of Tawhid quickly, but it is difficult to reach the level of enlightenment. If a dervish has a thorn in his foot, you need to know where it comes from". Enlightenment - intellectual knowledge, practical knowledge, acquaintance, understanding, mystical knowledge; knowledge of the mysteries of the state and the divine truths. Ibn Ata said: Enlightenment consists of two parts. One is the enlightenment of the Truth and the other is the enlightenment of the truth. According to Shibli, "Enlightenment is a continuation of wonder" Hujwiri admits: "The truth of enlightenment appears in the heart of the enlightened. Enlightenment is the life of the soul (the source of life), and the value of each person is distinguished by his enlightenment. Without enlightenment the mind cannot radiate and discover the divine mystery. Such a soul is worthless in the sight of God. " Some say, "Enlightenment is the science of truth, which is understood on the basis of performing the deeds required by piety, pilgrimage, leeching, Shari'ah and the teachings." According to the Risalai Qushayri, enlightenment is a mirror for the learned. Let him see the beauty of Mawlawi when he looks at him" [1, 1952] [Abdulkarim Qushayri. The treatise of Qushayri. 1991, pp. 489-490; Ibn Arabi. Book of Enlightenment. 2008, pp. 48,140,143,197,198,276,286; Sayyid Jaafar Sajjodiy. "Mustalahotiurafo and Sufism". Hijri-1339, pp. 374-379; Alisher Navoi TAT, 2011, pp. - 647-648; Sheikh Najmiddin Kubro. Mystical life. 2004, p. - 227]. Arif Billah - Sheikh Mahmoud Shabustari also says about this:

The girl's heart saw the enlightenment of pure light,

God saw him in everything he saw.

The wise heart is aware of existence,

His body is absolutely narrow [1, 1952] [Mahmud Shabustari. *Gulshaniroz*. 1952. page - 102.].

Purpose: If one's mind's eye is enlightened by the rays of enlightenment, one will surely see God in everything. Because such a person is considered to be a sage, and his heart - the mirror of the Absolute Beauty, has become a source of mystery.

The people of meaning called enlightenment "Irfan" and considered it a gift from Allah and a great privilege over knowledge. The word "enlightenment" is also used in the sense of knowing, knowing, familiar, re-acquainted, and knowledge. The word "Irfan" in the general sense, in contrast to the external science, means to know something clearly and perfectly in all respects [1, 1652] [Abdulkarim Shar'i Juzjani. *Sufism and Man*. 2001, pp. 10-11] If we consider that such knowledge is based on discovery and inspiration, it becomes clear that the goal of enlightenment from the sect, which is the practical stage of mysticism, is enlightenment [1, 1952] [Khoja Ahmad Yassavi. *Devonian wisdom*. 2006, pp. 37-47].



The people of meaning have interpreted the gnosis in the heart of the terms discovery and inspiration as follows: to see the unseen features and real things behind the scenes, to feel them, to be aware of their secrets; inspiration and knowledge from Allah. Guardians are the masters of discovery. In Sufism, there are such concepts as theoretical discovery, enlightenment discovery, divine discovery, spiritual discovery, unmarried discovery, abstract discovery, anxiety discovery, discovery zamoyir, discovery state of the pipe, and discovery state of the castle. Inspiration is the meaning or truth that emerges in the heart through divine grace. To tear the veil of love is to discover secrets" [1, 1952] [Abdulkarim Qushayri. Qushayri's treatise. 1991, pages - 22-25, 199-203, 502-523; Ibn Arabi. Book of Enlightenment. 2008, page - 181, 189. Sayyid Ja'far Sajjadiy". Mustalahotiurafa and Sufism". Hijri-1339, pp. 327-328; Alisher Navoi TAT, 2011, p. - 646; Sheikh Najmiddin Kubro. Mystical life. 2004, pp. 223-225].

Some scholars have used the concepts of mysticism and lore in the same sense. In an article by the great scholar Abdulhakimshariyy O'zjani, thinking on the same topic, he makes this issue clear: "some believe that mysticism is a branch of Irfan and one of its manifestations, that is, mysticism is separated from Irfan as a way and sect. And lore is a more general concept, which includes other ways and denominations than mysticism. According to him, a person can be a Sufi and not be arif. Or a person may appear to be a mystic and not benefit from gnosis at all. Sometimes the word arif is used in a higher sense than sufi and dervish. Some considered gnosis to be the scientific and intellectual side of mysticism and mysticism to be the practical side of gnosis" [1, 1952] [Dialogue, 1995, №1-2, p. 32].

Abdulhakim DzhuZHani again in this article, referring to the issue of "Knowledge of lore in India and Greece", states that there are dozens of philosophical denominations that express the ideas of lore in India, and from these it is possible to call the sect of lore "Vandation, and also describes the philosophical views of representatives of this doctrine as follows": the Orif rises to the [1, 1952] ["Communication", 1995, № 1-2, Page-33].

In one of the books on mysticism, the Arif is described as follows: And in this way, the state of affairs and the state of mukashifah will appear" [1, 1952] [Sayyid Ja'far Sajjadi. Farhangi terminology *orifon*(wisdom) and *muttasavif*(mysticism), Hijri-1339, page - 283].

Meaning: A Arif is a person who knows that Allah has raised him to the rank of observing his own name and names. And he is the one who discovers Allah by attaining divine enlightenment through spiritual experience, inspiration and observation.

In another book, he is described as a person who is wise, knowledgeable, aware of the enlightenment of the Truth, who truly knows Allah, and who attains enlightenment by inspiration and condition [1, 1952] [Muhammad Mu'yn. Farhangi Persian. Hijri-1382, page - 2260].

Enlightenment due to spiritual or inner experience is called "reasonable knowledge", "pleasure knowledge" [1, 1952] [Ahmad Yassavi, Suleiman Baqirgani. College of Proverbs. 2011, p - 224], - it is explained. It is true that the heart of the possessor of this knowledge, Orif, is wider than the Throne. Because, "Those who are on the throne and on the throne, the world is physical. The soul of a healthy heart is a human being, and the command of the Lord is fulfilled" [1, 1952] [Ibrahim Haqqul. Identity in the word. 2013, page - 28]. Accordingly, Orif was recognized as the Sultan of the world, not of any people or nation. As he perfects his heart with purity, a radical change in the spiritual world takes place. And this, in turn, is likely to affect the creature - the natural world. According to Ibn Sina, if Orif speaks of something mysterious or unseen, the

opposite will be felt in the natural world [1, 1952] [HayraniAltintash. In Ibn Dina's thought, as a mystical concept, orif and irfan. 1990, p. 115]. The prophecies of HazratNavoi in “Nasayimul-Muhabbat” about the birth of KhojaBahauddinNaqshband, quoted in the Samoan language by Khoja Muhammad Baba'i, and the fact that QasriHinduvin became QasriOrifan thanks to his knowledge and guidance, are one of the proofs of this idea. Let QasirHinduvin be Orifon ...” [1, 1952] [AlisherNavoi. MAT. 2001, page - 256].

AlisherNavoi in one of his ghazals for his attention to the moral and spiritual qualities and virtues of enlightenment:

Keep the health in the lake of poverty, whatever you do,

If Orif is not him it, everyone will argue with Irfan [1, 1952] [AlisherNavoi. MAT.1988, page - 92], - he says.

Such expressions about the fate of Arif and the status of Arif are often found in Navoi's poetry:

Remember Sahfai, O Orif, you need light,

Sofiy is very worried about unity [1, 1952] [AlisherNavoi. MAT.1988, page - 76].

## CONCLUSION

The Orifs have gained fame in the form of those who know Allah, know Him, and live with the pleasure of divine enlightenment, refrain from showing off their knowledge and enlightenment, are inclined to silence, and do not cease to observe.

According to Navoi's writing, who are the orifs? “when asked, Sheikh MuzaffarKermanshahyKirmis”Orif is a person who dedicated his heart to his Mawlus, his body to his people, [1, 1952] [ AlisherNavoi. MAT. 2001, page -154. if he answered, Sheikh AbulhairTainoti is better than Orifis a miracle among the wisdoms and miracle of all wanders [1, 1952] [ AlisherNavoi. Met. 2001, page – 149-150], - as long as he confessed.

In the work “Nasayimul-Muhabbat” it is said that Orif should not be aware of the other siyrat and should not be jealous of any servant, as well as from the language of sheikhs on the skill of keeping secrets: “Orif, say your secret and say your secret” [AlisherNavoi. MAT. 2001. Page 154.], “In the mystery of wisdom, a mirror is given that every time he looks at that mirror, he sees” [1, 1952][ AlisherNavoi. MAT. 2001, page-69]like feedback also has attention.

AlisherNavoi also compares Orif to Great River, a man of mystery, who cannot flood the sunlight, or who cannot notice any change in appearance:

If the fascination does curl to Orif (wisdom),

It's a matter of hiding the moment.

The sun is reflected in the river,

What is possible to overflow his mother [1, 1952] [AlisherNavoi. MAT. 1989, page - 512].

As “Nasayimul-Muhabbat” explains in his work, Sheikh Abu Ishaq Ibrahim ShahriyarGoziruni informed that the extent to which the spiritual perfection of the orifs reaches a high level depends on how clearly their eyes can see the true Society: “This work is an Orif Muslim, whose purity is full of joy and whose eyes are closed before the true dawn” [1, 1952][ AlisherNavoi. MAT.

2001, page-154],- as long as said. It is worth noting, however, that the pleasure of seeing and seeing Allah with pleasure was not the same in all Orif. Therefore, their impressions and circumstances on the way to understanding the truth were also different. When one Orif said, "I do not see anything that I do not see God behind him", another said, "I do not see anything that I do not see God in it". Another said, "I have never seen anything before that if I have not seen God before, "the next said", I only see God. "Also there are those who say", Allah alone looks, and he is invisible Allah does [1, 1952] [Ibrahim Hakkul. In the word itself. 2013, p. -29]. These five attitudes were cases of external existence, which also led to Goho's ideological bias. Navoi also noted that "Lisonut-Tair"roman:

Quality to everyone in was own symphony,

Appeared ingenuity that made many discrepancies

Everyone wants his own perfection,

Did Valley turned into ruin[1, 1952] [AlisherNavoi. Met.1996, page-225], was saying.

When approaching the wisdom of the elephants and the blind from the point of view of the valley of enlightenment of this epic, it is necessary to say that India – represents the true sanctuary, the blind – represents the Taliban, who began to be aware of the mystery of lore. So who is the elephant man? Elephant man is their imam, saint, Sheikh or owner of enlightenment-perfection Orif. The following examples from the chapter "prayer on the island of enlightenment" in narrative support this idea:

O enlightenment of man,

Enlightenment of the distracted world

Enlightenment is a part of everyone,

The centuries named him Orif

Whom to enlighten,

Made all imagination author [AlisherNavoi. MAT. 1996, page - 285]

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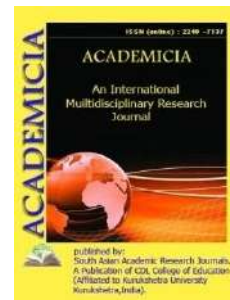
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## FORMATION, ACTIVITIES AND PROBLEMS OF PRESCHOOL EDUCATION INSTITUTIONS IN UZBEKISTAN.(1945-1980 YEARS)

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### ABSTRACT

*This article describes the measures taken by the Soviet authorities in Uzbekistan in the field of preschool education on the basis of scientific, historical literature and sources. Also, the study included preschool education, children's attendance and demographic indicators.*

**KEYWORDS:** *Preface, Archival Sources, Management Mechanism, Non-Governmental, Industrial Zones, Reform, Personnel, Alternative.*

### INTRODUCTION

Relevance of the topic: The purpose of the ongoing reforms in the field of preschool education in the Republic of Uzbekistan is to bring up a comprehensively healthy and harmoniously developed generation and prepare them for school education. Today in Uzbekistan, special attention is paid to improving the system of preschool education, which is the primary and main link in the education of younger generation, strengthening the material and technical base of kindergartens, providing them with skilled teachers, quality and effective preparation of children for secondary education.

The Decree of the President of the Republic of Uzbekistan ShavkatMirziyoyev dated September 30, 2017 "On measures radically improve the management of the preschool education system" has raised the work in this direction to a new level[19]. Adoption of more than forty normative and legal acts for the development of the sector in a short period of time has strengthened the legal framework of the preschool education system [20]. As a result of reforms in the field, the management mechanism in the pre-school education system has been radically improved, and the system of non-governmental education services has been reformed [21].

Summarizing the work done in our country over the past years to improve system of preschool education, improving the quality and efficiency of education, the problems and achievements in this area highlight the essence and importance of large-scale reforms.

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## RESEARCH METHODS

Article historical, comparative logical analysis of generally accepted historical methods sequence, based on the principles of impartiality. The growth rate of preschool education between the period 1945-1980 was analyzed on the basis of the level of the periodicals and data from archival sources. Over the years, efforts have been made to highlight the growing number of children in preschools, the differences between urban and rural kindergartens, and the methods of comparison.

Indeed, the issue of education and upbringing of preschool children has always been one of the most pressing issues in our nation.

## RESULTS AND DISCUSSIONS

In the first years of economic recovery after the war, in addition to addressing the most important political and economic issues, the country also paid close attention to issues related to the development of the preschool education system. The Ministry of Education of the Uzbek SSR has developed a series of action plans to expand the network of kindergartens and increase children's attendance. Considering that the war had seriously damaged the health of preschool children, the necessary measures were taken. In particular, the opening of sanatorium-type kindergartens reached 26 in 1947, with 1,584 children [2,12].

The expansion of pre-school education in rural areas of the country has not gone unnoticed. This way not only for the benefit of the younger generation in the field of education and upbringing, but also because of the strong demand for agricultural products around the world. In the cotton fields and on the livestock farms, most of the work is done by women and mothers. In this connection, on March 16, 1948, the Council of Ministers of the Uzbek SSR adopted a resolution "On improving in the condition of collective farm playgrounds" [2,13]. The leaders of the collective and state farms began to pay more attention to the improvement of children's playgrounds in order to this decision and to involve more women with children in agricultural work. As a result, by 1949, the total number of playgrounds in this country was 5,538, and they covered 134,758 children [13, 35].

On May 18, 1949, the Central Committee of the CPSU and the Council of Ministers of the USSR adopted a resolution No 2004 "On Measures to Expand and Improve the activities of preschool Educational Institutions and Maternity Hospitals". In order to ensure the implementation of this decision, the construction of new types of preschool institutions has begun in Uzbekistan, as well as in the Republics of the Union. The construction of such facilities, mills, collective farms and state farms. Urban kindergartens are being built and put into operation as soon as possible. However, in a few collective farms, kindergartens were completed on time. In particular, in 1953 in the collective farms named after Stalin and Frunze of Akhunbabayev district of Ferghana region, in the collective farm "Mekhnatkash" of the district, in the collective farm "Stalin and Budyonny" of Tashlak district, in the collective farm "Malenkov" of Kuvadistrict [14, 21].

There are only new buildings in the ring. Kindergarten planned to be built in some collective farms have not been implemented in practise. Preschools operated in adapted buildings or in the homes of educators. In particular, in 1952 it was planned to build a new type of kindergarten in the collective farm named after Voroshilov, Kuybishev, Molotov, Lenin in the Altirik district of Ferghana region, but in practice it was not seen [14,20].



The 1953 plan of the Fergana region was to cover 258 permanent kindergartens-1,500 pupils, 1,000 children and 3,000 brigade mobile kindergartens-19,350 pupils. However, as of June 1, 1953, 115 permanent kindergartens and seasonal kindergartens covered only 50-60 percent of the children [14,20;4,2]. Rural preschools are not equipped with hard and soft equipment. The children were given tea and bread in the morning and evening, and some hot food for lunch. The quality of education was low. The level of medical services in the kindergartens of Kuvasay, Tashlak, Kuva districts is unsatisfactory, and the chairmen of the collective farms and the first secretaries of the party organization did not pay enough attention to these issues. In this area, children are housed in collective farms with no facilities [17,6].

The mobile kindergartens opened by the brigades did not meet sanitary requirements. There were no separate rooms for children. Because they were placed on swings and not provided with separate food, they ate from a common pot prepared for lunch for the collective farm. Their care and upbringing are entrusted to disabled women [14, 23].

As a result, the implementation of the above decision was not approached responsibly. From 1949 to 1959, many of the kindergartens on the collective and state farms were not educational institutions but temporary detention facilities.

On May 21, 1959, the Central Committee of the CPSU and the Council of Ministers of the USSR adopted a resolution entitled "Further Expansion of Preschool Education Institutions, Preschool Education on measures to improve the upbringing of children of childbearing age and their medical care accepted" (1,12;21,70). It is important to raise children from the first months of life. The Ministry of Education was recommended to establish kindergartens for children from 2 months to 3 years. On the basis of the resolution of the Central Committee of the Communist Party of Uzbekistan and the Council of Ministers of the Republic on August 5, 1959 made the appropriate decision [3,76;5,3]. There are two systems for factory and plant managers who have their own nurseries and kindergartens, one nursery and one kindergarten. In Uzbekistan, the implementation of this decision has been carried out since 1961 and two types of educational institutions in order to organize a single structure of education merged into a single kindergarten (18,32).

According to the letter of the Ministry of Education of Uzbekistan No. PFU-05-8 dated February 8, 1961, the 8th kindergarten of the Fergana City Health Department was merged with the kindergarten of the cocoon factory [11,71; 7,9].

Due to the untimely arrival of building materials, the construction of kindergartens is extremely slow was carried out. In particular, from January to August 1959, there were 16,424 kindergartens in the country. Although construction was planned, the number of buildings completed by the end of the year was 6,624 (the plan was only 40 percent completed). During this period, it is planned to build 13,425 kindergartens, and in practice 4,598 was built. (34 percent completed) [8,68].

By the 1960s, there were several types of preschool education in Uzbekistan. These are: kindergartens, nurseries, daycare centers, sanatorium kindergartens, seasonal kindergartens, playgrounds and mobile kindergartens.

In 1962, there were 539 in Fergana region there are pre-school educational institutions where 30,650 children are educated. 44 of them belonged to the Ministry of Education of the Uzbek

SSR, and there were 3771 pupils in these kindergartens. 3 of them are in sanatorium gardens. There were 155 foster children. There are 67 kindergartens in the system of departments and organizations - 6267 children, 36 in state farms kindergartens - 3189 children, in 17 systematically integrated kindergartens - 2536 children. From this In addition, there are 38 day and night kindergartens with 950 children was covered [16,136].

The ninth five, covering the years 1971-1975 There are more than 5,000 pre-school educational institutions in the country annually, with more than half a million of them children were covered. They accounted for 18.4% of preschool children in the country. During these years, children's institutions for 215,000 places have been built and put into operation. Preschool education in 1975 19,7 percent of children were involved in institutions [10,9].

In the union republics, the coverage of preschool children was 37%, while Uzbekistan ranked 11th in the list. Given that the majority of workers in large industrial enterprises were women, most enterprises did not have kindergartens. Increasing the number of children in kindergartens has begun to be done by reducing the number of available places. As a result, the existing kindergartens under some enterprises have to work with pupils several times more than their capacity forced. Sixty percent of kindergartens and nurseries were housed in public buildings. For example, Kindergartens opened in Fergana under the auspices of the Sredazneft Association, the Oil and Gas Plant, the Bolshevik Plant, and the Sock Knitting Factory provide education, discipline, and food security. Demand for such kindergartens has increased. Because not only factory workers, but also families living in the surrounding area were willing to send their children to these kindergartens [13,35].

With the growing population of the country, the demand for kindergartens is growing. Despite the new buildings under construction, all the children there was no opportunity to cover. Taking into account the demand of the population, the leadership of the Communist Party for the construction of preschool institutions and providing them with the necessary means for kindergartens training of the necessary personnel and development of issues such as the adoption of kindergartens by enterprises, construction companies, collective farms and state farms came out [9,5].

However, the focus is on improving the material base of preschool education in the country however, the number of kindergartens built in the 1970s lagged behind population growth and did not meet demand failed. During 1971-1975, it was allocated for the construction of preschool institutions in some regions about 20 million soums of funds were not used [11,3].

As a result of measures taken in 1981 in the farms of Fergana region, the coverage of children in preschool education was 31.4%. It is only 2% higher than in 1976.

While the number of seasonal kindergartens in the country is high, the activity is at its lowest level and there is control not performed [6,58].

The Ministry of Education and Health did not view such kindergartens as subordinate. There are no plans to improve the skills of principals and educators. The educators did not have pedagogical education. Not equipped.

In 1974, there were just over 5,000 preschools, but in 1977 that number exceeded 5,600. In 1974, 527,000 children were covered, which was 18.4%, while in 1977, 654,213 children were covered, accounting for a total of 22% [12,15].

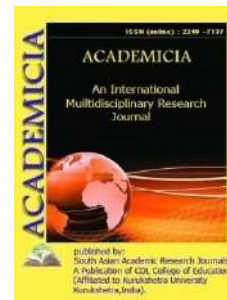
## CONCLUSION

In conclusion, it can be said that in the post-World War II years, the network of preschool education institutions in Uzbekistan has expanded. The number of foster children has increased year by year. Kindergartens in general have proliferated. But do not rush many kindergartens were not built on time as a result of hasty and fraudulent paperwork. The existing pre-school educational institutions are lagging behind the population growth rate and meet the existing needs did not receive. The main part of the preschool children of the rural population is covered by the kolkhoz playgrounds and mobile nurseries, whose activities and the sanitary condition did not meet any requirements.

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## THE UNITED STATES AND CENTRAL ASIA: SIGNIFICANT ASPECTS OF RELATIONS AND INTERESTS

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### ABSTRACT

*This article is dedicated to coverage of current state of relations between the US and Central Asia. Central Asia as a favorable geostrategic region has always attracted leading countries. The United States also has a particular interest in this important transit zone. As the US is one of the countries defining the world order, there is no region where its interests do not exist. The United States always has a peculiar approach for important geostrategic regions. The United States regularly claims that the US was one of the first state that to recognize the independence of Central Asian states and has helped these countries to build up their sovereignty. An addition to this, the fact that Afghanistan is also directly adjacent to the region shows how important the US influence in the region is. It is obviously seen that the US-supported projects such as Greater Central Asia and The New Silk Road initiative are aimed to affiliate Afghanistan with Central Asia. It is also crucial for the United States to have its influence in Central Asia to lessen Russia's dominance in the region and to form a barrier to China's heavy inflows. Furthermore, the richness of its natural resources and the large hydrocarbon reserves of the world in this region, increase the significance of Central Asia for the United States. It can be interpreted that the name of the US has always been encountered in the strategically influential areas. It is also vital for the Central Asian countries to have the US in the region. The region which is mainly made up of developing countries needs a vigorous investor like the United States. Precisely, one of the most essential view is that the presence of the US in the region can help to keep the balance power in Central Asia. Clearly, there is a commonality of interests in the relations between the US and CA.*

**KEYWORDS:** *The US, Russia, China, Central Asia, regional interests, influence, balance of power, strategy, new strategy of the US for CA, Afghanistan, geostrategically important region, ‘Heartland’, “C5+1” project, Northern Distribution Network (NDN)*



## INTRODUCTION

There is no any doubt that the United States has a particular interest in Central Asia, as one of the world's giant and leading actor in the process of determining geopolitical trends of the world. At the same time, Central Asia is also an interested party from the relations with the US. Today the image of Central Asia is growing in the modern geopolitical processes, and therefore, the United States also sees new promising benefits in Central Asia.

Closer partnership with countries like the US can open up ample opportunities for developing Central Asian countries. It is vital for the US to maintain a high level of relations with Central Asian countries so as not to lose their positions in this geostrategic ally important region. That is the US is not indifferent to the forceful influence of Russia and China which are main US rivals today. It is obviously seen that there are common interests underlying this relationship, the joint efforts of the United States and Central Asia can be promising for both sides.

**Geopolitical features of Central Asia.** As Central Asia located in the heart of the Eurasian continent and, as can be said, "Heartland", it has always been in the spotlight of figurehead countries. Including, The United States has never been apathetic to Central Asia. The US has always put forward its intentions and principles on its own agenda regarding this region. Central Asia's cozy geostrategic location and well-off natural resources have attracted US to the region. Adding to this, the Afghan issue also proves that Central Asia is a region that deserves further attention for the United States. Afghanistan, which is already a part of the Greater Central Asia is a far-reaching for the US.

The US presence in Central Asia provides certain opportunities for the region's states. The foreign policy of the countries which located in the relevant geostrategic region is quite complicated. In this respect, the existence of a sole power in the region is unacceptable to countries with weak economies and their inability to promote regional integration. To this day, not only Russia's, but also China's influence has grown so much in CA that these countries, which appears to be official partners, are already on the path of stealth contention. Recently, the fact that transferring the border land of Tajikistan to China, increasing Kyrgyzstan's debt from China and growing China's influence in Kazakhstan rapidly and protests in the territory of this country against China's clout may explain the essence of the situation. Russia's classic policy of influence over the region: Moscow always attracts Central Asian countries, emphasizing that the region has always been influenced by Russia and, indeed, its influence on the region is so durable that it strives to exercise its political will. And it can be seen that some of these political intentions have been obtained by following the EAEU. In these circumstances, it is very essential and beneficial for the Central Asian states to have a third actor that maintains a balance of power. From this point of view, the US necessity for the region may be more relevant than the Central Asian countries' need for the US.

**US interests in the region.** Although distant, the United States, with its stake in the maintenance of geopolitical pluralism in post-Soviet Eurasia, looms in the background as an increasingly important if indirect player, clearly interested not only in developing the region's resources but also in preventing Russia from exclusively dominating the region's geopolitical space [1]. The US is concerned with the dramatic increase in Russia's reputation in CA. Moreover, China's increasing impact in the region, especially over the last decade, has encouraged the US to adopt a more active foreign policy towards the region. As is stated above, the priceless geopolitical



region, located in the heart of the Eurasian continent, may not be far from the influence of the US, which is considered as one of the world's governing bodies. Today as the world states are putting up an intense struggle for energy resources, Central Asia is attracting the United States as a region with abundant natural resources. But in modern trends, the priorities of the United States in Central Asia represent geostrategic property. Because of the fact that not to be directly linked to the region limits its access to the region's natural resources. From this, it can be deduced that all of the US plans in the region are aimed at strengthening its geopolitical position in Central Asia.

**Bilateral relations: comparative-political analysis.** If the general features of US relationship with the states of the region are revised, the principal purpose of the United States can be seen. There is an imminent approach of the US for Uzbekistan, which economic situation is more advanced than Kyrgyzstan, Tajikistan and Turkmenistan as well. And at the same time, it is considered to have the most powerful army in Central Asia. Located in the heart of the region, being able to serve as a transit zone for all countries in the region, and being border with Afghanistan escalate Uzbekistan's gravity to the US. The new government, which came to power in 2017, has undergone a series of economic reforms. In foreign policy, first of all, the implementation of the good neighborhood policy with other Central Asian countries and establishing Central Asia as the main focus of the country's foreign policy will ensure Uzbekistan's high position in US's regional diplomacy. It should be noted that integration in the region will not happen without the intention and influence of Uzbekistan. Being in the center of the region is one of the key factor and also Uzbekistan can affect to other Central Asian states because of its position and potential. Moreover, opening borders and friendly relations with neighbors in foreign policy have fueled the spark of integration processes in Central Asia. An example of this is the consultative meetings of the Central Asian leaders in March 2018 in Astana (Nur-Sultan) and in November 2019 in Tashkent. In addition, the fact that the meetings of the C5+1 platform in February 2020 in Tashkent, just proved that Uzbekistan is at the forefront of the US plans for Central Asia.

Kazakhstan presently offers the best opportunity for US engagement. Kazakhstan has the vision, resources, and institutional capacity to play a greater leadership role and to help put Central Asia on a more positive trajectory. In its foreign and domestic policy, Kazakhstan has a number of important accomplishments to its credit, and, unlike other states in the region it has set out an ambitious agenda for the future.[2] The United States seeks to strengthen its influence in the region by establishing close ties with Kazakhstan, the most economically developed country in CA. Having investor support like the US is well-deserved for Kazakhstan, which is a resource-rich country as well as having a high improved potential. Closer ties with Kazakhstan, Russia's closest economic and political partner in the region, can help to keep Russia's influence to a minimum. Upsurge of China's prestige in Kazakhstan in recent years, US cooperation is a superb for Kazakhstan to balance foreign policy.

The US is interested in Turkmenistan's rich hydrocarbon reserves. Turkmenistan's vast natural gas and oil resources continue to attract foreign companies to the country, but the Government of Turkmenistan has yet to implement reforms needed to create an inviting business climate where foreign investment and foreign investors are truly welcomed.[3] Until recently, China was the only major customer of Turkmen gas. But in April 2019 Russia also began to import Turkmen gas after a 3- year break. The United States is paying attention to the possibility that

Turkmenistan will diversify its energy markets. And the US focus Turkmenistan's proximity to Afghanistan and border security, and the potential for American commercial interests in Turkmenistan.[4] Turkmenistan is the most interested actor and initiator of the TAPI project. However, Turkmenistan cannot implement the project alone due to lack of money and it is looking for a partner to help realize the project. The United States may be the most attractive investor in Turkmenistan for the project, but the US has not shown any worthwhile interest for the project so far.

US-Tajik relations focus on US support for the country's accession to the WTO, assistance to improve agriculture and the climate for foreign investment, and encouragement to respect human rights and the rule of law[5]. Relations with Tajikistan are also not at a high level. The US program in this country is to strengthen security, economic and regional ties. Tajikistan's military affiliation with Russia, which is Russia's closest military ally in Central Asia, hinders Tajikistan's favorable ties with the United States. According to Dmitry Popov, a Russian analyst, "The US primarily supports Tajikistan in the areas of peace, security and humanitarian aid. The analysis of the American- Tajik relations shows that at the current stage the republic is not among the main foreign policy priorities of the U.S. in the post Soviet space. However, it does not mean that Tajikistan is completely out of the Central Asian strategy of the U.S. Keeping it in the focus of attention of the American foreign policy will be the aspiration of Washington to maintain access to Afghanistan and to constrain development of geopolitical competitors such as Moscow and Beijing".[6]

Kyrgyzstan, which is considered to be relatively developed with democratic principles, can open up broader cooperation with the United States to resolve its domestic and economic problems. It is also important the US uphold with Kyrgyzstan to prevent from being fully linked to China and Russia. The US has provided more support to Kyrgyzstan than any other Central Asian country in building democracy in the country. But after the US military base in Manas was closed in 2014, the US-Kyrgyz military relationship collapsed. The US is keen to work closely with Kyrgyzstan if it creates favorable conditions for itself, but the fact that Kyrgyzstan is already under the impact of China and Russia, and this is hindering bilateral relations. For this reason, the US just about has lost interest in Kyrgyzstan. The recent abolition of the immigrant visa regime for Kyrgyz citizens also indicates that the US does not consider Kyrgyzstan as a reliable partner.

**Afghan factor.** In its initiatives for Central Asia, the US seeks to link Afghanistan to Central Asia. To give an illustration, The New Silk Road project is one such project. The New Silk Road initiative of the US was first envisioned in 2011 as a means for Afghanistan to integrate further into the region by resuming traditional trading routes and reconstructing significant infrastructure links broken by decades of conflict [7]. To clarify, this project aims to link Central Asia with Afghanistan to take out South Asia. But without providing the peace in Afghanistan, it is difficult to put this project into practice. Therefore, now this US-project is no longer in effect. Vice versa , China's "One Belt, One Road" policy undermined this US project in the region. But the US has also taken action in its plans to connect CA with Afghanistan. A striking example of this is Northern Distribution Network (NDN) project. The Northern Distribution Network was developed in 2009 to deal with the pressing need to sustain the movement of equipment and supplies during Operation Enduring Freedom in Afghanistan. Although the NDN is a physical transportation route, it has the potential to further influence the Central Asian states to forge

alliances with their neighbors and increase stability in the region. The Central Asian states by means of the NDN, formed relationship that, in some instances, brought closer cooperation.[8]

Afghanistan is a proper issue, which is already a part of Greater Central Asia and has a particular importance to the region and the US. The United States has a long and varied history of engagement with Afghanistan. Inspire of tortuous turns and obstacles in the relationship, it has almost always been a transactional one. Given its “front line” status, Afghanistan has usually been a pawn in a bigger strategic game, initially between the Communist bloc and the capitalist countries in the region (including Iran under the shah, Pakistan, and India) and subsequently between the secular world and radicalized Islam. Afghanistan’s current status as a ward of the United States and international community is unusual and will not last[9].

The US officially acknowledges that the US goal in Afghanistan is to fight against terrorism and drug trafficking. But the presence of the US in the region also means that it is directly involved in Central Asia and this will also bolster close monitor to Russia and China’s actions in the region. It is important for countries such as the US, to appear in a geostrategic ally significant region like this. And it is clear that the US will ever withdraw its troops from Afghanistan. Because today the interests of the United States in Afghanistan are not based on the vital blessings as at the beginning. There is a high possibility that even if the US pulls its troops out, Afghanistan cannot be fully guaranteed by other countries concerning keeping peace. It is questionable that Afghanistan’s ability to determine its own destiny without external interference. Taliban forces are continuing to threaten the north of the country with brand-new strength and peace talks are thus far ineffective. Since, according to experts, the Taliban is not an absolute whole and it has separate groups to oppose any peace negotiations with the US. Thereunto, external concerned actors continue to reinforce the Taliban, and even they are trying to influence the US-Taliban negotiation process. This means that the US will not withdraw its troops in the near future. The current Afghan government needs the United States to oversee the Taliban and counter other radical and interested forces. Peacekeeping in Afghanistan is also beneficial to the region states. Predominantly, it is crucial for Turkmenistan to realize its TAPI project and for Uzbekistan to get to the ocean trade road. But the issue of peace in Afghanistan, which has grown into the space of political games, is not depend on Central Asian states.

**Contemporary geopolitical processes: the US position.** When it comes to the US concerns in the region today, the new strategy of the US called “United States Strategy for Central Asia 2019-2025. Advancing Sovereignty and Economic Prosperity”, adopted in February 2020, can be the base of its position in this region. The reason for the new strategy is to shift governments in two leading countries of the region(Uzbekistan and Kazakhstan). In particular, the new government of Uzbekistan has undergone a number of positive changes in the economic and political spheres.

It should be noted that there are no principal modifications in the new strategy, that is, the US has not changed its strategy in Central Asia entirely. But there are some noteworthy points. The section of policy objectives consists of 6 points. 2 out of those 6 points are focused on Afghan issue. The first is to expand and maintain support for stability in Afghanistan, and another one is about encouraging connectivity between Central Asia and Afghanistan. This shows that unless the Afghan problem is resolved, Afghanistan will be the main focus of the US strategy in CA. Principally, the strategy says: “The United States recognizes that a secure and stable Afghanistan

is a top priority for the Central Asian governments, and each has an important role to play in supporting a peace process that will end the conflict. The United States will encourage the Central Asian states to develop economic and trade links with Afghanistan and to model stable governance of multi-ethnic, Muslim majority countries"[10].

The document also highlights the export of Central Asia electricity (Kyrgyzstan and Tajikistan) to Afghanistan and Pakistan through the "CASA-1000" program and the development of the Lapis Lazuri Corridor to promote trade between Afghanistan and Central Asia with Europe and Eurasia. It is also touched upon the diplomatic platform C5+1. Specially, the document states this: " U.S. participation in the C5+1 supports regional connectivity and Central Asian sovereignty, independence, and territorial integrity. C5+1 project are being implemented across Central Asia with over \$34 million from the United States Government in the areas of security, economic connectivity, and environment".

It is noteworthy that each of the major competitors in the region has specific mechanisms for achieving their goals. To give an illustration, for Russia these mechanisms are Eurasian Economic Union (EEU) and Collective Security Treaty Organization (CSTO), and China's mechanism for achieving its goals in the region is the SCO and the "One Belt, One Road" project. In these circumstances, it is crucial to have an acceptable mechanism for the United States, and this mechanism for the US may be the C5+1 project. That is why, the US is working to develop this platform. Through this platform the US can promote its political objectives in the region.

In general, the strategy also sees the following aspects, which are different from previous one. Imprimis, Uzbekistan is largely focused on the development of the new strategy. The US craves to emphasize Uzbekistan's leading role in Central Asia's integration process. Assuredly, it is related to the changes in Uzbekistan in recent years. Second, the US does not see Central Asia as an extremely promising market. But it believes that regional integration, including enhancing the transit potential of Central Asia and expanding economic cooperation with Afghanistan and South Asia, can reduce China and Russia's impact in the region.

Realistically, it should be noted that, the US's primary goal in the region is not to lose its geopolitical position, that is, the US plans are aimed at preserving and developing its geopolitical condition. Other factors, such as natural resource and economic interests are secondary issues for the US.

The ongoing trends in US relations with Central Asia can also be analyzed through official visits by the US Secretary of State Mike Pompeo to Kazakhstan and Uzbekistan at the beginning of February in 2020.

Pompeo's visit in CA at this time is not an accident, considering the case of Uzbekistan. Uzbekistan's recent refusal to join the Eurasian Economic Union (EEU) will help keep the country from becoming dependent on Russia and avoid trade issues involved with the economic bloc.[11] In addition, President of the Republic of Uzbekistan Shavkat Mirziyoyev in his address to parliament specifically mentioned joining to the EEU. Under these circumstances, Uzbekistan's emergence of Russian influence through the EEU has sparked the US and it is clear that the US needs a new Uzbekistan in Central Asia. As a consequence, Pompeo's visit was important not only for the US, but also for Uzbekistan, because this way enables Uzbekistan to avoid being under pressure of Russia due to the EEU. It is important for Uzbekistan to maintain a

balance of power in foreign policy and this has been accomplished by Pompeo's visit. The US sees Uzbekistan and Kazakhstan as the closest partners in the implementation of its geostrategic interests in Central Asia. Therefore, Pompeo's visits were organized exclusively to Uzbekistan and Kazakhstan. Other countries of the region are troubled for the US and do not have sufficient potential. Uzbekistan and other Central Asian states do not want to intensify the influence of a particular state in the region. Moreover, this was stated by the Minister of Foreign Affairs of the Republic of Uzbekistan Abdulaziz Kamilov during his meeting with Mike Pompeo: "We want to see Central Asia as a region of stable development, prosperity, and cooperation, and we would really not like to feel on ourselves unfavorable political consequences in relation to some competition in our region between large powers".[12]

## CONCLUSION

Based on this, the following conclusions may be drawn. Firstly, the US relations with Central Asian countries, specifically Kazakhstan and Uzbekistan, started to acquire a new feature. Recent developments in these countries have drawn US attention. Especially, foreign policy of Uzbekistan aimed at strengthening cooperation with the countries of CA and organizing integration in the region, confident economic reforms in domestic politics, and positive human rights reforms are making Uzbekistan a favorable partner for the US. Secondly, the US is currently using Afghanistan as a backbone for overseeing political processes in Central Asia. That is, the presence of the US in Afghanistan means that it will have an impact in Central Asia as well. If the US withdraws troops from Afghanistan, its influence in Central Asia could be drastically reduced and that is why, the US can now move on to direct cooperation with Central Asian countries. The US can maintain its influence in Central Asia, especially by deepening cooperation with the leading countries of the region. Ultimately, the US influence in Central Asia can be an essential factor for the region's states to balance the forces. It is worth noting, today, political processes in Central Asia are becoming more complex. The classic way of influencing Russia on Central Asia, Kazakhstan's economic and Tajikistan's military dependence on Russia; China's slow access to Central Asia through its soft power policy, already having a huge influence in Kazakhstan, Kyrgyzstan and Tajikistan, have increased the need for a third country to maintain balance in Central Asia. Such a third participant in the region can be the US. Russia has never liked a country that tries to stay away from it, and the state that seeks to distance itself from Russia should always be prepared for the 'cold winds' from Russia. The Ukraine events of 2014 and ongoing tense relations of Belarus with Russia can be the best examples of how it can be painful to stay away from Russia's deep impact. And China, as mentioned above, has been pushing its soft power policy with all its might. China's relations with Tajikistan regarding areas of gold-fields and their subsequent transfer to China, the steady rise of Kyrgyzstan's debt to China, the rise of China's influence in Kazakhstan, and prolonged protests in the country against China's impact have proven the prestige of China's policy in the region. Taking these factors into consideration, it is required from CA states to be cautious about improving relations with China, particularly in the economic sphere including credit and risky investment so as to avoid being an injured party due to the impact of China's soft power. However, it is also important to note that if the US sees significant benefits in CA, its impact on CA can be as tough as Russia and China's one. But now, the United States has no primary interests in Central Asia and the US will not even engage in a sharp struggle with Russia and China to expand its reach in the region. This can create favorable atmosphere for the Central



Asian states. If Central Asia becomes a real, fierce competition area between these three major powers, the Central Asian countries will not be able to cope with such intense competition. But the current status-quo is somewhat moderate. US efforts in Central Asia are aimed at curbing China and Russia as much as possible. For Central Asian countries, the presence of the United States with a new strategy in the region will help them avoid excess pressure and unsure the balance of power in the region.

**Perspectives and proposals.** The US can implement promising projects in Central Asia and it sees Central Asia as an important geostrategic region, a valuable transit zone, and seeks to link Central Asia with Afghanistan and South Asia. If the US goal really is to bring peace to Afghanistan, that is a promising plan for the Central Asian states as well, because Central Asian countries are interested in accessing the ocean route through the south. For the Central Asian states, the US can be a source of new opportunities and projects. When the issue of Uzbekistan's joining to the EAEU was raised, the US also began to make offers for Uzbekistan. Lead by example, US Secretary of Commerce Wilbur Ross claimed that, "Uzbekistan's aspiration for EAEU may complicate WTO accession", adding, "The United States 'strongly supports' Uzbekistan's entry into WTO and is awaiting a government response to requirements of the memorandum on foreign trade regime[13]. If Turkmenistan can also involve the United States in the implementation of the TAPI project, this could play an important role in its realization. It should be underlined that the US is also facing some shortcomings in the region. As an example, there is a lack of activity in the US in quoted above projects. Uzbekistan has long been in the process of joining the WTO, but the US took action only after the EAEU issue arose. Turkmenistan has long been looking for a partner to fulfill the TAPI project, and it is obvious that Turkmenistan has high hopes for the US in this issue. For the US, active involvement in such projects can have a positive impact on its reputation in the region. The United States should pursue more active foreign policy towards CA by offering more promising programs to these countries so that it can maintain its geostrategic interests in this region.

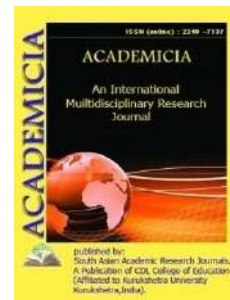
For the governments of the Central Asian states, it is appropriate to act in the present pattern. That is, following a foreign policy without alliances which political interests are concealed and without compromising any particular power. Excessive rapprochement with the US, while ignoring other actors in the region, is not an acceptable option for the Central Asian states. In view of the fact that the states of the region cannot completely refrain from the influence of Russia, because Russia has a privileged position in the region, and this role has a number of positive features. China's economic impact is also undeniable. For the countries of the region, balancing the power is incredibly important and convenient in many respects. Under such conditions, regional integration is crucial for the Central Asian states. The unification of the countries of the region can produce a suitable response to any external influence.

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## SISTEMIC ANALYSING OF WRITTEN SOURCES

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### ABSTRACT

*In this article, there are ideas about new informational-technological method for the research of historical writings. According to this method, we can define degrees of originality, falsify of each writing by informational-technological indicators and this article is about appearance of scientific criteria to explore historical writings for chronology.*

**KEYWORDS:** *Classification, written source, system, assembly, office, personal, art, historical, scientific works, cartography, statistics, chronology, metrology.*

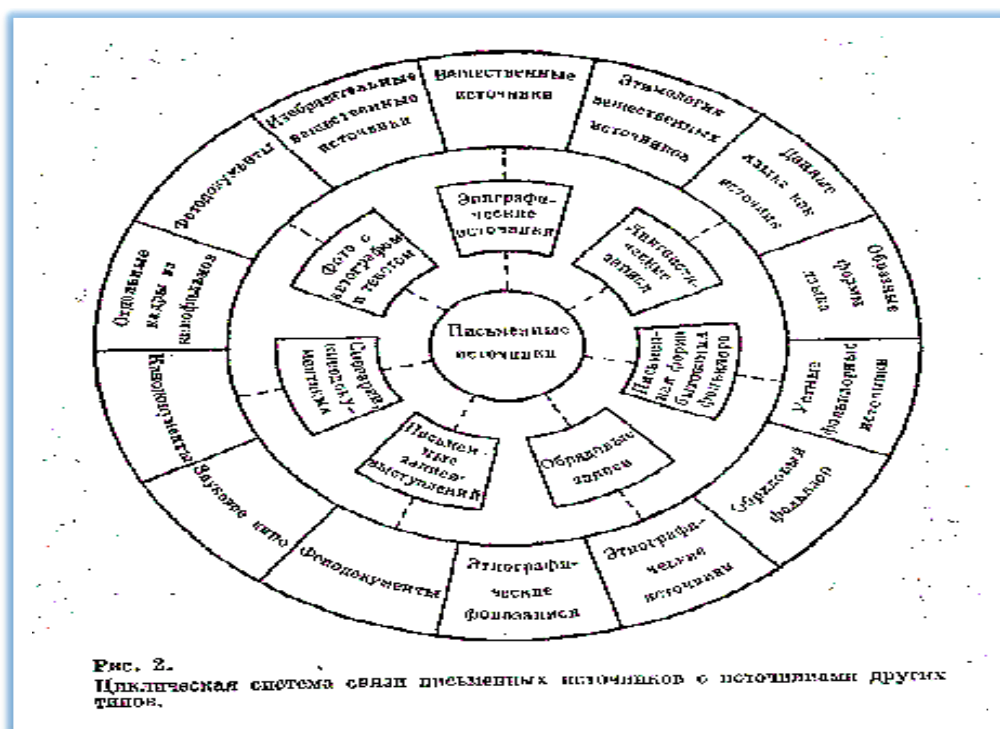
### INTRODUCTION

The importance of historical sources in covering the history of mankind objectively and neutrally has always been recognized by research scientists. For this reason, the classification of them according to their form and essence has been one of the most important tasks of source studies. A number of studies have been conducted on the classification of sources, some of which are noted [19; 38]. Source scientist, academician B. Ahmedov divided the chronological boundaries into five main categories (material, ethnographic, linguistic, folklore, written), depending on the historical sources of the period from ancient times to the middle of the XIX century, their general nature, reflecting the past [19: 8-12]. . B. Akhmedov, in turn, divides the written historical sources into two types: 1) official documents issued by the Supreme and local rulers (certificates, decrees, charters, etc.), financial statements, official correspondence and 2) historical, geo-cosmographic and biographical works [19:11].

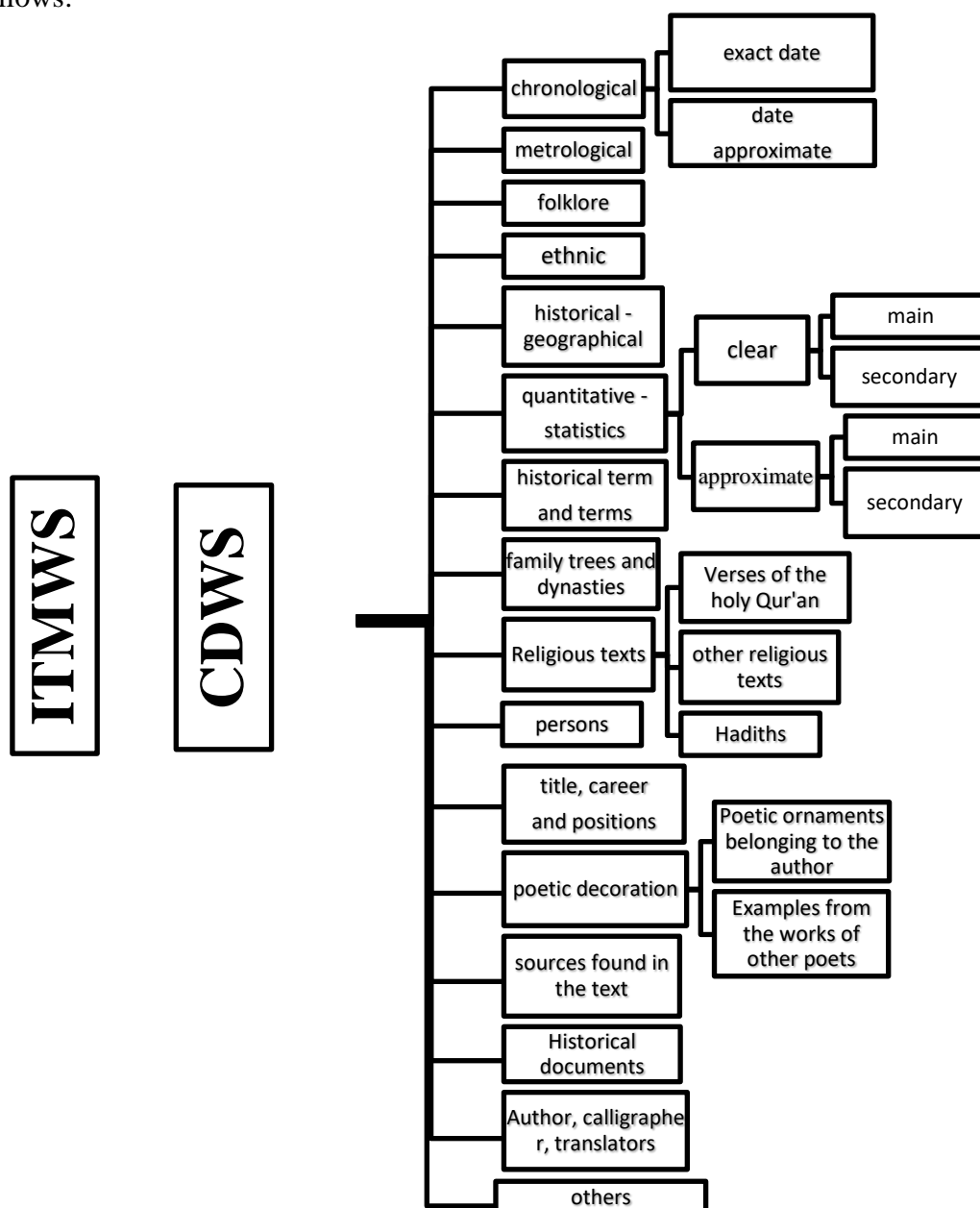
### RESULTS AND DISCUSSION

Russian source scientist L.N. Pushkarev took a unique approach to classifying historical sources from chronological boundaries from antiquity to the fourth quarter of the twentieth century. In his research, he classified historical sources into periodic and linear systems. The researcher

categorized historical sources into sixteen types according to the periodic table (Appendix 1) and fifteen types according to the linear system (Appendix 3)[38]. In turn, L.N. Pushkarev develops a linear (Appendix 5) and Periodic (Appendix 4) system of historical written sources. According to Appendix 5, written sources are divided into two types (documentary and narrative style) and twelve to twenty-four types. According to Appendix 4, written sources are divided into eight types (legal, office, personal, artistic, historical, scientific, cartographic and statistical) and three to twenty-four types. The scientist gives a periodic table of the interaction of written sources with other types of sources in Appendix 2 of his research. Scientific views on the classification of sources are included in tabular form in the monograph "Classification of Russian written sources on the history of the homeland" (Classification of Russian written sources on the history of the homeland), published in 1975 by the scientist[38]. . Below Appendices 2 and 3, developed by L.N. Pushkarev in tabular form, are referenced in their original (in Russian) form.

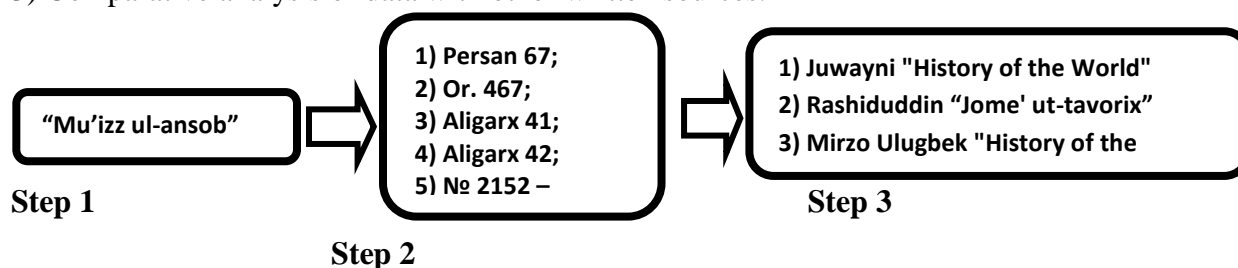


In the article, we would like to make some comments on the issue of systematic analysis of written sources according to their internal features, which is an important and basic type of historical sources. In the process of studying them, it is necessary to be vigilant in the use of information and evidence presented in the pages of sources, that is, to approach them critically [19:12]. In the systematic analysis of written sources, the study of the written source through the development of "Information Technology Map of written sources" (ITMWS) opens up new opportunities in source studies. ITMWS is a fundamental study of the nature and internal features of a written source. It is possible to determine the amount of data in the text based on ITMWS. ITMWS puts data from a written source into a specific system and categorizes them according to their characteristics. One of the alternative views of ITMWS in diagram mode is as follows:



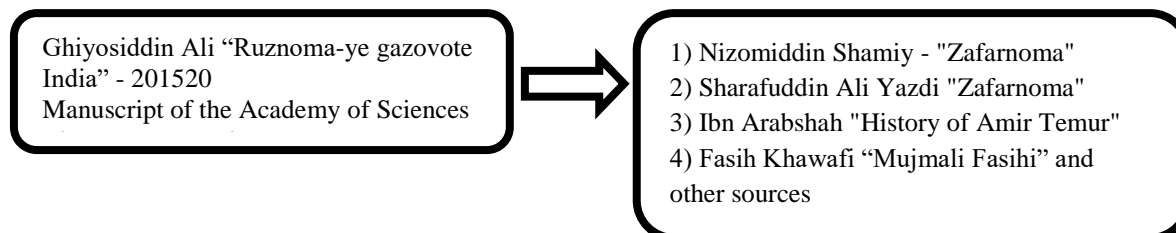
Based on ITMWS, it is possible to create a “Categorized Database of Written Source” (CDWS). In this case, it is advisable to use auxiliary fields of history. The study of the data in the GMC using diagram, table, and SmartArt graphic element types puts the comparative analysis into a specific system. It should also be noted that many researchers have made effective use of various forms of tables and diagrams in categorizing written sources, comparing ancient records, chronological and genealogical data in chronological and regional order, categorizing civilizations, and more [1]. The use of three-step analysis is important in determining the amount and source level of data in ITMWS and CDWS. This can be seen in the example of Mu'izz ul-Ansab:

- 1) Data classification and analysis;
- 2) Analysis of data in written sources;
- 3) Comparative analysis of data with other written sources.



If the manuscript of the source is in a single copy [20: 147; 151; 211; 284; 13: 4], a two - step analysis is performed. This can be seen in the example of Giyasuddin Ali's source in the work "Ruznama-ye gazovote India" [7; 8]:

- 1) Data classification and analysis;
- 2) Comparative analysis of classified data with classified data of other written sources for the same period.



Data from a written source can also be categorized according to common internal characteristics:

I. Chronological [39: 35-39]: This information clarifies the date of the historical events that took place and serves to establish a certain periodic boundary. Chronological data make up the bulk of the information available in written sources. It is expedient to divide them into three main types and variants according to the state of meeting in the text:

- 1) Chronological data with clear dates;
- 2) Chronological data with approximate dates;
- 3) Chronological data indicating the duration of an event.

Chronological data on the second type are given by the authors of the source: "one day", "in a short time", "in the middle", "at this time", "in winter", "today", "the next day", "in the middle of the night", "Overnight", "morning", "after a while", "in the autumn of this year", "after a while", "about a year", "a few days later", "that night", "to until the horses are fat", "in the morning", "at night", "tomorrow at dawn", "this year", "this month", "at the time of birth", "at the time of death", "in two or three days", "two- after three days", "In the spring of the year of the sheep", "about seventy-five days", "the spring of the year of the pig has entered", "during this period", "two hundred years ago", "when the solar eclipse reaches the point of spring equinox", "after winter", "when the spring of the year of the mouse arrives", "in the first spring of the year of the sheep", "for several years", "in a fixed day", "in the year of the sheep", "in the year of the leopard", "after three months of siege", "five hundred and twenty-three governments", "He lived forty-eight years", "He was seventeen years old", "A few months ago", "In a week", "The end of this month", "On the ninth of the month", "For thirty years", "At the end of Ramadan", "In the middle of the month of Dhu'l-Hijjah", "Some time", "At this hour", "These days", "at the end of this month", "this year", "since the time of the terrible event", "in the middle of winter", "Eid", "next day", "last year", "a few years", "in those days", "at the end of the winter days", "after three days", "for a period", "at the end of one day", "within three years", "for two months", "the date of that opportunity is up to nine hundred and eight", "For this opportunity", "how many times", "At the end of time", "since the oath", "five months of fortress", "ul fatarotta", "earlier", "in this history", "how many years- who", "until the end of the oath", "three-four years ago", "Samarkand in the second turn", "how many years", "at that time", "at the end of this month", "evening prayer in the middle of the night", "other late prayer", "in this winter", "four", "Five years later, in the Kazakhs", "in that time", in sentences indicating the approximate time of the historical event.

We will try to analyze this category on the example of Mu'izz ul-Ansab. The chronological data in the source are 146, of which 88 belong to the Genghis and 58 to the Timurid periods. Let's analyze the chronological data according to the first stage of ITMWS:

- a) Information on the dates of birth of household members:  $2 = 11$ ;
- b) Information on the dates of enthronement of household representatives:  $28 = 0$ ;
- c) Information on the term of office of the representatives of the ruling family:  $14 = 1$ ;
- g) Information on the age of death of household members:  $1 = 37$ ;
- d) Information on the dates of death of household representatives:  $33 = 8$ ;
- e) Chronological data on different historical processes:  $10 = 0$ .

If we analyze the chronological data in Mu'izz ul-Ansab on the basis of types, we find that 78 of them ( $59 = 19$ ) are clearly dated, and the remaining 68 ( $29 = 39$ ) are approximate chronological data.

**II. Quantitative-statistical:** This category includes all numerical data that are not related to chronological and metrological data. They can be divided into two main types according to their state of occurrence in the text:

- 1) Accurate data expressed in numbers;



## 2) Approximate data expressed in numbers.

The authors of the second type of information are: “countless armies”, “innumerable armies”, “total nomadic armies”, “infinite army”, “all”, “close to a thousand people”, “several people”, “A group of horsemen”, “a small number”, “about ten thousand people”, “a group”, “about sixty horsemen”, “about a hundred people”, “all Turkish-Tajik officials, navkars, servants and relatives people”, “with about four or five thousand men”, “with about five hundred men”, “with about twenty thousand horsemen”, “a few pearls” and so on. Mu'izz ul-Ansab contains about 130 figures. About 100 of them belong to the Genghis Khan period and about 30 to the Timurid period[15].

The following information, expressed in numbers in the source, is mainly the majority:

- Number of wives and concubines of some members of the household;
- The number of sons and daughters of some members of the household;
- How many children some princes and princesses have;
- How many wives or current queens some queens are;
- The number of troops in the military units attached to the commanders and emirs;
- The number of troops sent for military campaigns;
- Others.

**III. Metrological** (weight, distance, volume, area, level, etc.): Because metrological data are related to units of measurement, they sometimes also represent data expressed in numbers. Information related to this category is provided by the authors: “two addresses”, “ten-day road”, “one harbor”, “one farsang road”, “total navohi”, “about a hundred gas walls”, “thirty thousand shekels”, “five lacquers”, “a thousand heads of silver”, “five leagues in length, three leagues in length”, “the distance to the bow”, “ten braso”, “ten steps in length”, “three hundred miles in circumference”, “this place is three”, “The thickness of a man's arms”, “The height of two spears”, “The height of four large horses”, “The length is one hundred and five, the width is dark”, “three steps”, “three fingers”, “two and a half palms long”, “two inches”, “one man”, “two-three distance”, “five-day journey”, “ninety-four degrees long” and a fraction, “a two-width desert road”, “a ten-day desert road”, “a tiny amount of land”, “a fifty-shariah gas”, “a three-month road”, “one shariah farsang every sixteen miles”, “The thickness of the chain is like the number of a man”, “An iron stake as thick as a man's waist”, “The distance of a hard shot arrow”, “The stone is not bent at all”, “Eight is silver”, “The distance of a hammer”, “A piece of tin”, “Thirty pieces of satin”, “Columns that do not fit in the arms of three”, “Nearly a hundred plates”, “a stone the weight of an elephant”, “a board the size of a dice”, “several steps”, “no more than two grains of the main commodity”, “nine gallons of water”, “four wooden roads”, “approximately the same length”, “four such as”, “a bullet”, “a bullet”, “a shar'i distance”, and so on. Metrological data are almost non-existent in Mu'izz ul-Ansab. There are 18 metrological terms in Nizamiddin Shami's commentary on Zafarnoma [16].

**IV. Ethnic:** This includes information found in the text about tribe, community, people, folk, army, population, tribe, generation, nation, people, and so on. K. Shoniyozov noted that in the works of Beruni there are more than 100 names of peoples and tribes [36: 128]. The index of

ethnic names of "Mu'izz ul-ansab" contains 120 information [15: 343-346]. When we analyzed the source, we were able to identify the occurrence of about 160 ethnic names [40: 138-143]. However, it should be noted that the source of ethnic information given in such sources as "Tarihi arba' ulus", "Mu'izz ul-ansob", "Shajarayi turk" is Rashiduddin's source "Jome' ut-tavorix". Comparing and analyzing ethnic data in Mu'izz ul-Ansab with sources requires special scientific research.

**V. Historical-geographical:** This includes information related to place names found in a written source. It would be useful to divide them into oykonim, ethnotoponymy, anthropotonymy, hydronym, oronym, polynymy (urbanymy), drimonym, dromonym, zoonym, chronym and other types. A. Sagdullaev noted that in Herodotus' book "History" Bactria, Bactria, Bactrians were mentioned 13 times, Sogdians 2 times, Khorezmians 3 times, Saks 11 times, massagets 19 times [25:34]. The Tarikh-i Bukhara source cites 206 [5: 581-589], Al-Mulhaqat bi-s-Surah 250 [9: 188-195], Majma al-Ansab wa-l- ashjor 196 [2: 312-318] and 99 [15: 351-354] are mentioned in Mu'izz ul-Ansab. H. Hasanov and R. Rasulovs mention that in "Boburnoma" more than a thousand [34:62; 24:44], T. Nafasov ferefers that it's more than 1,100 place names [23:39]. Nizamiddin Shami's "Zafarnoma" contains 848 place names [16: 477-501]. These include stream, garden, spring, temple, region, visaq, valley, guzar, dara, river, pool, steppe, wall, sea, pass, yobisa, summer, yam, lands, valley, shrine, road,lake, bridge, ridge, pavilion, reed, old, town, castle, village, dome, well, sand, fort, reserve, army, anchor, district, field, country, address, stage, masjid, masjidi Jome', cemetery, nahr, saray, khanaqoh, pool, desert, city, e and others.

**VI. Historical terms :** Historical terms can be divided into several types depending on the state of occurrence in the text. By fields: economic, political, cultural, military, religious, legal, scientific, musical, ethnic, toponymic, title, etc. Linguistically: Arabic, Persian, Turkish, Mongolian and others. 135 in the Tarikh-i Bukhara [5: 590-594], 99 in the Mu'izz ul-Ansab [15: 347-350], 414 in Nizamiddin Shami's Zafarnoma [16: 506 -521] is described. The Zafarnoma index includes 103 military terms, 73 honorary titles, and professions of rulers, 54 economic terms, 18 metrological terms and 14 musical terms.

**VII. Qur'anic verses and hadiths:** The works of Arab-Persian authors contain information about the verses of the Qur'an and hadiths. Information on this category is 109 in Nizamiddin Shami's "Zafarnoma" [16: 405-444], 32 in Hafiz Abro's appendix [16: 445-448], 124 in Matlai Sadayn's 2-volume 1 book [3: 535- 623] and in Volume 2, 145 [4: 677-702].

**VIII. Personal names:** The names of individuals mentioned in written sources are often listed in alphabetical order in the indexes. It is advisable to divide individuals into a number of types and parts according to the circumstances in which they meet at the source. According to the position of individuals in society: 1) Stratification; 2) According to the tribal origin; 3) According to professional affiliation; 4) on the basis of religious affiliation and views; 5) by territorial affiliation; 6) It can be based on gender, etc.

From a personographic point of view: a) the gods; b) angels c) prophets; g) legendary figures; d) governors and saints e) rulers; g) various categories of officials; j) The blind; h) different categories of persons; k) division of unnamed persons, etc., regulates the analysis of data related to the category. Sometimes there is also information about unnamed people in written sources. In particular, the information about the Timurid princesses, whose names are not mentioned in the

source of "Zafarnoma" by Sharafuddin Ali Yazdi, makes a total of 38 [12]. It should be noted that the reason for the incomplete coverage of information about the Timurid princesses and women in general in the written sources can also be found in the written sources of that period. In particular, Ibn Arabshah's source, Ajaib al-Maqdur, states: "Timur read the place mentioned by the women in his reply and made an introduction. Because insulting women is a great sin and a great sin. They do not even pronounce the names of women and girls, but call each of them by a different phrase, and constantly warn (people) to avoid this. If the wife of one of them gives birth to a daughter, she is called a "veiled child" or "adornment" or "mastura" or something like that [11:259].

In the index of names of persons compiled in the source "Tarikh-i Bukhara" 303 [5: 570-581], in the source "al-Mulhaqat bi-s-Surah" 917 [9: 167-187], "Majma al-ansab and- l-ashjar" contains 401 [2: 298-309], and "Mu'izz ul-ansab" contains about 6000 [15: 197-342]. Nizamiddin Shami's "Zafarnoma" contains 773 [16: 449-476]. If we take into account that the name of Amir Timur is four, the name of Princess Khanzoda is three, the names of 11 people are found in two different forms, the source contains information about 756 historical figures and 1 literary hero - Isfandiyor [16: 456]. There is also a number of information about their names. R. Rasulov has more than 1,800 in the play [24:44], T. Nafasov 1406 ta [23:39], M. Abdullaeva noted that the names of 1540 people [29: 103] met. Khudoynazarov noted that the "Shajarai Turk" source mentions the names of more than 400 historical figures, briefly describing the lives and activities of 110 of them [33: 69]. In addition to the index of personal names compiled for Al-Kamil fi-t-Tarikh [10: 486-520], the index of honorary titles divides the names found in the source into groups such as Muslim, Arabic, Turkish and Iranian [10: 540-549]. . Ethnic and linguistic classification of historical figures by titles and names, further enhances the ability to know the information level of a written source.

**IX. Genealogy and dynasties:** Written sources contain information about the dynasties that ruled in different periods, the clergy, the genealogy of people who left a deep mark on the life of the country. The analysis of genealogical data helps us to better understand the historical processes. In the index of dynasties in the source "Al-Kamil fi-t-history" 11 [10: 552], in the index of dynasties in the source "Majma al-ansab wa-l-ashjar" There are information about 40 dynasties [2: 310-311]. We will try to explain this category by analyzing the data on the Timurid dynasty, which left a deep mark on world history. The preface to Mu'izz ul-Ansab contains information on the number of representatives of the Genghis and Timurid dynasties [15: 12-13]. A fundamental study of the history of the Temurids states that the list of Amir Timur's descendants reached 193 [19: 134]. the level of study of the dynasty in written sources requires more research. A dynastic analysis of Nizamiddin Shami's Zafarnoma reveals that of the 756 historical figures, 15 were Timurid mirzas and 14 were Timurid princesses[16]. In Sharafuddin Ali Yazdi's "Zafarnoma" there are 46 Timurid mirzas and 67 Timurid princesses[12]. The source "Mujmali Fasihiy" contains information about 69 Timurid princes and 27 Timurid princesses [17]. In "Boburnoma" there is information about 85 Timurid mirzas in total [30: 76-80]. The play also contains 20 chronological information about the birth and death of some of the Timurid mirzas [30:81]. A. The seventh chapter of Navoi's Majlis un-nafois contains information about Amir Timur and 21 other Timurid mirzas [18: 78]. Although research on the dynasties that ruled in the past, including the Timurids, is significant [38], the issue of creating a database of dynasties that can be found in a clearly written source has not been fully resolved. With this in

mind, we consider it expedient to study the genealogical and dynastic data in the written source as a separate category in the ITMWS, and to present the statistical data on this category in the ITMWS.

**X. Titles and Positions:** Written sources contain a lot of information about titles, positions, ranks, status, careers, honorary titles. Al-Kamil fi-t-Tarikh has 39 titles [10: 549-550] and Musahhir al-Bilod has 62 titles [14: 427-428]. . A number of researchers have analyzed data for this category [26]. For example, of the 1,540 people found in the Boburnoma, 357 are listed as historical figures from Movarounnahr and are categorized. Including 5 amirs and nobles; 20 kings and princes; 42 princesses and daughter s of kings; 52 umars, army chiefs and beys; 21 members of religion and mysticism; 30 people of science and literature; The names of 187 different people — soldiers, peasants, artists, craftsmen, slaves, and oilmen — were mentioned [29:103]. Sh. Vohidov and R. Khalikova on the management of the Bukhara state [29: 240-251], Sh. Vohidov and D. Yangibaevs provided information about the secretaries and calligraphers found in Sadri Ziyov's " Fehrist" [28: 53-60]. Sadri Zia noted that of the 450 individuals mentioned in the catalog, 170 were calligraphers [28:59]. E. Sattorova described 22 military and military-administrative titles and positions that existed in Central Asia in the XVI-XIX centuries [31: 377-380]. About some titles and in Sharafuddin Ali Yazdi's "Zafarnoma" [29: 91-93], titles found in "Mu'izz ul-ansob", various attributes and epitaphs related to the title, more than 90 titles in the time of Genghis and Timurids and the names of the deeds are recorded [29: 106-111]. During the analysis of Mu'izz ul-Ansab, we were able to determine that the source contains information about about 280 titles and positions [40: 143-164]. In order to fully determine the functions and hierarchical level of the titles encountered in the source, it is necessary to make a comparative analysis with Rashiduddin's "Jome' ut-tavorix" and Juwayni's "Tarihi jahankushoy" sources.

When we systematically analyze the source of Fasih Khawafi's "Mujmali Fasihi", there are about 150 titles and positions in the text [41: 21-26], Muiniddin Natanzi's "Muntahab ut-tavorihi muiniy" more than 350 [40: 165-197], Zahiriddin Muhammad Babur's "Boburnoma" contains the occurrence of more than 570 [40: 197-252] data in the Boburnoma indicates the source significance of this category.

**XI. Historical documents:** A number of historical documents can be found in the texts of written sources. Documents on the history of Uzbekistan were published by O.D. Chekhovich divided them into 34 types [37: 27-28; 35]. D. Valieva tried to study the diplomatic relations between Bukhara and Tsarist Russia in the first quarter of the 19th century through a comparative analysis of Amir Haydar's letters[21]. J. Juraev analysed , 22 letters to Amir Haydar and Muhammad Hakim [30: 121], P. Gulyamov, thinking about the identification of Amir Temur's letters, divided the essay or munshaat complexes into groups [18: 209-214]. Information about documents can be divided into two types according to the state of occurrence in the text. Types can also be divided into several types depending on the nature of the document:

1) Official documents; 2) Informal documents.

**XII. Creativity:** This category includes information on architecture, irrigation, land reclamation, roads and other creativity.

**XIII. Religious Sphere:** This category includes information on religions, sects, tomb circumambulations, shrines, and more. Al-Kamil fi-t-Tarikh contains information about 19 religions and sects [10: 555-556].

**XIV. Military:** This category includes wars, military campaigns, battles, defensive battles and their organization, military uprisings, military conspiracies, tactics, strategy, army structure, military training, military inspections, types of weapons, use of weapons, etc. data is included.

**XV. International relations and diplomacy.**

**XVI. Culture:** This category includes information on the classification of sciences, literature, science, art, writing, calligraphy, music, fine arts, life and work of people of science and art, cultural figures and others.

**XVII. State and local government.**

**XVIII. Linguistic:** In this category, linguistic information from a written source is collected and analyzed.

**XIX. Economic:** This category collects information on written sources of trade, crafts, agriculture, finance, monetary reform, taxes, property relations, prices, market relations, currencies, and more.

**XX. Sources in the text:** This category is important in studying the nature and source basis of a written source. Al-Mulhaqat bi-s-Surah mentions 101 [9: 158-160], and Tarikh-i Bukhara mentions 12 [5: 595] sources. In Shajarayi Turk, the author mentions 18 sources in Persian and Turkish, although he did not mention their names when he began writing the work [6:11].

**XXI. Rituals, ceremonies and events:**

**XXII. Poetic decoration (stikhodekor):** It is common to find poetic fragments in medieval prose-written sources. In view of this, it would be useful to include information on poetic decoration in a written source as a separate category in the YOMITX. Let's analyze this category on the example of Abulgazi Bahodirkhan's work. His "Shajarayi turk" and "Shajarayi tarokima" sources contain six poems, four of which are written in Uzbek and the other two in Persian-Tajik. The four poems in the Shajarayi Turk also consist of 30 lines, two in Uzbek and the other two in Persian. Abulgazi Bahodirkhan's medical treatise Manofe'-ul-inson also contains 20 lines of poetry written in Persian [33:30]. Munis's Firdavs al-Iqbal also pays great attention to poetic decoration. The author included 683 verses of 2915 verses in the source, while Ogahi included 84 verses of 514 verses. The poetic fragments belong to Mullo Sayyidoyi Bukhari, Nizami, Saadi, Firdavsi, Mirza Nazim Hiravi and six unregistered poets. The play also contains history, masnavi and qasida by Munis and Agahi (16 of the 21 Persian chronograms are Munis's) [27:76]. Sadri Ziyo's Tazkar ul-Ash'ar tazkirah contains 1444 bytes, while the poems of the classified poets contain 2616 bytes [27: 153].

**XXIII. Nature, flora, fauna, climate:** Information in this category occurs at different levels in written sources. "History of Bukhara", "Ajoib al-maqdur", the diary of Rui Gonzalez de Clavijo, "Matlai sa'dayn", "Boburnoma", "Historical Rashidi" and many other sources in Central Asia, Afghanistan, India, Iran, China, There is information about the nature, flora, fauna and climate of such regions as East Turkestan, Mongolia, Azerbaijan. With this in mind, we think it is appropriate to study this data as a separate category in ITWMS as well.



**XXIV. Information written by the author, calligrapher and translator about himself and his relatives:** Identifying the author of the work and his identity is of great importance in the scientific analysis of the manuscript. It is important to correctly determine the general ideological direction of the work in order to determine the identity of the author, that is, to which social group he belongs, as well as his worldview [20: 16-17]. Fasih Ahmad Khawafi's "Mujmali Fasihi" 100-101, 116, 118, 129, 131-132, 171-172, 178, 183, 193-196, 199, 205-206, 208, 216-218, 221-222- and [17] and Abdurazzaq Samarkandi's 39, 42-43, 109, 194, 251, 378 [3], 10-13, 17, 22, 73-75, 91-93, 99-101 of Matlai Sa'dayn. 111-117, 119-132, 136-163, 173-177, 179-180, 192, 194-197, 265-266, 336-337, 341, 366-368, 399, 401, 474-475, 483- On pages 484, 537, 556-557, 673-674 [4] they provided valuable information about themselves and their loved ones.

**XXV. Myths, narrations, proverbs, parables, proverbs and wise sayings:** In addition to historical events, some written sources contain a lot of information in this category. Such written sources include Ibn Arabshah's Ajaib al-Maqdur, Abu al-Ghazi's Shajarayi Turk, and Shajarai Tarakima. On the influence of folklore in the work "Shajarai tarokima" academician A. N. Kononov said: "The work was important not only as a historical source, but also as a literary monument, because it skillfully depicts folk legends, folk etymology, ethnonyms, proverbs and parables" [32:43].

**XXVI. Cartographic data.**

**XXVII. Other information.**

## CONCLUSION

What results and innovations can a systematic analysis of a written source lead to:

- 1) It is possible to determine the level of originality, compilation and falsity of the source by comparative comparison and critical analysis of any written source and the source itself, which has several manuscripts copied at different times, according to the information indicators;
- 2) It will be possible to determine the level of originality of both primary and secondary written sources covering the history of a period by comparative comparison and critical analysis of information indicators;
- 3) Informative classification of primary written sources of different periods of history, comparison and critical analysis of quantitative indicators provide an opportunity to better understand the history of this period from a source and scientific point of view, to understand and shed light on new aspects of causes and effects of historical processes ;
- 4) Systematic analysis of the written source and study through ITMWS increases the ability to systematize and direct research in ancillary areas of history;
- 5) Systematic analysis of the written source and study of it through CDWS such as "Pushkin's Dictionary", "Abay's Dictionary", "Dictionary of Navoi Works" [22], "Temur's Statutes", "Zafarnoma", "Mujmali Fasihiy", and can effectively assist in compiling dictionaries from other sources as well;
- 6) Systematic analysis of the written source and ITWMS provide an opportunity to systematize and direct the completed and planned research in the field of source studies;



7) Systematic analysis of the written source allows to know the level of data in the form of diagrams, tables and graphic elements of SmartArt, and the ITMWS and ITWMS of any written source are developed;

8) Systematic analysis of the written source is useful in determining the level of sourceability of research, popular science and art works that cover the history of this period;

9) In the study and critical analysis of written sources in source studies, a new scientific direction of content emerges - the direction of the information layer (boundary) of sources.

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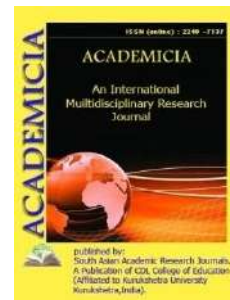
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## EPILEPSY AND EPILEPTIC SYNDROME

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### ABSTRACT

*Current evidence suggests that the number of patients with epilepsy is increasing worldwide. Epilepsy has been known as a disease since ancient times. About the types of disease, clinical signs, symptoms, methods of examination and treatment.*

**KEYWORDS:** *Epilepsy, Lennox-Gasto syndrome, anticonvulsants, absence, tonic-clonic, focal, widespread.*

### INTRODUCTION

Historically, great people such as Socrates, Plato, Julius Caesar, Janna D Arc, Van Gogh, and Dostoevsky have suffered from epilepsy. [9] That's why some experts say that only strong-minded people suffer from epilepsy, while others believe that seizures trigger talent buds in a person. I do not totally agree with them, but I've seen some patients with epilepsy show strong symptoms. [11] Among the patients who came for treatment were powerful artists, poets and mathematicians. Among such patients are many who invent wise sayings that amaze people, and many who end up with quartets rich in wisdom. I have witnessed an increase in intuition and cognition in a sick girl with constant aggression. In most patients with epilepsy, if the seizures are not stopped in time, they can lead to severe mental disorders, leading to mental retardation. The earlier the seizures start, the earlier mental disorders can develop. However, severe mental disorders do not occur in all types of epilepsy. Epilepsy is a chronic disease of the brain characterized by recurrent seizures of various kinds. Epilepsy is common among the population. Out of every 1,000 people, 5-10 can get the disease. 70% of epilepsy develops before the age of 20. The incidence rate is almost the same in women and men. [13]

## RESULTS AND DISCUSSION

Etiology. Epilepsy is a polyetiological disease. A number of negative factors play a significant role in its development, including genetic, brain injuries, congenital anomalies, infections, metabolic disorders, intoxications, neurodegeneration and vasocerebrovascular diseases[1, 320]. It is known from the etiology of the disease that any pathological factors that dramatically alter the bioelectrical activity of the cerebral hemispheres can cause epilepsy. Under the influence of such factors, epileptogenic foci are formed in the cortex. The group of highly excited neurons located in the cortex of the cerebral hemispheres is called the epileptogenic foci. Depending on the etiology, epilepsy is divided into 3 major groups:

1. Idiopathic epilepsy is an epilepsy that develops due to hereditary predisposition. In this epilepsy, there are no structural changes in the brain, and no pathological changes in the neurological status. Idiopathic epilepsy occurs both familiarly and sporadically.
2. Symptomatic epilepsy is an epilepsy that develops due to brain damage (effects). The main causes of the disease are brain injuries, tumors, vascular diseases, degenerative diseases, metabolic and toxic encephalopathies. Symptomatic epilepsy is mainly characterized by focal seizures.
3. Cryptogenic epilepsy - epilepsy of unknown cause. Any epilepsy of unknown cause is classified as a cryptogenic epilepsy. Focal and diffuse epileptic attacks are also distinguished. Epileptogenic foci in the brain; if it stays in one place - focal, neuronal movements spread to other areas and both hemispheres - diffuse epileptic attacks develop. Disseminated epileptic attacks, any attacks that present with loss of consciousness are called diffuse epileptic attacks. These include various absence, diffuse tonic-clonic or separate clonic and tonic, atonic (astatic) and myoclonic attacks. The diagnosis of "disseminated epilepsy" is made only if the patient is unconscious. If the epileptic attacks occupy half of the body but the patient retains consciousness, it is focal epilepsy, not widespread epilepsy. Thus, loss of consciousness is a key criterion for diagnosing generalized epilepsy. The word "disseminated" does not mean that epileptic seizures have spread throughout the body, but that epileptic activity has spread to both hemispheres. Therefore, absence also belong to the group of widespread epilepsy. Disseminated epilepsy accounts for almost 40% of all epilepsies.

Absence [French. abscess - an epileptic seizure characterized by a very short loss of consciousness (2-30 seconds). They are among the most common epileptic attacks. For example, in children with absence epilepsy, there are more than 50 or 100 absence attacks a day. For abscess, peak-wave activity with a frequency of 3 Gs, which is symmetrically reflected in the EEG, is very typical. This type of epilepsy is more common in children and adolescents. No aura is observed in abscesses. Abscesses are divided into simple and complex types. In a normal abscess, the patient freezes to a point. At this point, her pupils dilate, she is not affected by light, and her face turns pale. The patient freezes in the state in which he is doing what he is doing, that is, he stops speaking, writing, writing, drawing, painting, and so on. But it does not lose its balance, it does not fall.

This means that the patient freezes like a statue in the same position as he was during the attack. This lasts for a short time, 5-15 seconds. After the abscess, the patient resumes his work. Normal abscesses pass at the same rate as they appear. The patient does not know what happened to him or learn from others. During normal abscesses, the eyeball may rotate once or twice or the head



may move backwards. After simple abscesses, the patient does not recover, his activity does not slow down, he resumes his activities as a healthy person.

**In complex absences**, loss of consciousness is manifested in combination with various tonic and vegetative components. Complex absences are a bit more complicated than normal absences, loss of consciousness lasts longer (20-30 seconds), and falls are more common. Such attacks, which appear without any aura, cause the patient many injuries. Also, complex absences are manifested by various automatisms, i.e. the patient says something to himself, makes some gestures with his facial muscles, performs various unconditional movements with his limbs. During automatics, the patient loses consciousness, does not know what he is doing, and does not remember.

*Febrile attacks.* Attacks that occur when the body temperature rises are called febrile seizures. Febrile seizures occur in children aged 6 months to 5 years. The most common period of the disease is 1-2 years. Elevated body temperature is often associated with upper respiratory tract infections. Seizures if medications are taken to lower body temperature; attacks will also stop. Febrile seizures are primary-prevalent epileptic seizures characterized by tonic attacks. Febrile attacks are always accompanied by loss of consciousness. However, they are among the mildest epileptic seizures. Because the prognosis in this disease is almost always good. Focal attacks are not unique to him. The earlier the febrile seizures start, the sooner they disappear. The number of febrile seizures decreases as the child gets older. Usually, febrile seizures stop before the child is 6 years old. Sometimes epileptic status develops and the child's life is in danger. There is no consensus that febrile seizures may progress to other epileptic seizures. If a child with febrile seizures has structural changes in the brain and neurological disorders, especially in the offspring with epileptic seizures, if seizures are repeated, other types of epilepsy are more likely to develop later. Such patients are often diagnosed with sclerosis. In them, febrile seizures can progress to Lennox-Gasto syndrome.

*Diagnosis.* Not all doctors experience the first epileptic attacks in a patient. That's why diagnosing epilepsy almost always starts with a thorough medical anamnesis.

A doctor who has not seen the attacks observed in a patient with his own eyes will certainly come to an opinion after a thorough examination of the anamnesis of the disease. Here, the information of the doctor who has treated the patient before and seen the attacks once or twice, especially the neurologist, is very important. Therefore, the chronology of epileptic seizures should be detailed in the medical record or biography. Accurate and detailed information provided by the doctor who treated the patient first is very important for the doctors who will treat the patient later.

Subjective data and anamnesis. When diagnosing epilepsy, the doctor faces the following 2 questions.

1. Has the patient had an epileptic attacks or other condition?
2. What is the type of epileptic attacks and what is the cause?

To clarify these questions, the patient and his relatives are asked a series of questions, and in parallel, a medical history is collected.

Questions for diagnosing epileptic attacks:

- Did the patient lose consciousness?
- Was he wheezing?
- Has he stopped breathing?
- Did he shout during the attack?
- Were aura messengers observed?
- Is there a bloody foam in the mouth?
- Did he lose his eyesight, shake his head, or turn to the back or sides?
- Were there any tremors in the limbs?
- When did the attacks occur: at bedtime, early in the morning, during the day or at night?
- Approximately how long did the attacks last?
- Did the patient fall into a deep sleep when he regained consciousness?
- Has this happened before?

Questions to identify absences:

- Does he stare at a point?
- What is the condition of the eyes during an attack?
- Head, body and limbs?
- How long does the sensitivity last?
- What is the patient's condition after the attack?
- Does he feel aggressive?
- How many times a day (week or month) do the attacks recur?

Here we have raised questions about the most common types of epileptic seizures, including the identification of absences. The length of the answers to these questions will help clarify the question of whether an epileptic seizure has been observed in a patient. After answering these questions, the doctor moves on to the next stage of diagnosis, which is to determine the type and cause of epileptic seizures. This should be based on subjective symptoms, anamnestic data, somatic and neurological status, laboratory tests, EEG, CT and MRI data.

Anamnestic data:

- Do any family members have epilepsy?
- Were there any febrile seizures in early childhood?
- What complications were observed during fasting?
- Have you had any brain diseases (brain injuries, meningitis, encephalitis)?
- Do you currently have tuberculosis sclerosis, brain abnormalities?
- Have you had any brain surgery?

- No endocrine diseases and various metabolic disorders?
- When and after what was the first attack?
- Are you not taking medications that aggravate epileptic seizures?

The physician reviewing the anamnestic data is listed above

ask questions to the patient and his relatives and thoroughly study the information on the medical record. The absence or presence of a history of disease does not rule out a diagnosis of epilepsy. Because if epileptic seizures are observed but the cause is not identified, a cryptogenic epilepsy is diagnosed.

*Electroencephalography.* EEG is of great importance in diagnosing epilepsy. It is important to distinguish between physiological (normal) and pathological waves when performing these tests. Acute waves, spikes, and peak-wave complexes that appear on the EEG are the main epileptic waves. No additional screening methods are important at the EEG level in the diagnosis of epilepsy. EEG can not only differentiate epilepsy from other paroxysmal conditions, but also determine the type, severity, treatment outcome, and prognosis of epileptic seizures. EEG video monitoring data increase the diagnostic value of this method.

**Laboratory tests.** Laboratory tests are mainly used to determine the cause of epilepsy and hematological disorders that occur during treatment with anticonvulsants. Measuring the amount of electrolytes (Na, K, Cl, Ca; Mg) in the blood can be very important in determining the cause of epileptic attacks. Laboratory tests are also performed to determine inflammatory reactions, hormone levels, and sometimes the concentration of anticonvulsants in the blood. General blood tests (especially hemoglobin levels) and biochemical tests (ALT, ACT) are performed to determine the side effects of anticonvulsants. Liver enzymes should be monitored regularly, especially during treatment.

CT and MRI scans. Modern tests are widely used to determine the cause of epileptic seizures. Idiopathic and cryptogenic epilepsy do not cause pathological changes in the brain.[2, 404] In symptomatic epilepsy, CT, MRI, and MRI scans almost always detect pathological changes in the brain and its blood vessels. Of course, epileptic seizures that develop as a result of metabolic disorders are an exception. A PET test is required here.

*Treatment.* Treating a patient with epilepsy is a complex process that requires the following guidelines. The general practitioner is also required to be aware of these rules.

### **12 rules of treatment with anticonvulsants**

1. The patient is monitored after the first epileptic seizure (including EEG monitoring), and anticonvulsants are recommended after the 2nd or 3rd seizures.
2. The patient is selected a single anticonvulsant that is effective for the identified epileptic seizures, and treatment begins with the same drug, that is, the principle of monotherapy is followed.
3. The selected anticonvulsant is initially given in small doses and its dose is gradually increased until the attacks are over, ie until the therapeutic dose is reached.

4. The choice of drug is approached individually, taking into account the circumstances and side effects that prevent its recommendation. Once the attacks have stopped, the increase in the dose of the drug is also stopped, and in this way the therapeutic dose is selected.

5. The patient and his relatives are warned about the continuous use of the drug and its side effects. If you experience any side effects, you should seek medical advice immediately.

6. Clinical and laboratory tests are performed to determine the side effects of the drug. If they are observed or toxic effects begin to occur, the dose of the drug is reduced and replaced with another drug.

7. Even if the dose of the selected drug is increased, if the epileptic seizures do not stop, gradually reduce the dose and switch to another drug in parallel.

8. If monotherapy does not help, switch to polytherapy, 2 anticonvulsants are recommended together. Here, the interactions of the selected drugs are taken into account, i.e., drugs that have the same effect, inactivate each other, or enhance their toxic effects are not prescribed together. In very rare cases, a third anticonvulsant is chosen.

9. In the initial stage of treatment, an EEG is performed every 3 months and epileptic activity is studied. Laboratory tests, including liver function tests, are performed

If focal neurological symptoms occur, CT or MRI may be performed.

10. Treatment with anticonvulsants should be continued for at least 2-3 years and gradually discontinued. Sometimes these medications have to be taken for years.

11. The patient and his relatives are warned that epileptic seizures may recur. The possibility of using surgical methods of treatment is taken into account and the patient's relatives are informed about it.

12. The patient is taught a healthy lifestyle. It is said that a healthy lifestyle is an important factor in preventing recurrence of epileptic seizures and faster recovery of the patient.

**Note.** Table 2.33 shows the different drugs used in epilepsy

Here's a few basic facts about a stomp pad. When choosing these drugs, it is necessary to follow the rules generally accepted by epileptologists. The required anticonvulsant is selected by the neuropathologist, not GPD.

### 2.33-table

Prescription for using anticonvulsants

Name of the drug and its synonyms	Instructions	Daily dose for older people	Average daily dose for children	Impediment conditions (complete and relatively)
Valproats(depakin, konvuleks, orfiril)	All of the epileptic attacks	1200-2400 mg	20-30 mg/kg	Acute and steady hepatitis, diathesis, initial 3 months porphyria

Karbamazepin (finlepsin, tegretol, zeptol)	Focal attacks, Secondary widespread attacks, Other paroxysms	800-1200 mg	10-20 mg/kg	Atrioventricular conditions, old age brocardia, initial 3 months of pregnancy, blood illnesses, porphyria, hypoteries  Clonazepam (rivotril, antelepsi) Focal is helpful for dealing with widespread attacks Epileptic status 2-4 mg 1,5-3 mg pregnancy, lactation, myasthenia, bronchial asthma. It strengthen miorelacsants, analgesics
Lamotrigin (lamictal)	focal initial and secondary attacks Main thing in Lennocs-Gasto Syndrom Additional drug	100-400 mg	5-10 mg/kg	pregnancy lack of liver and lung
Gabapentin (neyrontin)	Focal attacks	1200-2400 mg	20-30 mg/kg	Pregnancy and lactation, The children under the age of 3
Vigabatrin (sabil)	Uest syndrom	1000-3000 mg	50-100 mg/kg	Regnancy and lactation Zonizamid (zonegran)

Carbamazepine (finlepsin, tegretol, carbalex, zeptol) is used not only in focal epileptic seizures of various etiologies, but also in psychomotor disorders, tonic-clonic seizures observed during sleep or after waking up, abstinence syndrome, manic-depressive psychosis, affective disorders.

is used. The dose of the drug is selected individually, depending on the patient's somatic condition, age and course of the disease taken into account (Table 2.34)

#### 2.34-table

#### Prescription for carbamazepine in epilepsy

The age of patient	Daily minimum dose	Daily maximum dose
Children under the age of 1	100 mg once per day	100 mg twice per day
1-5	100 mg twice in a day	200 mg twice in a day
6-10	200 mg twice in a day	200 mg three times per day
11-15	200 mg three times per day	200 mg four times per day

For adults, 200 mg 4 max per day, hand 400 mg 3-4 times per day

**Note:** The daily therapeutic dose of carbamazepine for adults can be increased to 1600 - 2000 mg. At such times, retard types of the drug are selected. The patient sometimes forgets to take the daily dose of anticonvulsants. At such times these drugs are long affected species are selected.

Lamotrigine (lamictal, lamitor) is also an effective anticonvulsant, produced in tablets of 25, 50 and 100 mg. Lamotrigine is an effective tonic for clonic seizures and focal seizures. If treatment with other anticonvulsants does not give the desired result, additional lamotrigine is prescribed or it is recommended separately. This drug is also effective in abscesses and myoclonic seizures. The scheme of recommendation of lamotrigine monotherapy is shown in Table 2.35.

**TABLE 2.35 LAMOTRIGINE FOR CHILDREN AND ADULTS OVER 12 YEARS OF AGE MONOTHERAPY TYPE RECOMMENDATION SCHEME.**

Scheme of raising the dose of lamotrigine				
1-2 week	3-4 week	5 week	6 week	7 week
25 mg once a day	25 mg twice a day	50 mg twice a day	100 mg twice a day	200 mg twice a day

Note: Once the daily dose of the drug reaches the optimal level, it is maintained at the same dose. While the optimal daily dose for some patients is 200 mg, for some patients it may be necessary to increase it to 400 mg.

Valproates. In prevalent epileptic seizures (including tonic-clonic), the first-line recommended medication is valproate. Valproates are very effective in abscesses, myoclonic and atonic attacks. Therefore, they are also recommended for various "mixed" epileptic seizures. Valproate is widely used in epilepsy, behavioral disorders, febrile seizures, simple and complex focal seizures, primary and secondary prevalent epileptic seizures, manifested by psychomotor phenomena. Valproate can be used as an adjunct in the treatment of thrombotic hyperkinesia in children. These drugs are also recommended as adjunctive medications in manic-depressive psychoses. The most commonly used types of valproate are depakin and convulsive.



### Questions that arise during the treatment of the patient and their answers

Question. Why is monotherapy chosen to treat epileptic attacks?

Answer. In most cases, 2 anticonvulsants give the same result as 1 anticonvulsant. The monotherapy method reduces the harmful effects of anticonvulsants on the body, as 2 anticonvulsants can reduce the effect of each other and can eliminate or intensify the effect of intoxication. Psychological reasons, that is, most patients do not like to take a lot of drugs and do not follow the medication regimen. Also, monotherapy is cheaper.

Question. Is it safe to give anticonvulsants in mild forms of epilepsy?

Answer. Yes, it is. Anticonvulsants are not recommended for some types of mild epilepsy, such as rolandic, photosensitive, and reading epilepsy. Pediatric abscess epilepsy also resolves on its own as the child gets older. But the diagnosis must be correct.

Question. What types of epilepsy are severe and can recur after a seizure has stopped?

Answer. Severe forms of epilepsy include West syndrome, Lennox-Gasto syndrome, Kojevnikov epilepsy, Rasmussen syndrome, and the like.

Question. How long should anticonvulsants be given and when should they be stopped?

Answer. There is no consensus on when to stop taking anticonvulsants. In most cases, it is recommended to take the drug for another 2 years after the last epileptic seizure. If the attacks do not recur within 2 years, the medication can be gradually reduced and stopped. In some cases, especially in symptomatic epilepsy, it is necessary to take anticonvulsants for 3-5 years. If the underlying cause of the epileptic seizure is eliminated (e.g., through surgical treatment), there is no need to take anticonvulsants for a long time. Anticonvulsants have been used for many years in Lennox-Gasto syndrome, Kojevnikov epilepsy, and Rasmussen syndrome.

Question. When can epileptic seizures start again after taking anticonvulsants completely?

Answer. Its causes are several: 1) mental and physical retardation 2) persistent focal neurological symptoms 3) long-term epileptic history 4) late start of proper treatment 5) focal epileptic seizures 6) different types of epileptic seizures if the attacks are manifested together 7) if strong changes in the EEG persist 8) other adverse factors (alcoholism, drug addiction).

Surgical treatment methods. Epileptic seizures cannot be completely stopped in almost 20% of patients, even if the anticonvulsants are chosen correctly. In such cases, surgical treatment may be required. Before sending a patient for surgery, of course, there is a consultation with qualified doctors. This is because the therapeutic methods needed for treatment may not be used enough.

**Epileptic status.** Epileptic status is an acute condition characterized by a 30-minute follow-up of epileptic seizures. The main factors contributing to the development of epileptic status:

- Sudden discontinuation of antiepileptic drugs.
- Mistakes made when switching from one drug to another.
- Taking medications that aggravate epileptic seizures.
- Brain injuries, subarachnoid hemorrhage, intracranial tumors and abscesses.
- Acute infections and infectious diseases (URVI, measles, meningitis, encephalitis).[3, 461]

- Acute intoxication (including acute alcohol intoxication).
- Acute metabolic disorders (hyperglycemia, hypoglycemia, hyponatremia, hypocalcemia).
- Acute cerebral hypoxia.

Depending on the type of epileptic seizures, the status of epileptic seizures is as follows

There are 2 types:

- 1) Epileptic - the status of widespread tonic-clonic attacks;
- 2) Without epilepsy - the status of abscesses and complex focal seizures.

Attack epileptic status

Attack epileptic status is an epileptic status characterized by widespread tonic-clonic attacks. It is very difficult and sometimes fatal. Attacks last for 30 minutes or appear intermittently during this time. In the inter-seizure period, the patient does not regain consciousness.

**Epileptic status without attacks.** Epileptic status without epilepsy is an epileptic status characterized by the status of abscesses and complex focal seizures. It's a little lighter. The status of epileptic seizures without seizures, in turn, is divided into 2 types: 1) the status of absence 2) the status of complex focal attacks.

It is known that absence last for 30 seconds. During absence, the patient loses consciousness for a few seconds, but resumes when he regains consciousness. If the abscesses are observed for 20 to 30 minutes in a row, the patient becomes numb, which means that the status of abscesses occurs. During the status of absence often develop sopor and somnolence, rarely coma. Emergency care in epileptic status As mentioned above, epileptic status with tonic-clonic seizures requires immediate medical attention. Emergency medical procedures

1. First of all, it is necessary to take the patient to a safe place, open his collar and provide him with fresh air. It is important to avoid harsh objects that can cause injury. Hands and feet that are shaking cannot be touched. At this point, the patient's arm or leg may hit the doctor hard, and both may be injured.
2. If the patient's head is turned in any direction and attacks are observed, the doctor should take it between the palms of the hands and gently hold it in this position. If the doctor does this correctly, the head will be turned back, the tongue will be stuck in the throat, the saliva will go into the airways, and the head will be injured by hitting the ground. Put something soft under your head. However, the use of force in these acts is strictly prohibited.
3. The patient is taken by ambulance to the nearest hospital and admitted to the intensive care unit. If the ambulance is equipped with the necessary medical equipment, all necessary resuscitation procedures will be performed on the road.
4. During attacks, foamy saliva often comes out of the patient's mouth. This saliva can pass into the patient's airways when he takes a deep breath. It's too dangerous! Therefore, the saliva should be wiped with a clean cloth or gauze. If possible, an airway should be provided. Because laryngospasm is also observed during the attack.
5. Do not put a spoon or other hard object in the patient's mouth. It's too dangerous and useless.

6. 2 ml (10 mg) of diazepam in saline of sodium chloride is administered intravenously. Diazepam can also be administered in 20 ml of 40% glucose.

The rate of administration to children and adults should not exceed 2-5mg per minute. Otherwise, the heartbeat or breathing will stop or your blood pressure will drop. In children, diazepam is administered in an amount of 0.25 mg per 1 kg of body weight. If the child weighs 20 kg, he is given 5 mg of diazepam. If the attacks do not stop within 10 to 15 minutes, diazepam is given intravenously in the same amount.

7. If the attacks reappear after the cessation of action of the administered drugs, add 50 mg (10 ml) of diazepam to 250-500 ml of saline or sodium chloride saline and infuse intravenously for several hours.

8. Sometimes the use of drugs is required if the attacks do not stop. Sodium or thiopental sodium is often used for this purpose. 10 ml of 20% sodium solution is injected very slowly, within 10 minutes. Sometimes it is enough to give 5 ml of this drug. Instead of sodium, 10 ml of a 1% solution of thiopental sodium can be slowly administered intravenously. The drug is then infused intravenously in an amount of 50-70 ml. Drugs often cause a drop in blood pressure, heart and respiratory failure. Therefore, monitoring of the patient's blood pressure, heart and respiratory function should be provided.

9. All necessary laboratory tests are performed at the beginning of these treatments. To do this, the amount of glucose and electrolytes (sodium, potassium, chlorine, calcium) in the blood and urine, the acid-base status of the blood is checked.

10. If a patient falls into a deep epileptic coma, general treatments are continued until he or she emerges from the coma. To do this, the patient is given diuretics, dexamethasone, antipyretic drugs, antibiotics. Prolonged epileptic status often results in metabolic acidosis. To eliminate it, sodium bicarbonate or other similar drugs are injected intravenously.

11. A patient with epileptic status or coma is transferred from the intensive care unit to the neurology department and treatment is continued there. If the epileptic status is resolved quickly and without complications, the patient can be sent home in 1-2 days. She is being monitored by a general practitioner.

Epileptologists admit that in epilepsy, attacks are more common in patients who lead a passive life. It is less common in patients with active mental and physical activity. Therefore, restricting patients, especially children and adolescents, from physical activity and schooling and discussing their illness in front of them as a family can lead to severe mental trauma. Such children develop melancholy behaviors and grow up mentally handicapped. But keep in mind that excessive mental and physical stress can increase the number of attacks. Severe stress is more likely to trigger attacks. The patient should not be allowed to work in life-threatening occupations, such as driving, firefighting, police, guarding, or rescue. It is also prohibited to work in areas where chemicals are present or in high-rise buildings, or in factories where there is a high risk of injury. Working at night is not possible at all. This is because sleep deprivation at night can lead to recurrence or increase in attacks.

Housework and other activities. When taking a shower, the patient should not close the door from the inside, should not take hot or very cold showers, should not go to the sauna, and should not stay in the bath for a long time. Bake in the oven, cook in large pots, and always be careful

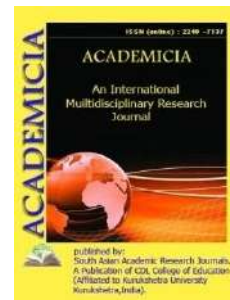
not to work with sharp objects. Physiotherapeutic treatments are also not possible. One or two full-time employees should be aware of the disease. You should also not go on long trips alone and stay alone in hotels. Relatives of the patient need to know how to provide emergency care during an epileptic attack. At the same time, the home should have the necessary medications for emergency care. For example, magnesium sulfate and others

### CONCLUSION

In short, the disease is quite common in the world and in Uzbekistan.[14] Patients with this disease experience not only negative but also positive changes. On the plus side, some of them develop strong thinking that is not found in other people. Epilepsy is divided into several types, each of which has its own clinical picture. When it comes to treatment, some of these are self-limiting and some are symptomatic.

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## THE PHENOMENON OF INTER GENRES DIFFUSION IN THE UZBEK DRAMA OF INDEPENDENCE PERIOD

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### ABSTRACT

*In this article the turning over the phenomenon of inter genres diffusion of the Uzbek drama of independence period as one of the main principle of the development of dramatic genres, that is, lyric emotion and elation like adjacent literary characters as if lyricism and epos, through the saturation of features of the state and actions moderate the tradition of expressing new inner abilities by U. Khamdam in the story of "The Equilibrium" and the scenario interpretation of this verse are investigated.*

**KEYWORDS:** Diffusion, Drama, Melodrama, Tragedy, Comedy, Novel, Lyricism, Tragedy, Humor, Conflict, Culmination, Comment, Replica, Monologue, Dialogue.

### INTRODUCTION

The phenomenon of inter genres diffusion has become one of the main principles of the genres development in Uzbek literature in the period of independence. Particularly, the various genre pictures of dramatic type which adjacent to lyrical types (lyrics, epos) like lyric emotion and elation shows the new inner abilities through the saturation of the moderate of actions and state features. Virtually, drama is the synthetic type of artistic literature, since olden times the elements which is specified to lyrics, for example it used effectively from lyrics. Taking consideration the academician I.Sulton: «Lyricism (subjective basis) is primarily visible in drama, in the attitude of plays and events which is being reflected in the ideal base of composition in its principle.....In the drama, that is, lyricism is shown in typical forms in the literary type of work which is author's deprivation in participating in the incidences» - said that. [5, 189]

Describing the genres of the dramatic turn of the 20th century up to the 1980s, V.Frolov recorded the tragedy, comedy, drama, melodrama as the main genres of the drama "The fate of the genres of drama" ("The fortune of drama").

He considered below as the inner forms of melodrama:

1) Detective melodrama; 2) domestic melodrama - "internal monologue"; 3) melodrama - tragedy; 4) melodrama - comedy; 5) melodrama - vaudeville; 6) heroic character melodrama. It is understood that V.Frolov sought to embody the genre and forms of the literary genre combined with theatrical art. Interestingly, he thinks that the epos - "the storytelling participant" - has a form of a play. It notes the lyrical forms of the lyric drama, lyric-comedy, lyric-monologue, and theories that have been added to the theater. He emphasizes the existence of a number of genres related to the film, pantomime, cinema, radio and tele-theatre. [7, 407-410].

## THE MAIN PART

When we look at the historical experiences of our literature, we are able to witness of some writers wrote in this or that theme and any play in a specific genre firstly, and then, in the essence of this living work they create another subject of the second genre. In particular, it is remembered that Oybek wrote scientific poetical articles, poems and poems about the great poet and thinker, later created an epic poem by this name, till his novel about "Navoi" is written. The same creative experience is evident in his novels writing, such as "The serendipity blood", "The golden valleys breezes" and "The sun never darken". In this case, we are referring to the novel "The serendipity blood", which was later created by the same name. The creating of "Zaynab and Omon" which is based on epic poem "Zaynab" by Kh.Olimjon, U.Umarbekov's works "When the Earth in hot", "The debt in the Doomsday" and dramas "Fatima and Zuhra" are the great examples for that. This creative tradition has been continuing after the independence of our country. Based on the comparative interpretation of the scene by the name of U.Khamdam's novel "The Equilibrium" serves as a basis for investigating how the tragedy of person is reflected in the drama. Three literary-vital factors played an important role in the transition of author from novel to drama. Firstly, it is evident that the playwright broadens the progress of events while the novel is being written, and intensifies more its content and idea. The second factor, is the creation of a prototype of a drama, a master character who controls it. The third factor, is that the boundary between the novel and the drama is determined by the clarifying of the difference. As the writer points out, the process happened "deviate" easily from novel to drama. It is also important that U.Khamdam is well aware of his life and deeply mastered the idea of the work, his artistic fantasy, his poetic skill, and that these factors are directed to a specific goal. In fact, novel as a complex creative process itself is suitable fully to the requiring of epic genre, its scene imagination was also re-formed at the level of a mature performance.

The difference between a novel and dramatic genres is more complex than the differences of genres in the same type. This is not noticed for a reader. In the novel, events and characters are described in epic scales [4,56]. As if, the epic image and epic exposition are dominant in a novel [2, 207-234], but the drama is characterized by exceptional vibrant behavior and content [3, 134]. In contrast to the novel "The Equilibrium" and the play of the same name, we conclude that both the novel and the drama have their own appearance, shape, meaning, and meaning as an independent work. The scenario of the work is more effective, more active and more fruitful for



audience. However, what aspects of the novel served as a basis for drama? There is a need for a separate consideration.

The novel "The Equilibrium" was created in the years of independence and warmly welcomed by the scientific and literary community. Two of the philosophical problems mentioned in the novel can be distinguished. Human beings can live in a certain balance throughout life, or they can balance the world, their dreams, emotions, desires and goals. Both situations are interpreted as human tragedies. These tragedies are being investigated on the basis of heroes' personality and contradictions in their lives. Literary scholar I. Yakubov analyzes novel: "Man, must understand, discover, understand himself firstly. Only then he will be able to perceive the universe and his Creator, and realize his time. The artistic expression of this truth is reflected in the novel "The Equilibrium" [2, 236].

The tragic fortunes of the roles of Yusuf, Said, Miraziz, Zahra, Amir, and even the external and internal speeches influence the reader's spiritual world. The manner style of each hero is described by their characteristic logic, psychological state, and outlook. Creator invented the unique ways in which life can be summarized through spiritual states. The novel was staged in 2011 at the AbrorHidoyatov Theater and was welcomed warmly by the audience. The novel "The Equilibrium" and its dramatic interpretation are also seen in the years of independence, as well as the successful solution of the events in them. By comparing novels and dramas, it is evident that the writer made dramatic changes in the text of the work, first of all taking into account the dramatic students. The drama consists of six curtains and each curtain has several views. The first curtain is a view that begins with the scene of Yusuf's work in the garden. "Independence - it's not a red label, a stingy slogan that some people are looking at in a mockery and trying to do the same! It is the largest and the most incomparable socio-political, moral and spiritual degree of our nation which was achieved in the past hundred years! [9, 2]. The writer uses the retrospective plot to start with the monologue of the teacher Yusuf the story of eternity and the essentials to achieve it. The story begins with the story of Yusuf's childhood and his conversation with his father. In the second part of the drama, Yusuf returns to his childhood and talks to balance with his father.

*"Father:- Do not worry so much, son, it's dawn, and you still get snow too. Well, come down and do not fall and cripple".*

The boy replied: *"Tell your Grand Mountain, father, keep up the sun and put the sun on! At least we would have been playing with Sodiq already in the street".*

Father (with a smile) –*"What do you say, son, the mountain did not keep the sun. The sun rises far beyond the mountain. No mountain or anything else, no one can interrupt him. When it's time, it looks like it", explained Father.*

The boy replied: *"If not, tell God to let the sun go down!"*

Father: *My son, God does not ask me. He is the king for himself. He knows his job well. It keeps the world in perfect order. It does not tune up the mood.*

The boy: - *What is an order?*

Father: *He is a pillar which keeps our life. If not, balance on the earth will break. When the balance strikes, mankind's worries come.*

The boy: - *What's the equilibrium?*

Father: *Well, son, you've asked a hard question ... (think) I think it's the beginning of all good things. There is alife, a good life if there will be balance... Well, you know yourself, when you get older, my colt".[9, 3]*

In the above-mentioned dialogue, there is a deep symbolic meaning in pointing to the Greatmountain. Because, the aspiration to the Great mountain from his childhood is a symbolic expression of a person's thirst for greatness. This is the eternal way of fate. Human beings are frustrated that the destiny allows them to "choose". Yusuf has repeatedly denied such a choice - from the beginning of the two routes. In fact, human life spans many test points. Hence, the aspirations of the above dialogue are a reference to the essence of philosophy of life - the starting point for maintaining balance and losing it.

On the second screen of the scene, Halima aya, Yusuf, Amir and Gulshoda talk about the influence of religion on faith, belief, piety, world and society. Yusuf and Amir have different views on religion and belief.

Amir said: *"I heard you do not read the namaz. Is that true?"*

Yusuf: *"What is primary in the Muslim world, brother?"* (Yusuf answered the question with a question)

The Amir: - *"Belief". "Why is your first question not about the belief?"* He asked.

Amir: *"Because a person who is a believer will perform namaz".*

Yusuf said: *"But it does not mean that all those who read the namaz are believers. However, there is no any rule (hukm\*) in Islam that all who do not pray does not have belief".*

The Amir said, *"This is not the basis for you not to pray"*

Yusuf said: *"Ohhh, if I look around, I will always be in Allah's permission and worship Him, no matter where I am and what I am doing. But it is not the main thing ... there is a basis for any religion to be good, to do good, and to permit to others what permit to yourself".[9, 8],*

In the above dialogue, the inefficacious was clearly evident in Amir's views. The tragedy of Amir is the act of a fanatic person who does not know the meaning of the Islamic faith. The sad fate of Amir is, actually, the fate of someone who is on the way without sacred and beliefs. In fact, he is a well-educated, well-poet, a person who has been completely neglected of worldly affairs and concerns, and only follows the path of piety, worship, and gratitude to all; but also forcing others to follow that path, even breaking the grace of his uncle, his siblings, and his relatives.

In the novel, Yusuf's father is in the lead, drama events begin after his death. Therefore, the head of the family, as the adviser of his children, the role of Mother is put on the foreground. In the novel, the reason of Yusuf's coming to the village is suffering from financially was explained by asking the money for paying his rent payment, but in the drama these details were revealed through the speech of the heroes.

The most effective point in dramas is the story of Yusuf and Sodiq. Because, the culmination point of the play is the scene of the death of Yusuf's child, Yusuf repeatedly reminisces his conversation with this friend about the motherland, country, and freedom. It can be said that the

vital dialogue between the two friends in this scene will serve to explain the tragedy of Yusuf's family, later it serves to explain the cause of his child's death.

"- Sodiq: *Yusuf, do you really mean that our life is better or worse than in the before? ... do not you treat old times? Do you ever think it's back? Just tell the truth ... I see you, my friend, please tell me the truth. This is a matter of life and death for me.*

Yusuf: (after long-lasting silent, at once) *No. No! Thousand times no, Sodiq, you understand?!! If it is not true that we cannot afford to eat it, even if I can not afford to buy a single drug for my son, it will be a death penalty, even though my house is burned!* [9, 10],

In the next parts of the play, the story of Oygul and Yusuf's return from the village to the city, the expulsion from the house of tenants, and the request of Oygul for divorce with this words "If you are a man!". His talk with Zakhro in the home of Mirazim, especially, Zakhro's words, encourages him to think about his own life:

"Zahro: ... *Brother Yusuf, you know, I'm like a patient who is slowly dying. The illness that destroys my life is neither cancer nor any other disorder, but the idleness.*

Yusuf: (to himself) – Repentance (Tavba\*), I realize that if I am no longer trying to solve my financial problems, my family and myself will be destroyed. In this case, the unhealthy spiritual needs of the poor ended Zakhro. So, the human being is the one who needs it. So, human beings have to display their spirituality in a material way and to condemn and retain their material world through spirituality ... The bright example of this is, here is me, is Zakhro, is my brother ... "[9, 15]

From this reflection and discussion, it is possible to find out that the problem with which Zakhro and Yusuf were being tortured. The heroines are inspired by the inner dissatisfaction of their spiritual and psychological world, and suffer. The fact that, life is not merely a substance is that it resembles an empty cell, even if the person is rich, and if he is spiritually deficient, lives in a cellar. At the same time, dramatist has to maintain balance between materialism and spirituality, but warns that individual, society and the world are inevitable.

After that, Yusuf and Said were given a dialogue. Said's always saying "we", the use of the word "we" over any situation and state surprises Yusuf with introspection:

Yusuf: (in inner) "- *We mean, who? Functionaries? Do others are in it? If I agree with Said's suggestion, then I will be part of "We". Then I'm just saying that Said is not saying "I" and "We". After all, Said was the one who used to say "I" and to speak "I". Now, just say "We". Or is it the case of the majority? Even so, where did the "I" of Said go to where did I go? All his sayings have been mastered now! Where is Said's, where did disappear his identity, his views? ...* [9,17],

The above-mentioned discussions encourage the audience to think and reason. The fact, that if every human being has his "I" calls for understanding that it prevents him different futility. According to the philosophy of the Giloniy, the human body consists of four elements: water, soil, fire, air. [8, 96], Philosopher Francis Bacon "In fact, the desires of a person hiding or overturned will never disappear, but when it comes to a favorable situation. They sometimes fall asleep, but never have to believe it. Even if they are embodied, and if there is a good opportunity, they will certainly rise again." [6,206]. So, the forces that fall asleep in the human body are not evil. If he maintains control of his inner balance, the sleeping emotions will not wake up. On the

contrary, seeds of "evil" in his heart can have a great impact on humanity. In the drama, this philosophical idea is absorbed in the conversation between Yusuf and ErgashBey.

After the meeting with Ergash, Yusuf's mental state changed dramatically. Doubt about the next day, and when he looks into his mind, Yusuf is afraid. Of course, this fear is not only about Yusuf, but also about the audience. The social changes in society 's life, the processes of the consciousness of the people - their outlook are essentially dramatic. The peculiarity of this dramatization is that it can be seen as imaginative performances and concepts, that represent artistic-philosophical tensions in reality. The reaction to the forces, mobilized to change the order in which life is so alive stems from the essence of that drama. It is true that Ergash aka can not find his way in the "transition period", but describes a spiritually "fractured" traumatic tragedy.

Brother Ergash: *"I was not like that in the past. I taught physics and mathematics at one of the universities, and I was the author of two or three discoveries and articles published in science. My family lives in peace, my wife works as a nanny in the nursery school, and both of us find it easy to earn a living. Then suddenly I started to pay wages on time, and then the value of the money went down to nothing". Wife says, "If you look around like other men? Do you think of the other thing that comes with the money?" I say: - "What can I do? Be patient, they will all fall into the trap". My wife did what I did not do - she left school and went out to the market ... She was carrying a small bag of sackcloth for market to market. It was a bit worse than that ... I quit my job while reducing the staff, and I lost everything. I woke up at home without knowing what to do ... I applied to the court and divorced my wife and started living in a two bedroom apartment which I bought it for my son. I've been completely alone since then. I've been in trouble since then. I have been drinking since then. Since then, I've been choking and drunken. Even at the right time, I did not hesitate to ask five-ten hundred sums\* for acquaintance. My pride is still in my mind - I do not even think!*

Yusuf: - *"Oh my God, how dreadful is my fate! So, what do you have to do to keep in the street? ... [9, 18]*

The influence of the verb imposes on Yusuf's yet unspoken internal pride. Because, the suffering of a man takes place in the form of a weakening of the internal immunity and constitutes the gloomy nature of the existence. Therefore dramatics determines the flow of the story, the pace of the heroic behavior. In the above passage, which is related to the mental condition of the participants of the work, the reality and sincerity in the picture of the situation provided the vitality of the scene. In the novel, the author may give a psychological picture to the reader through the story, and may expose the hero to the reader by describing the spiritual world. In drama, the author's capacity is limited because, drama is a state of tension, spiritual emotions, and it is important to show action rather than a statement. Effective and reliable lighting on the sensitive aspects of human thinking requires a great deal of work from the dramatist. The stage is often built on the basis of the characters' spiritual emotions. The sharpest struggles in the spirit of the drama heroes are reflected in the emotional collision.

In artistic prose, the role and significance of psychological images in artistic works are unique. It has been emphasized that in the prose, the mood of the heroes is expressed in many places by the author's statement. In the drama, the same task is entrusted to the participants. The author's description of the author is also a function of interpretation. However, the psychological state of the heroes should appear in the eyes of the audience. It is this feature that distinguished him from

the prose. When giving the hero's spiritual experience, the playwright needs to take into account the possibilities of the scene and create a psychological situation. It is necessary to persuade the audience to be able to do so. In prose, an epic commentary can lead the reader into the world of psychological experiences, and then analyze the current situation.

The culmination point of the epicsis given in the fourth scene of the play, the 54th chapter of the novel. This is the scene of Muhammadjon's tragic death, due to doctors' indifference and apathy to human fate. After his son's death, Yusuf again recalls his talk with Sodiq:

*"Is it possible that the God who stuck my words to myself which I had said in a pain?"* Then I said to my friend Sodiq: *"If I agree with any shortcomings and losses of my hand, not only will it hurt my country's freedom"*. Is that what they say is that *"Angels are amenable to bad talk"*? "[9, 23]

Comparative comparison of the novel and instinct of "The Equilibrium" shows that, even though, Yusuf does not go astray, goes into different streets, and never runs through any kind of inaccuracies, he remains true to the essence of his heart and his sense of justice, the nation will not stop thinking about the pain of the country. At the end of the drama, when Yusuf returned to work, the author proposed a serious, social-philosophical idea of life. The intelligentsia, which prevents the imbalance of the universe and is able to hold the glory in the world, is embodied in the image of Yusuf. In fact, everyone needs a balanced and apparent balance. The balance of the universe will never disappear unless there are awake, conscientious men of faith like Yusuf.

The writer and the director are convinced that creative cooperation, the skill of actors, makeup men and artists has moved to the heroic background of the external reality and determines the motility of the inner movement. The totalitarian regime in the pre-emptive tide and the difficult life cycle of the transition period are mastered. The interior of the zombies has been thoroughly investigated through the spiritual world, and the vast potential of symbolic images has been used extensively. In particular, the names of places (Ulugtog), the names chosen are deeply figurative in the internal and external conflicts of heroes (Yusuf, Amir, Halima aya). Most importantly, this work was not only in the novel, but also in the form of drama, as well as the attention of the reader and the audience, because it is the essence of the universe's equilibrium, its greatness, and the greatness of its people.

## CONCLUSION

While the majority of the modernity of the Independence has a positive ideals of ideals, it is often the case that there is a lack of ability to express reality in the context of strong dramatic conflicts and colloquia - contradictory relationships - a series of struggles, high artistic solutions. The common mistakes, which are often characterized by a wide range of modern contexts, such as a hype, a narrow outlook, a dry characteristic, a more intricate perception of social life issues, have prompted many theater groups to address the artistic examples of our national literature in prose and gesture. As a result, the episodes "My memory brokens" (Zulfiya), "Ghosts rebellion" (The stories of E.Vakhidov); "Oleasteries" (E.A'zam), "The woman", "Think" (Zulfiya Kurolboykizi), "Puankare" (A.Yoldosh); "Walking people in the Moonlight", "The hours snorting night" (T.Murod); the scenes was created based on the novel "The Equilibrium" (U.Hamdani).

The above-mentioned works are important not only for the relevance of the themes, but also to the satisfaction of the spiritual and educational needs of our contemporaries in drama in terms of

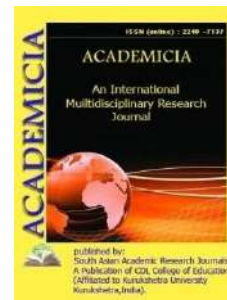


dozens of characteristics, such as the heroes' vitality, the truthfulness of events, the scale of their thought, the highness of poetic expression, the breadth of coverage. Of course, each of them can be separately analyzed and studied. We believe that in the near future such kind of research will also occur.

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## **MORPHOFUNCTIONAL CHARACTERISTICS OF CHANGES IN THE MUCOUS MEMBRANES OF THE TRACHEA AND BRONCHI AND INTERNAL ORGANS WHEN EXPOSED TO INSECTICIDES AND MIXTURES OF PESTICIDES**

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### **ABSTRACT**

*The scientific and experimental work is devoted to the study of the toxic effects of pesticides, insecticides and pesticides on the morpho-functional state of internal organs in the experiment. Under experimental conditions, morphological studies were conducted under special conditions for the use of pesticides. The results of microscopic studies at different times of the oral and aerosol effects of pesticides on internal organs are presented. The authors came to the appropriate conclusions based on the analysis of the data obtained. Recommendations on the selection and use of pesticides for processing in vegetable production are given.*

**KEYWORDS:** *Regional Features, Liver Morphology, Brain Morphology, Lung Morphology, Pesticide, Insecticide, Pesticide.*

## INTRODUCTION

It is well known that almost all pesticides have hepatotoxic effects even in small doses, which makes the problem of protecting the liver from the toxic effects of pesticides one of the urgent regional medical and social problems in Central Asia.

Recently, in most leading countries of the world and in international organizations, more and more attention has been paid to the prevention of harm to human health and the environment by air pollution, based on health risk analysis, harmonization of atmospheric pollution standards.

According to numerous literatures published in recent years, allergic and pathomorphological changes are detected by morphological and functional indicators of the mucous membrane of the respiratory tract, based on the results of a study of the effects of the daily dust factor in conditions under Aralia (2).

## THE MAIN FINDINGS AND RESULTS

It should be noted that as a result of reforms in the agricultural sector of the Republic of Uzbekistan in recent years, gardening has been developing and fruit and vegetable production is growing. This is achieved through the use of modern technologies used by our gardeners and farmers in the production of competitive quality products, along with the use of chemicals and pesticides. Nevertheless, along with our achievements in this area, there are some disadvantages: namely, adverse consequences due to non-compliance with hygiene standards and carelessness when using a variety of imported pesticides in horticultural processing.

Therefore, the importance of the timely application of pathogenetic preventive measures, as well as the prevention of complications of various diseases of the respiratory system by studying the morphofunctional changes resulting from the effects of these pesticides on the body, especially the respiratory system, is of great practical importance.

**Goal and Tasks.** To study the morphological and functional changes in the mucous membrane of the trachea and bronchi under aerosol exposure to insecticides, as well as the morphological changes that occur under the influence of a mixture of methylmercaptophos and DDT in organs in experimental animals.

1. To study the morphostructures of the mucous membrane of the trachea and bronchi in intact animals.
2. To study the effect on the morphostructures of the mucous membrane of the trachea and bronchi in dynamics during aerosol exposure to insecticides.
3. To determine the degree of response of the histo-structures of the mucous membrane of the trachea and bronchi with aerosol exposure to insecticides.
4. Microscopic examination of internal organs after the introduction of mercaptophos and DDT.

## Material and Research Methods

The studies were carried out in accordance with the European Convention for the Protection of Vertebrate Animals used for experiments or other scientific purposes (Strasbourg, March 18, 1986) ETS N 123. Experimental studies of aerosol exposure were carried out on 54 male rats weighing 180-220 grams. The effect of mercaptophos and DDT upon oral administration was

studied in organs in white rats, divided into 3 groups in series after oral administration of toxic chemicals for 4 months. For aerosol use of pesticides studied in the following conditions:

1. The object of the experiment was 10 intact rats that were in the field without the use of pesticides and 44 experimental animals that were during the application of aerosol treatment in vegetable growing and gardening.
2. In intact and experimental animals, the mucous membranes of the trachea and bronchi were studied by the general histological and histochemical method. The method of choice was hemotoxylin - eosin and a CHIC reaction.

### ***Research results***

The results of our experimental studies of 10 control rats showed that the mucous and submucous membranes of the trachea and bronchi were lined with a multi-row epithelium with a thin basal plate. In its own plate of the mucous membrane and in the submucosal basis, loose fibrous connective tissue with single diffusely scattered lymphocytes and histiocytes was detected. The glands of the mucous membranes of the trachea and bronchi were located between the plates of hyaline cartilage; they were single in the preparations. Excretory ducts of the mucous glands were lined with single-row cubic epithelium, around them focal accumulations of lymphoid elements were revealed.

In control rats, the respiratory section of the bronchi was uniformly airy, the alveoli were thin between the alveolar septa. The epithelium of the main and lobar bronchi is single-row cubic. Around individual pulmonary veins revealed small accumulations (1-2 rows) of lymphoid elements. In the walls of the bronchi of 2-3 orders of division and in respiratory bronchioles, single focal lymphoid accumulations and diffusely dispersed lymphoid elements were detected. The results of morphological studies showed that the mucous membrane of the trachea and bronchi in rats after acute exposure to aerosol insecticides, single-row epithelium is edematous and infiltrated.

In 23 experimental rats, focal epithelial metaplasia was detected. The basal plate is thickened. Foci of fibrosis spreading to the submucosa were observed in the own plate of the mucous membrane, focal lymphoid accumulations and a moderate amount of diffusely dispersed lymphocytes and histiocytes were detected. In the respiratory bronchi of the mucous membranes in some places, pathological changes are mild. In the mucous membranes and the basement membrane of the main and lobar bronchi, focal lymphoid accumulations and a moderate amount of diffusely scattered lymphocytes and histiocytes are noted. In the respiratory department, the alveolar passages are not uniformly airy, their walls are thin. Perivascular around the branches of the pulmonary veins and pulmonary arteries in their adventitious layer, focal accumulations of lymphocytes are detected.

When studying the results of a microscopic examination of the internal organs after administration of a mixture of methyl mercaptophos and DDT in rats of the 1st group (10 mg / kg methyl mercaptophos and 10 mg / kg of DDT) were accompanied by more pronounced circulatory-dystrophic and alterative changes in the internal organs than in rats 2nd group (3 mg / kg methyl mercaptophos and 10 mg / kg DDT). In animals of the first group, a sharp blood supply to the vessels was observed in the brain. Edema of the soft membranes was noted.

Perivascular edema and pericellular edema. Cytoplasm swelling, necrobiosis and necrosis of many ganglion cells. In the lungs, a thickening of the alveolar septa due to their filtration by round cells and histiocytes. Identified signs of productive vasculitis in places with partial obliteration of the lumen of the vessel. Pulmonary edema. Focal atelectases, chronic catarrhal-desquamative bronchitis. In the heart - a sharp blood vessels. Swelling and focal vacuolization of muscle fibers. Swelling of the interstitial tissue.

Hemorrhages are visible in the liver against the background of blood filling in the peripheral sections of the hepatic lobules. Around the hemorrhages, round-cell infiltration with single leukocytes is noted. The central veins are dilated, their endothelium is swollen. Around the central veins, in the thickness of the lobules, as well as in the interlobular connective tissue, focal lymphoid-histiocytic infiltrates are observed. The vessels between the lobular connective tissue are sharply expanded overflowing with blood, with a swollen wall, due to plasma soaking. A sharp expansion of the lymphatic vessels, overflowing with lymph in the form of a uniform pink color of the mass, is noted. The bile ducts are dilated: their epithelium in the form of papillary growths protrudes into the lumen. The nuclei are arranged in several rows of oval and elongated shapes.

In the third group (animals exposed to high temperature), moderate vascular congestion, perivascular and pericellular edema, and a slight swelling of the cytoplasm of ganglion cells were observed in the brain.

In the heart - uneven plethora of blood vessels, granular dystrophy of muscle fibers. Lungs - moderate plethora, desquamative catarrh of the bronchi. Productive vasculitis sometimes with complete obliteration of their lumen.

Around the vessels, as well as in the connective tissue of the alveolar septa, small focal lymphoid-histiocytic infiltrates are found. In one case, chronic bronchitis.

In the liver - moderate plethora of blood vessels, granular dystrophy of the cytoplasm of hepatocytes. In the thickness of the lobules, necrobiosis and necrosis of the liver cells. Small lymphoid-histiocytic infiltrates in the interlobular connective tissue, often with cystic expansion of the bile ducts. In some animals, lymphoid-histiocytic infiltrates were noted in the thickness of the hepatic lobules around the central veins.

In the fourth series of experiments (inhalation inoculation in the chamber), it was revealed that in the brain there was a sharp blood vessels filling, perivascular and pericellular edema, swelling - granular degeneration of ganglion cells leading to necrosis. In the lungs, the largest foci of catarrhal desquamative pneumonia are often found. In the heart - granular dystrophy, focal fragmentation of individual muscle fibers, in places micro necrosis. Liver tissue is moderately full-blooded. The interlobular connective tissue is infiltrated with a small number of round cells and histiocytes. The formation of false bile ducts is noted, in places they are with cystic dilated lumens. A sharp swelling of the hepatocyte cytoplasm-granular dystrophy with necrobiosis and necrosis of certain groups of liver cells is noted in the thickness of the lobules. In some lobules, parenchyma necrosis is observed in the center of the lobules. Around the foci of hepatocyte necrosis are large with a light cytoplasm.

Thus, the results showed that changes in the mucous membrane of the trachea and bronchi occur in three stages. So, in the first stage of 3-5 days of the experiment, it manifests itself in the form

of allergic changes when an insecticide affects the mucous membrane of the trachea and bronchi. In the second stage, local histostructural changes appear on the 7-10th day of the experiment and are focal in nature. In the third stage, cumulative insecticides, on the 15-30th day of the experiment, settled on the mucous membranes, cause deep morphological changes in the mucous membranes, blood vessels, mucous glands of the basement membrane.

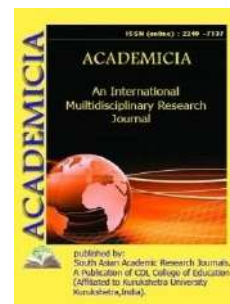
## CONCLUSION

With oral poisoning with a mixture of methyl mercaptophos and DDT, the severity of dystrophic processes in organs depends on the dose; high temperature enhances the toxic effect and contributes to more severe changes in the body, especially in the liver. A four-month inhalation of a mixture of pesticides causes changes in the lungs in the form of serous-catarrhal pneumonia and an alternative dystrophic nature of the change in the brain and liver.

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## GENDER POLICY OF UZBEKISTAN: YESTERDAY AND TODAY

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### ABSTRACT

*The article considers the formation and development of gender policy in different periods. He gives examples of reforms carried out in society to establish gender equality. It studies the reflection of international standards in the legislation of the Republic of Uzbekistan in relation to gender policy. The legislative foundations providing gender equality in different spheres of social activity are investigated. Legal protections in promoting gender equality are being studied.*

**KEYWORDS:** *International Experience, Gender Equality, Code, Constitution, Law, Law, Action Strategy, Woman, Convention Of Rights.*

### INTRODUCTION

All over the world, gender policy is closely interconnected with the concepts of democratic values, open civil society and the rule of law. Real democracy cannot exist without the equal participation of all citizens of the state who have multi-valued functions, which is especially manifested in society. Therefore, the achievement of democratic development is closely related to the real opportunity for men and women to participate in the construction of a democratic state. Since a woman at the present stage of development of society is her full member, in the context of building a civil society, her role and importance in state and public administration are growing.

In world science, the ideas of gender equality in the system of state legislation, as well as the implementation of gender equality in respecting human rights, their freedoms and legitimate interests, have priority in the political, legal and socio-philosophical aspects. The functions of countries around the world with unlimited, absolutely limited and relatively limited competencies, as well as proportional functions to support the interests of women and individual public gender roles, are becoming the object of socio-philosophical research. Institutional and



functional analysis of the legal activity of the state with the help of philosophical categories of essence and phenomenon, content and form, universal, special, private, and on their basis the development of conceptual paradigms in this area has a scientific, theoretical and practical value.

### THE MAIN FINDINGS AND RESULTS

In Uzbekistan, over the years of independence, various legal documents, concepts, laws and government programs have been prepared and developed that are in the interests of women and motherhood. The activities of women and their role in society have been institutionally and functionally reformed. Being in the most vulnerable social groups, a woman can fulfill herself only when she receives equal civil and political rights with men. International experience shows that the participation of women in the political and economic spheres of the country helps in the fight against poverty and social disadvantage of the population. The implementation of legislative projects aimed at systematically improving gender policy is a prerequisite in our country for the modernization and development of civil society institutions.

The issue of gender equality is one of the important topics of scientific research of scientists of international scale. The first socio-political studies of gender began to appear in the late 60s and early 70s of the twentieth century. That is, this period of history, characteristic of its feminist, female and youth movements, began to give rise to society to study the problems of gender equality. Sociologists, sociopsychologists, linguists and political scientists of a number of countries began to study and conduct research in the field of "gender" and its influence on the individual and personality. The emergence of a free female personality has generated controversy among anthropologists, geneticists, historians, psychologists, sociologists, philosophers, philologists, and ethnologists. Basically, scientific discourses studied in depth the hierarchical sexual structure of the culture of society and religious representations as individual characteristics of the collective. The first reflections on the equality of men and women appear in the works of ancient Greek philosophers, such as Plato, Aristotle. If Aristotle believed that society cannot be happy when women are unhappy, then Plato expressed the idea that women, like men, should have an education.

Further, issues of gender equality began to develop Western thinkers - T. Parsons, P. Berger, T. Lukman, I. Hoffman, K. Rogers, A. Maslow, Z. Freud, S. Tobias, F. Howe, P. Lawther, N. Koch, J. Money, R. Stoller, J.W. Scott, A. de Tocqueville, J. Mill. Such scientists as M.A. Bakunin, P.A. Kropotkin, I.E. Kalabikhina, A. Posternak, T.I. Pesotskaya, G. Yermolina, A. Ivanova, A. Kolody, A. Kurylyova began to consider the problems of development of gender equality in more modern periods. During the formation of the Soviet Union, scientists V. Bilypay, L. Kaznin, A. Marchuk, T. Melnikova, A. Lyubimova, G. Morozov, Ya. Sadovnichaya, L. Shineleva, Z. Yankova, R. Yanovsky considered ideas for achieving social gender equality in a socialist society.

In the works of scientists of the East, from the beginning of the Middle Ages, gender equality was considered in the context of raising the status of women in general. In the oral and folklore of different periods, you can see examples of the praise and perfection of women. The creative works of Ibn-Rushid, Nizami, Al-Hamadani, Caliph Al-Muiz, poet Abu-l-At, Hagani, A. Jomi, Alisher Navai, Muhammad Fizuli, Vagif, Widad, Agahi, Makhtumkuli can serve as an example where a woman praises not as a slave and concubine, but as a full member of society, which was considered the progressive views of his time.

The study of the scientific-philosophical and political-legal aspects of the problems of the formation and development of gender policy has intensified especially in the years of independence.

The end of the twentieth century became significant in the fate of Uzbekistan. After independence, the state began to introduce new transformations in political, economic and social life. Having gained freedom in all respects, the Republic of Uzbekistan was able to independently adjust the political system and ensure economic and social development.

Ensuring a decent and healthy life of the population, quality development of human potential has become the main priority of the state policy of the country. Various State programs on social protection, the development of a market economy, and the improvement and strengthening of judicial relations were mainly aimed at developing a democratic society.

The possibility of building the right democratic society in many respects depends on the support of world and international organizations and the foreign policy of developed countries. During the years of independence, thanks to purposeful aspirations to take a global position, Uzbekistan has gained a good reputation as a democratic state.

Successful integration in world politics, the economic and legal space points to a large, focused work in the human rights sphere. In-depth international cooperation in a wide range of areas requires government policy to ensure gender equality, which is an essential component of world politics.

The gender policy of the Republic of Uzbekistan is based on generally accepted international norms enshrined in the UN Conventions and other international documents, aimed at overcoming all forms and manifestations of gender discrimination and creating conditions that give everyone the right, regardless of gender, to fully realize their personal potential.

Regardless of the political structure and level of socio-economic development, the problems of ensuring relations and equal opportunities have always been relevant in any state. Because the sustainable development and prosperity of the country, the achievement of peace among the people is due to the foundations of gender equality. A developed society proves that if women and girls have equal access to education, decent health care, acceptable work, and active participation in political and economic decision-making, this helps to achieve economic stability and benefits both the society in which they live, and humanity as a whole.

In order to ensure gender equality, the state of our country has taken appropriate measures. For example, the Law of the Republic of Uzbekistan “On guarantees of equal rights and opportunities for men and women” adopted by the Legislative Chamber on August 17, 2019 was approved by the Senate on August 23 of the same year. According to s. 1.1 of the Civil Code of the Republic of Uzbekistan 2018, it is stated that the purpose of this Law is to regulate public relations in the field of ensuring guarantees of equal rights and opportunities for men and women, and preventing discrimination on the basis of sex. The government of the country is intensifying all efforts to eliminate discrimination based on sex, as a result of patriarchal views and unreasonable social norms.

The historical conditions of the early twentieth century created obstacles to the establishment of equal rights for women. Sharia regulations and millennia-old traditions of Muslim society continued to oppose the establishment of new principles in what is now Uzbekistan.

Traditionally, a woman was perceived as the guardian of the hearth. Measures relating to family law, equal suffrage, the right to marry and divorce, the prohibition of marriage of underage girls, the compulsory registration of marriages by local authorities remained unfulfilled. Religious and domestic prejudices rooted in millennia-old patriarchal traditions did not allow women to solve family, social and state issues.

The idea of the equal rights of women, their role in society and in everyday life arises during the emergence of the Jadid movement in Central Asia itself at the end of the XIX century. Jadids were the first to enlighten the rights of women in Islam, Sharia, etc.

The life of a modern woman in present-day Uzbekistan has significantly changed for the better. The woman of modern Uzbekistan has gone far from the relationship of religious and spiritual laws in society. Civil and secular laws appeared that defined the equality of women and men.

The principle of human parity in all spheres of public life is achieved on the basis of the full achievement of equality between men and women. Recognized in the international community, the democratic renewal of our society, economic reform, improving the level and quality of life of the population, the development of education and health, science and culture, improving the welfare of the Uzbek people, points to the norms of legislation that ensure equality between women and men.

Based on the national legislation and the system of the Republic of Uzbekistan, which seeks to take its rightful place in the world community, it can be said that the state paid special attention to one of the symbols of national statehood - the civil institution. The second section of the Constitution enshrines the fundamental rights, freedoms and duties of individuals and citizens. The relevant chapters and articles in this section explain the rules that apply only to citizens.

Based on the status of citizenship, the essence of relations between the state and the individual is revealed. As long as individuals with civilian status establish close, strong relations with the state with certain rights and obligations, a combination of interests is recognized in these relations.

The relationship between the state and the citizen, first of all, is based on the development of human society. As a result of the struggle of people for their rights and freedoms, the idea of citizenship arose, which still relates to the status of citizenship, which is still being discussed at the state and society level. Therefore, article 18 of the second section, Fundamental rights, freedoms and duties of a person and a citizen of the Constitution of the Republic of Uzbekistan [2018] states that "All citizens of the Republic of Uzbekistan have the same rights and freedoms and are equal before the law without distinction of gender, race, nationality, language, religion, social origin, beliefs, personal and social status. Our Constitution (Article 18) enshrines the centuries-old aspirations of the Uzbek people to the concepts of human value as the equality of citizens. Regardless of gender, race, nationality, language or religion and other provisions, in every citizen of the country, the state sees, first of all, a person.

From the first days of its independence, Uzbekistan has shown by its actions the active approval of all initiatives regarding gender equality of the United Nations. By all efforts, the state creates the necessary conditions for the comprehensive development and ensuring of the rights and interests of women. An example of this is the basic principle of public policy defined in the National Goals and Sustainable Development Goals for the period up to 2030, called "Goal 5. Ensuring gender equality and empowering all women and girls".

All actions taken to achieve this goal ensure the elimination of all forms of discrimination and violence (physical, sexual, psychological, and economic) of women and girls. Given their role in socio-economic development, the state proclaims the value of family relations. By this, the state normalizes domestic violence among the population. During the study, the data from the UReport survey showed that 83% of the respondents acknowledge the existence of domestic violence. At the same time, 54% believe that in order to save their families they are forced to endure insults and beatings, blaming the situation in which this happens. Namely, 74% of men tend to think of such discrimination. 52% of women, the acknowledged presence of the problem of domestic violence, prefer to remain silent about this in society. This attitude is determined by the characteristic trait of a woman of the east. To preserve family values, the welfare of all family members, a woman simply suffers any negative attitude towards her.

In 1995, Uzbekistan joined the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). The fifth article of the Convention separately emphasizes the need to combat gender stereotypes: "To change the social and cultural patterns of behavior of men and women in order to eradicate prejudice and eliminate customs and all other practices that are based on the idea of the inferiority or superiority of one gender or the stereotypical role of men and women" [Electoral Code, 2019]. Fourth article of the Convention prescribes "The adoption by States parties of temporary special measures aimed at accelerating the establishment of de facto equality between men and women".

The state takes special measures, for example, the creation of special programs aimed at promoting the activity of women, grants and scholarships for girls, various quotas for women, which, according to the Convention, are not considered discriminatory and must be abolished in order to achieve equal opportunities and equal treatment.

The Law "On Guarantees of Equal Rights and Opportunities for Women and Men" for the first time at the legislative level considers the concept of "gender". The social aspect of relations between women and men, manifested in all spheres of society, is considered the basis of the law.

Any difference or any restriction on the basis of sex is considered discrimination of human rights and freedoms in all activity areas.

The concept of gender-legal expertise is also introduced into the law - an analysis of normative legal acts and their projects for compliance with the principles of equal rights and opportunities for women and men.

The basic principles for guaranteeing equal rights and opportunities for women and men are the rule of law, democracy, equal rights for women and men, non-discrimination on the basis of gender, openness and transparency.

The document emphasizes that the state provides a guarantee to both women and men in equal participation in the formation of society and government. The state provides equal rights and opportunities in the field of health, education and science, culture and labor, social protection and other areas of society.

To achieve a democratic society, women's participation is considered the most important component. The very degree of communion is an indicator of the democratic culture of society. Gender equality is gaining momentum where democratic institutions and processes exist. International experience shows that the result of democratic processes has a positive effect on the

establishment of gender parity in the country. It is much easier for women to establish their civic, economic, social, political powers where there are expanded opportunities for the manifestation of democracy. Despite the fact that many countries of the world are developing democratic models, there is still a problem in the international community of constantly consolidating democratic principles and ideals in documents and norms of an international level. Not always the benefits of democracy are evenly distributed regardless of class, race, gender and ethnic origin. The uneven distribution of democratic justice requires the adoption of appropriate measures, political principles, laws, taking into account the balance of power between men and women.

Such global mechanisms as the UN Universal Declaration of Human Rights, the Convention on the Elimination of All Forms of Discrimination against Women helps a number of countries to establish gender equality in accordance with democratic principles. The first international legal instrument to which Uzbekistan acceded after independence in 1991 was precisely the UN Universal Declaration of Human Rights. In 2018, the President of the Republic of Uzbekistan Sh. M. Mirziyoev signed the Decree "On the Program of Events dedicated to the 70th anniversary of the adoption of the Universal Declaration of Human Rights", the goals of which are indicated by increasing the attention of the state and society to the values and principles of human rights. Namely, the improvement of the system of organizational and legal measures, the introduction of international standards in the legislation and practice of state bodies, ensuring reliable protection of human rights and freedoms.

On August 18, 1995, the Republic of Uzbekistan acceded to the "Convention on the Elimination of All Forms of Discrimination against Women", thereby showing its willingness to enter into international relations to preserve the rights and will of women. By all subsequent measures, Uzbekistan has shown the ability to provide new opportunities for women, along with men, in building a democratic society.

Gender equality in society is determined by an indicator of the degree of participation of women in the decision-making process. In the economic and political life of Uzbekistan, a woman until today has had a secondary role. But the socio-cultural and economic-political development of our time does not allow us to preserve and preserve old trends. For the development of an important resource as human capital, our state provides equal opportunities to all citizens of society. The value of equality among men and women, established by time and laws of society, makes any nation stronger in every way.

Gender policy in New Uzbekistan is carried out on the basis of legal, organizational, administrative principles of gender equality. Due to the fact that obtaining education and training, exercising the right to work and remuneration for it, socio-political and cultural activities, as well as special measures to protect labor and women's health are reflected in the legislation of the country, the principle of equal rights for men and women originates from The main law of the country is the Constitution of the Republic of Uzbekistan.

The diversity of forms of women's participation in social and labor activities, expanded opportunities for self-realization, effective measures to improve the labor of rural women help build a new, civil, democratic society. Gender equality is needed to remove social barriers, to assist the manifestation of personality, both men and women in all spheres of life.



The regulatory legal acts of the Republic of Uzbekistan are standardized based on the provisions of the articles of the Constitution and do not have discriminatory relations with respect to women.

Direct or mediocre violation or restriction of equality of citizens is prosecuted under the Criminal Code of the Republic of Uzbekistan (Article 141) [Actions Strategy 2017.].

In conclusion, it can be determined that the reform process including initiatives to improve women's opportunities in Uzbekistan as a whole contributes to strengthening gender equality in society.

In order to achieve gender equality, the laws of the Republic of Uzbekistan consider such provisions in society as, for example, labor rights, equal opportunities for employment, free choice of profession, education, social security for retirement, etc.

To increase the awareness of women of Uzbekistan about human rights, their role in the daily life of the republic, the Committee of Women of Uzbekistan, the Ombudsman, and the National Center for Human Rights are conducting public awareness events. The coordination of the activities of ministries, departments, territorial administrations is being carried out with the aim of broadly involving women in resolving issues of socio-economic and cultural development, strengthening social protection of the family, motherhood and childhood.

There is an information and analytical department for education, health and social protection under the Cabinet of Ministers of the Republic of Uzbekistan, and local structures have been created to promote the development of the women's movement and the full expansion of the potential of women. The basic concept of the "women's issue" consists of the formation by the state and society of not only the equal rights of men and women, but also the formation of equal alternatives for their implementation.

By promoting the active participation of all people in social, economic and political life, regardless of their age, gender, physical abilities, "race", ethnicity, origin, religion and economic or other status, the state takes measures to eliminate the root causes of inequality.

Despite the fact that decade has passed since Uzbekistan joined the Beijing Declaration, large-scale actions were carried out. Over the years of independence, the situation of women in the country has in many respects really changed for the better. The reduction of illiteracy, the reduction in maternal mortality, the increase in the growth of working women, the increase in women in leadership positions, the guarantee of legal rights are the result of state policy in the field of equality of men and women.

Seeing the importance of the Beijing Platform for Action as the basis for subsequent reforms, the goals of achieving gender equality were set during the development and implementation of the "Development Strategy of Uzbekistan for 2017-2021" [The Labor Code, 2011]. The priority tasks of these goals consist of increasing the socio-political activity of women, strengthening their role in government and society, increasing economic independence, ensuring the employment of women and youth, especially in rural areas.

In February 2018, the President of the Republic of Uzbekistan signed the Decree "On measures to radically improve activities in the field of supporting women and strengthening the family." In accordance with the Decree, three resolutions of the President of the Republic of Uzbekistan, six



decisions and one order of the Cabinet of Ministers were adopted. Together with ministries and departments, more than 20 plans were approved for conducting comprehensive measures aimed at strengthening the role and importance of civil institutions in protecting the rights of women. According to international standards, the Cabinet of Ministers of Uzbekistan on October 20, 2018 approved 16 National Goals in the field of sustainable development and 127 potential tasks with them for the period 2030. All the efforts of state policy in this area are aimed at one goal - using international best practices to improve the legal framework for protecting the interests of women and the family, to form special conditions and systems of ethnic norms in society, as well as rules for them. In the Republic, the Scientific and Practical Research Center "Oila" under the Cabinet of Ministers was created to conduct a number of fundamental, applied, innovative studies in the areas of family values and traditions. The Center promotes and implements the conceptual idea "A healthy family - a healthy society" in society. Each event carries the principle of "the family is under the protection of the state and society." A number of measures are being taken to strengthen activities for the early prevention of family and interpersonal conflicts, depressive situations that help induce negatively affecting the spiritual and moral atmosphere in the family and society, as well as ensuring the active participation of the general public in this process.

Under the chairmanship of the Speaker of the Parliament, a Gender Commission was created, whose tasks include the implementation of state policy aimed at achieving gender equality and improving the social conditions of women in the country; addressing gender equality violations; implementation of measures on occupational segregation, wage differences, increasing the proportion of women among economically active segments of the population; development of proposals in national legislation for universally recognized international norms on the elimination of all forms of discrimination against women's rights; introduction of measures aimed at improving the legal culture of women, etc.

## CONCLUSION

A woman in personal and public life always faces the need for her rights. The rights of women are enshrined in the Constitution, Civil, Family, Labor, Criminal Codes of the Republic of Uzbekistan. In the country, more than 300 regulatory documents regulate property relations and the protection of the fundamental rights and freedoms of women and children.

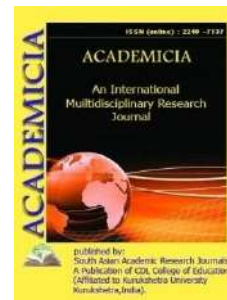
For a long time, women had to defend their rights and freedom. At present, the social stereotype imposed by people who claim that a woman's destiny is a family is the only obstacle to the development of women. The drastic changes that have taken place in the country since independence on the development of gender equality do not prevent some people from associating a woman only with their family, their belief that a woman was created only for procreation remains a priority barrier in society for a woman's self-development.

Democracy is the perfect condition for developing the foundations of civil society. A condition where people's participation expands in the political, economic, cultural and social spheres of life. Depending on this, the course of state policy defines development goals. The availability of equal opportunities for all people to access education, healthcare, employment and political participation contributes to the realization of the development goal.

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## UNDERSTANDING STUDENT'S PERCEPTION TOWARDS CLASSES THROUGH WEBINAR: A RESEARCH AT THE TIME OF PANDEMIC

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### ABSTRACT

*As online learning continuously grow from last decade. But current pandemic (covid-19) situation online learning become only source to teaching. Even government also promote online class in pandemic situation. So it's important to analyse students overall experience in online learning environments. Understanding student's perception towards classes through online the only question for student satisfaction to more nuanced question about how factors inside and outdoors of the classroom impact the web classroom. This research explored students experience with online learning. For instance some students feel that online learning is benefit s who don't seem to be in regular courses due to their job, and a few feel that they loose their society and physical activity due to current social distancing situation. The solepurpose to grasp the coed psychology about online learning on this current pandemic situation.*

**KEYWORDS:** *Online Learning, Distance Education, Flipped/Blended Education, Webinar Pandemic*

### INTRODUCTION

We board a time where the world is popping to technology. Android and i phones are almost every person in their pocket, electric car, and android based TV are being considered “smart”. Step ahead an education has also jumped onto the e- train. With thousands of options to realize an education online, it's only a matter of some time until online education becomes the only due

to gain an education. But is online education the right answer? Arguments are often made for every side, but what it ultimately comes all the way all the way down to, is an individual's preference in receiving their education. Students learn in a very quite ways. Some prefer online courses; others prefer the classroom setting and some opt to have a mixture of both. There are pros and cons for all the assorted forms of learning, which suggests that there is not one correct way of learning.

The general education system in India is predicated on compulsory programs for all citizens. Children start school from the age of 5 and study at the elementary level for 3 years, they still continue to middle school from fifth to ninth grades that are the mandatory level for everybody. From the 10th to +2 grades are treated as secondary education . The expected years of schooling for the country is 15.4, while the mean years of schooling is 12.8 (UNDP 2019).

Main educational methodologies are:

- The normal classroom education, where books, blackboards are employed by the teacher as a equipment
- Modern classroom education, where the lecture rooms are equipped with whiteboards, projectors or audio-visual display equipment and digital boards
- Online education, where the knowledge technologies and communications are accustomed help within the development and acquisition of information from the various remote locations.

It uses the net and video/audio and text communication and software to form the educational environment. There is several sorts of online learning: Knowledgebase, online support, asynchronous training, synchronous training, hybrid training knowledgebase type may be a set of lessons that are published on the web site and have general instructions of learning that a student needs to follow, with no support available. Online support type may be a modified version of the knowledge domain, where the support is obtainable so there's a discussion board, web forum or another communication way available to urge support on some topics. Asynchronous training is that the one where the teachings don't happen in real-time, but the scholars are given content regularly. Instructors are assigned and supply support through email or other communication platforms. Synchronous training is finished in real-time with a live instructor and optional moderator. there's a pre-set time to log-in to the net education environment and participants can communicate directly with the teacher and other group members. Hybrid training may be a combination of online and in-person interaction.

Countrymen fight against the pandemic situation outbreak has been unique. The “People’s Curfew” was a situational step for controlling the pandemic situation and further awareness and preparedness about the quarantine and provided the doorway for implementation of lockdown in several states. India is now locked down and loaded in its fight against the corona virus. Prime Minister Narendra Modi announced a required nationwide shutdown on 22 March between 7a.m to 9 p.m after that he announce lock down. He said *“If we are healthy the world is healthy,”* Modi said adding social distancing was key given that there was no vaccine as yet to stop the disease.

*“I appeal that in the coming few weeks only those who really have to, step out (of their homes). As much as possible, work and do business from home,”* he said because the state of 1.3 billion people clean up, the world health organization (WHO) said India s COVID fight could make or

break the worldwide war. COVID 19 pandemic is first and foremost a health crisis. When it involves the education sector, many countries have closed down schools and universities. School and college students are being 'homeschooled' from March 24 and Zoom and online classes have replaced traditional classrooms. But at a time when many are of the opinion that online classes will transform education as we all know it, not all is rosy, especially in India, where problems like lack of technology, of digital training and bandwidth are posing challenges for several families and teachers. The digital class divide has especially been highlighted during this pandemic. Internet isn't any more a privilege, but a necessity. If you do not have it, a student risks missing out altogether. In line with a study conducted by scholarship ed-tech platform Buddy4Study, of the 25 crore students littered with the lockdown, 80 per cent fall within the Economically Weaker Section category. While digital classrooms have made parents more involved in their kids' school life, it cannot be denied that interaction in classrooms helps in character development.

The HRD Ministry on 5th May 2020 stated that there'll "soon be a decision" on conducting the pending board exams at the earliest. Leena felt that "vigilance are going to be a problem" in government schools while conducting these online exams. According to data provided by UNICEF, 1.57 billion students are affected thanks to school closures in additional than 190 countries worldwide due to COVID-19. While In India, The Ministry of Human Resource Development plans to reopen schools and colleges by September 2020, teachers feel that alternative plans have to be made just in case another lockdown-like situation arises.

## REVIEW OF LITERATURE

**Ms. Shenoy.V.et.al(2020):** Find in their study COVID 19 – Lockdown: Technology Adaption, Teaching, Learning, Students Engagement and Faculty Experience that the purpose of this paper is to understand the technology adoption, teaching and learning process, student engagement and faculty experience towards virtual classrooms during Lockdown due to COVID 19, India. Inductive reasoning used in this study and qualitative research methods are used to collect the data from faculties associated with Higher education institutions in Bangalore and teaching courses such as PGDM, M.B.A, M.Com, M.C.A etc. The finding of the study suggests that during the lockdown period faculty have undergone the process of technology adoption and students are involved with various online modes of learning. There was lots of fear, anxiety and consciousness among students and faculty regarding COVID 19. This study is confined to the positive side of COVID 19 and change in the education sector by adapting to technology and engaging students with various virtual sessions. The current study is limited to the sample frame of 20 faculty from Higher education institutions at Bangalore, India, hence finding of this study cannot be generalized for entire India. The emotions and perceptions of faculty towards the usage of technology and experience are different for different users. Even though COVID 19 has created cognitive dissonance in students and faculty mind towards various situations they have faced in their day to day life in association with the society, family, and teaching and learning. It has created the revolution in Indian higher education, as there was lots

**Palvia.S.et.al(2018):** Observe in their studies "Online Education : Worldwide Status, Challenges, Trends, and Implications" that Online education in its various modes has been growing steadily worldwide due to the confluence of new technologies, global adoption of the

Internet, and intensifying demand for a workforce trained periodically for the ever evolving digital economy. Online education is on track to become mainstream by 2025. This editorial documents country-level factors that impact quantity and quality of online education. Such factors include industry (business); governments at local, state, and federal levels; country laws; ICT capacity; Internet/mobile technology diffusion; and income and digital divide. We provide implications for country and world organizations concerning online education.

Anh N 2017: Find in his study “The Impact of Online Learning Activities on Student Learning Outcome in Blended Learning Course” that the aim of the study was to determine the impact of online learning activities to the learning outcomes of students who participated in the blended learning course. Interactive activities are considered, in this study, include teacher – student interaction, student - student interaction, student – content interaction, and student - technology interaction. The undergraduate student participated in the blended learning course which using formative assessment to evaluate student learning outcomes by the combination of different learning activities through a learning management system. The quantitative results obtained when implementing learning analytics data from the system through using regression analysis showed that the students interact effectively with learning activities in the course have better results. Quantitative analytical results indicate that student – student interaction has a greater impact on student learning outcomes. These learning activities used for interactive activities as suggestions for teachers to design and implement learning activities for blended learning courses.

**Sun A& Chen X(2016):**Found in their studies “Online Education and Its Effective Practice: A Research Review” that using a qualitative content analysis approach, this study reviewed 47 published studies and re-search on online teaching and learning since 2008, primarily focusing on how theories, practices and assessments apply to the online learning environment. The purpose of this paper is to pro-vide practical suggestions for those who are planning to develop online courses so that they can make informed decisions in the implementation process. Based on the findings, the authors ar-gued that effective online instruction is dependent upon 1) well-designed course content, motivated interaction between the instructor and learners, well-prepared and fully-supported instructors; 2) creation of a sense of online learning community; and 3) rapid advancement of technology. In doing this, it is hoped that this will stimulate an on-going discussion of effective strategies that can enhance universities and faculty success in transitioning to teach online. Under current de-bates on the cost and quality of higher education, this study could help for the improvement of higher education and student enrollment and retention.

**Blackmon Stephanie J.(2012):**Observe in his study “STUDENT EXPERIENCES IN ONLINE COURSESA Qualitative Research Synthesis “As online learning continues to grow, it is important to investigate students overall experiences in online learning environments. Understanding students’ perspectives on their online classes or programs moves beyond the sole question of student satisfaction to more nuanced questions about how factors inside and outside of the classroom impact the online classroom. This qualitative research synthesis explored students experiences with online learning. For example, some students were satisfied with their online courses but still struggled with balancing online courses and work responsibilities. Other students found that enrolling in an online program related to their jobs was very beneficial.



**Hongjiang Xu (2007):** Analysis in their study “Effectiveness of Online Learning Program: A Case Study of A Higher Education Institution” Online learning has become a popular tool in addition to traditional learning methods. This study emphasizes on how assessment and delivery methods employed can influence the effectiveness of online program, as well as the benefits and constraints experienced in e-learning. The research project was conducted at a Higher Educational Institution for a period of three months. A case study methodology was employed to investigate the opinions and experiences of faculty and students involved in online programs. Various factors that affect the effectiveness of online programs were studied in order to provide insights on the major challenges, benefits and limitations faced. Among the findings, major problem areas were identified and suggestions were proposed on how identified problems can be minimized. The study also raised future direction for e-learning.

**Volery, T. and Lord, D.(2000):** Found in their study "Critical success factors in online education" that the Internet is a major technological advancement reshaping not only our society but also that of universities worldwide. In light of this, universities have to capitalise on the Internet for teaching, and one progressive development of this is the use of online delivery methods. This paper draws upon the results of a survey conducted amongst students enrolled in one online management course at an Australian university. Three critical success factors in online delivery are identified: technology, the instructor and the previous use of the technology from a student's perspective. We also argue that the lecturer will continue to play a central role in online education, albeit his or her role will become one of a learning catalyst and knowledge navigator.

#### **OBJECTIVE:**

- Online classes are much more effective than classroom Teaching
- Theory classes on webinar (Online) are much easier than practical classes
- To understand Attending college through webinar remains quite easy and convenient

#### **METHODOLOGY**

##### **Sample**

The present research was conducted on a sample of 180 Students from Jalandhar, and samples were randomly collected from the different colleges of Jalandhar city

##### **Procedure**

The questionnaires were distributed to the students of different colleges and they were asked to read the instructions given in the questionnaires. No time limit was given to fill the questionnaires but it was expected that respondents would fill the same within 15-20 minutes. Cronbach's Alpha was used to make sure the internal reliability of the instrument, the value of alpha should lie between 0 and 1. In our case, the value of Cronbach's Alpha comes to 0.8093. The reliability and validity was found to be within the acceptable norms.

H<sub>0</sub>: There is no any difference in the online classes and classroom teaching

H<sub>A</sub>: There is difference in the online classes and classroom teaching

H<sub>0</sub>: There is no difference in taking theory classes and practical classes through webinar

H<sub>A</sub>: There is difference in taking theory classes and practical classes through webinar

H<sub>0</sub>: There is no any difference in attending college though webinar or physically

H<sub>A</sub>: There is difference in attending college though webinar or physically

### RESULTS & DISCUSSIONS:

**TABLE1: SHOWING THE DESCRIPTIVE STATISTICS WITH T VALUE**

Sr No	Variables	Mean	Standard Deviation	T Test	Sig.
1	Do you think online classes are much more effective than classroom classes	2.6	1.32	12.52	<b>.000*</b>
2	The real classrooms teaching is best method of learning	4.24	1.15		
3	Taking Theory classes on webinar (Online) are much easier than practical classes	2.47	1.34	1.03	.466
4	Taking Practical classes on webinar(Online) are quite easy and simple	2.54	1.39		
5	Don't you think online classes are easy and convenient method of learning.i.e you can attend classes from anywhere	3.13	1.36	5.99	<b>.000*</b>
6	Attending classes in the classroom is easy and convenient method of learning as compare to webinar	3.92	1.31		
7	Attending college on time, meeting friends, discussion with teachers and friends gives you immense pleasure and satisfaction	4.32	1.12	12.59	<b>.000*</b>
8	Attending college through webinar, meeting friends, discussion with teachers and friends only through online gives you immense pleasure and satisfaction	2.67	1.34		
9	Do believe that online classes save your time, money and efforts	3.21	1.76	32.7	<b>.000*</b>
10	Your overall satisfaction level from webinar or online teaching method.	2.81	1.26	29.9	<b>.000*</b>

**\* Significance level: 0.05 (1.97)**

The above table Shows the descriptive value and t test value regarding student's perception towards online classes as per the results in the above table shows the overall trend of the online teaching and students perception towards online teaching

As per the first objective that online classes are much more effective than classroom teaching, Shows the mean value of 2.6 and standard deviation of 1.32, where as in the case of classroom teaching the mean value 4.24 and standard deviation of 1.15, the t value is 12.52 and the p value is (.000) less than .05, which shows that there is significant difference between online teaching and real classroom teaching.

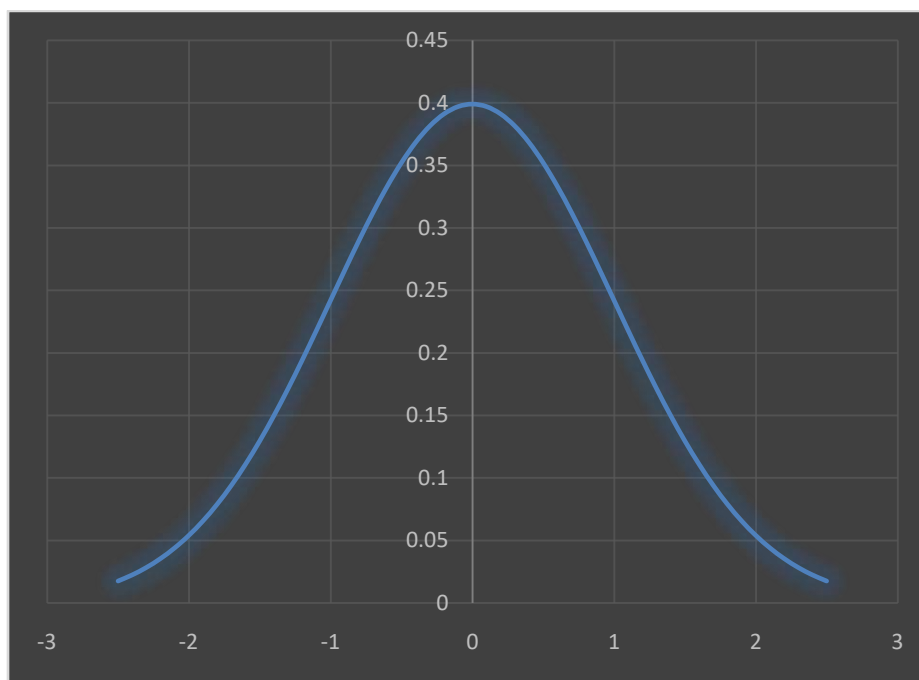


Figure 1: Showing normal distribution curve with t-critical value **1.97**

*H<sub>0</sub>: There is no any difference in the online classes and classroom teaching*

*H<sub>A</sub>: There is difference in the online classes and classroom teaching*

In the above figure the normal distribution curve showing that the t critical value is 1.97 and the t value is 12.52 which is more than the critical value and falls in the rejection area. So Null Hypothesis is rejected and alternative hypothesis accepted. Which shows that there is difference in online classes and classroom teaching. With higher mean value of classroom teaching indicates that classroom teaching is the best method of learning.

As per the Second objective that Theory classes on webinar (Online) are much easier than practical classes, In the case of theory classes showing the mean value 2.47 and standard deviation 1.34 on the other side the practical classes on webinar having the mean value 2.54 and standard deviation 1.39. the t value having the value of 1.03 and p value (.466) is higher than the .05, which shows there is no any significant difference in taking theory class and practical class on webinar

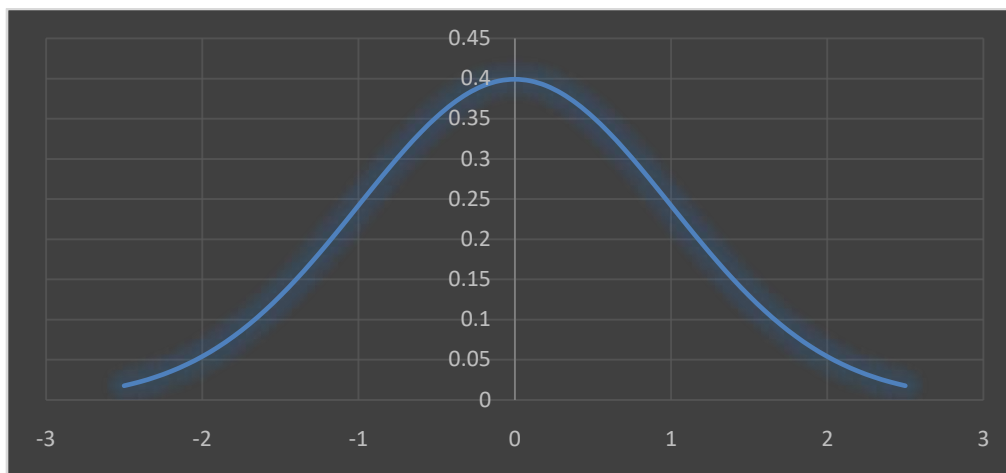


Figure 2: Showing normal distribution curve with t critical value 1.97

*H<sub>0</sub>: There is no difference in taking theory classes and practical classes through webinar*

*H<sub>A</sub>: There is difference in taking theory classes and practical classes through webinar*

In the above figure the normal distribution curve showing that the t critical value is 1.97 and the t value is 1.03, which is less than the critical value and falls in the acceptance region. So null hypothesis is accepted i.e Which shows that there no difference in theory classes and practical classes through webinar

As per the third objective that Attending college through webinar remains quite easy and convenient showing the mean value 2.67 and standard deviation 1.34 whereas Attending college on time, meeting friends, discussion with teachers and friends gives you immense pleasure and satisfaction showing the mean value 4.32 and standard deviation 1.12. the t value is 12.59, the p value is (.000) less than .05, which shows that there is significant difference between attending college through webinar and attending college personally

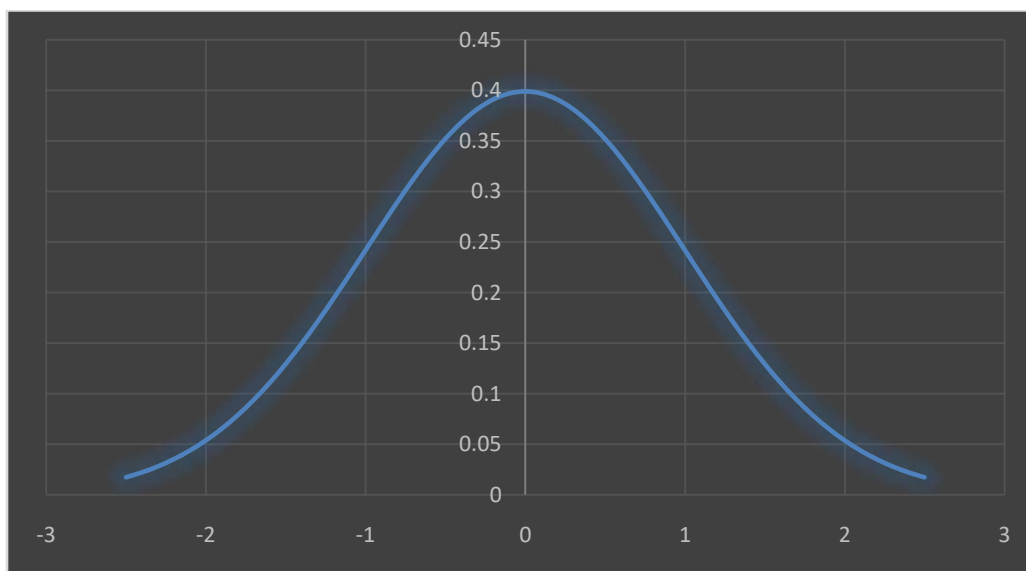


Figure 3: Showing normal distribution curve with t critical value 1.97

*H0: There is no any difference in attending college though webinar or physically*

*HA: There is difference in attending college though webinar or physically*

In the above figure the normal distribution curve showing that the t critical value is 1.97 and the t value is 12.59, which is more than the critical value and falls in the rejection area. So Null Hypothesis is rejected and alternative hypothesis accepted. Which shows that there is difference in attending college though webinar or physically. With higher mean value of shows that attending college physically more liked and students shows more interest in it

## CONCLUSION

From the above analysis, it revealed that students are quite interested to have online classes but overall they are not fully satisfied with the online classes. As they believe that having classes in classrooms are much more effective than classes though webinar, even though attending college physically is more important and interesting for students. So overall results show that students are interested to have online classes because it saves time, money and efforts but they love to interact with friends, teachers, participates different activities physically only.

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<https://doi.org/10.1108/09513540010344731>

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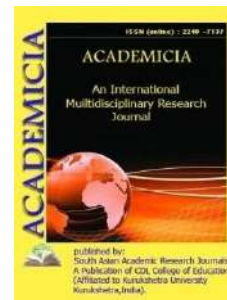
There were 18 *consultation* meetings completed between March and September 2019, in both New York and with partners and regional stakeholders in Beirut, ...

<https://www.livemint.com/news/india/janata-curfew-to-beat-coronavirus-pm-calls-upon-all-to-be-home-7am-9pm-22-march-11584629976871.html>

<https://www.hindustantimes.com/india-news/covid-19-lockdown-amid-e-learning-push-parents-wary-as-children-s-screen-time-increases/story-ejsLGZz5EiZCLxjThu2H3M.html>

<https://www.newindianexpress.com/education/2020/may/06/a-need-now-but-no-replacement-teachers-share-concerns-about-online-classes-during-covid-19-2139605.html>





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## THE INNOVATION ACTIVITY ON LARGE UZBEK COMPANYS A KEY FACTOR OF PERSONNEL DEVELOPMENT

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### ABSTRACT

*There are represented results of the study the Quality circle implementing practice on large Uzbek manufacturing company in the human resources area. Hypotheses relating to empowerment, team working, and training were developed and tested. An analysis revealed that there was a significant difference in empowerment practice between two groups of employees, but no significant differences in teambuilding and team working or employee training. Results of study divulged that team working and empowerment of Employees could improve innovativeness but certain aspects of employees training depending on their educational and aspiration level. An experience of suggestion system was reported in this article for the purpose of investigating effective factors of suggestion system at the large Uzbek industrial company. With effective suggestion system, the company can not only achieve goals on the improvement of the working processes but also improving quality of its employees, especially blue-collar workers, through involvement in suggestion activity, education and training. Linked to the company's personnel development, suggestion system is found to be effective owing to factors such as strong support of top management, high job involvement, education and training and convenient evaluation. This article is suitable and benefits to anyone whose interest is to promote the contribution of human capital and creativity of the organization they work for.*

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**KEYWORDS:** *Business Development, Innovation Activity, Industrial Company, Personnel Development*

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## I. INTRODUCTION

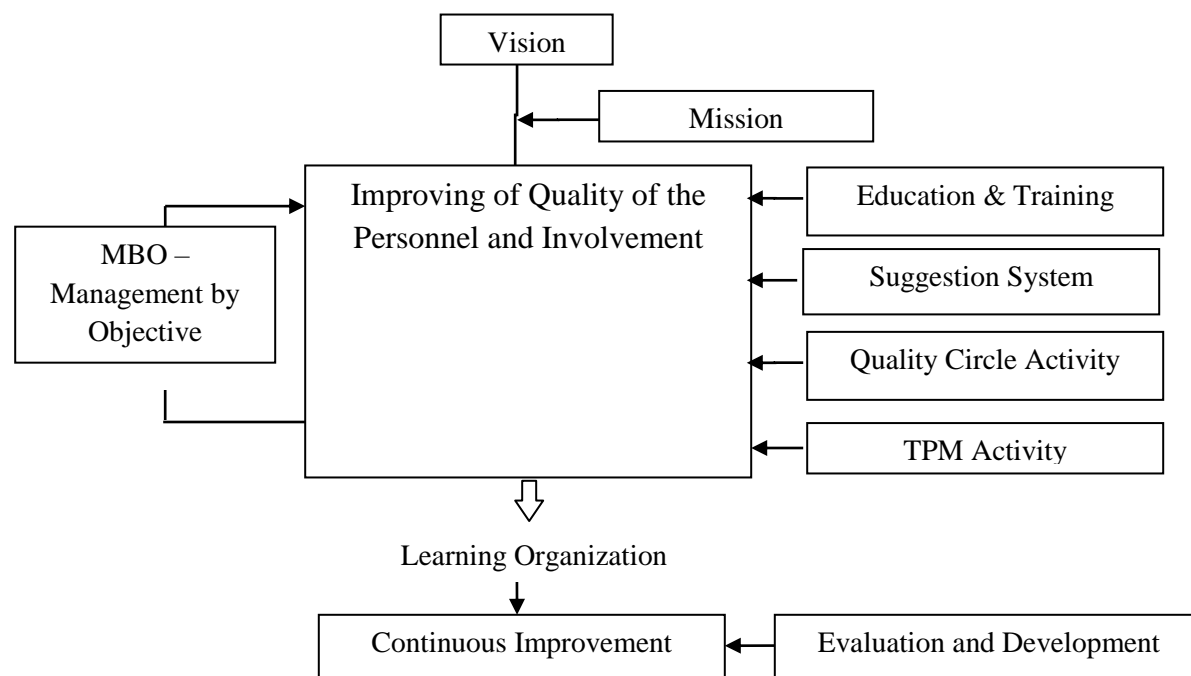
Suggestion systems are important features of modern production systems. Many companies with developed suggestion systems have shown the importance of improvement in quality and quantity of production. There has been little empirical research on the issue or suggestions. While there have been studies about modern production systems, there has been little specific focus on suggestion systems. Both as a tool to improve the production process so as a tool to improve the quality of the company's personnel. For this reason, we conducted research on the "human side" of the suggestion system in the company that established a well-organized suggestion system. The Suggestion System operated by the large Uzbek industrial company generated over 114 thousand suggestions for improving manufacturing processes over a span of 20 years. The average number of suggestions submitted by each employee per year is 2.1, approximately as 10 years ago for Britain companies. The saving from suggestions in the company we studied was approximately 3.9 billion Uzbek soum (US\$2.358.380).

This paper is concerned with investigating effective factors in operating a suggestion system at the company. In order to conduct the research, and experience of the company was excavated in search of its characteristics in the suggestion system. Further, a questionnaire survey was conducted from 144 workers (best suggestion-makers, the person in charge for suggestions, team members, etc.) in order to investigate how they think about the system and problems of system and personnel development. Relevant data were obtained and then analyzed for the study.

## II. Company personnel development and suggestion system.

About twelve years ago the management of the company made-out the following concept of company development (fig.1).

Under the Vision of the company's future, the mission was stressed that improvement of quality of the personnel and involvement through Paradigm changes should be used to create the Learning organization and climate the Continuous Improvement. The Suggestion system, Education and Training, Quality circle and TPM activity were selected as main tools for stirring up of employees. Successful implementation of the development model of the company greatly depends on the consciousness of the personnel of the company. Only increasing the level of personnel consciousness, will it be possible to achieve targets set and utilize all opportunities available to developing company. It would be interesting to learn how this company aligns suggestion system to company personnel development as a part of the development strategy. Suggestions for improvement are actively sought and rewarded by the company management with the support of front-line supervisors which make every effort to help and encourage employees to submit good ideas they might have for improvement. In this way, a strong culture of continuous improvement which enlists the active participation by all employees must be established. This is a long term aim of company management. On top management opinion, based on Korean partners experience, through education of personal and suggestion activity the company can strategically pursue quality rather than short-term profits and suggestion system must be become everybody's responsibility.



**Fig.1:** Concept of Company Development

Unlike many other manufacturing companies, the company puts Suggestion system on the top priority as management philosophy for the not only manufacturing efficiency but also for improving the quality employees through education and involvement.

Suggestion-making as innovative activity can be approached from two sides: developing suggestions as to the improvement of production and as an activity aimed to develop the company's employees. The first perspective (suggestions for improvement of production) conceptualizes suggestions as creative acts that are related to skills in creative thinking based on the competency, wide- educational and special knowledge, skills and abilities.

The second perspective adds one special particular facet to creative processes – loyalty to the company, involvement in a company's business and management, sharing common values. It means be self-starting, proactive, long-term oriented, and able to overcome barriers. Because not all employees have these capabilities, it demands the developing of employees and it is favourable for company development. These tools, which are characterized by the involvement of everybody, proactively and perfectionism, are embodied in the system combined with manufacturing, technology and office. In addition, Suggestion system is supported by "Shijoat" (means "Brave spirit") movement, as a spirit for the perfect accomplishment of company objective. In other words, company manager has reinforced the demands of working operations by means of examining how workers have done in the suggestion activity. The following figure shows the resulting performance of the system at the company.

Contents	Introduction (1998~2001)	Diffusion (2001~2006)	Activation (2007-2009)	Maturing(2010 ~present)
Suggestions, thousand	0.321	36.1	26.7	26,8
Suggestion per person	0.03	1.1	2.0	2.0
Implementation,	0.169	5.62	11.06	15.1

thousand				
Implementation rate, %	52.2	16.4	41.4	56.9
Involvement Rate, %	5.8	48.4	60.2	62.1

**Fig.2:** Average performance for the year

As shown in the above figure, four stages were identified: introduction, diffusion, activation and quality-seeking stages. The average number of suggestion increased to 11 486 in 2009 and dropped to 11 172 in 2010 because the evaluation level for adoption was raised. Regardless, the average number of suggestions per person rather went up. In view of the 66.9% implementation of the adopted suggestions in 2010 which is compared with 41.4% in the previous stage, and 82.7% involvement which is compared with 60.2% in the previous stage, this indicates the company began to enter the qualitative stage from the quantitative stage. The characteristics of each stage in the development of the suggestion system are shown in the following figure.

Stage	Characteristics
Introduction (1998~2001)	<ul style="list-style-type: none"> <li>- establishing the Education centre of company;</li> <li>- training on real-life examples for middle-range and front-line managers;</li> <li>- introduction of Suggestion System basically.</li> </ul>
Diffusion (2001~2006)	<ul style="list-style-type: none"> <li>- establishment of a rewarding system for implementation;</li> <li>- establishment of Suggestion Secretariat and Award Committee;</li> <li>- Quality Circle conference.</li> </ul>
Activation (2007-2009)	<ul style="list-style-type: none"> <li>- active implementation of Suggestion System;</li> <li>- computerization of Suggestion System management.</li> </ul>
Maturing - quality seeking (2010~ )	<ul style="list-style-type: none"> <li>- standardization of evaluation processes;</li> <li>- publication of a manual for evaluation and rewards on implementation;</li> <li>- expansion of suggestion system to suppliers;</li> <li>- development of the Suggestion System.</li> </ul>

**Fig.3:** Main characteristics of the four Stage

As shown in the above figure, the company first introduced the suggestion system in 1998 with the purpose of improving product and process quality. Then the system was widely disseminated during the period of 2001~2006.

During the 2007~2009, the system was activated owing to the increasing number of suggestions throughout the factory. In 2010, the system turned to a new stage and system would enter quality-seeking ones. It had been focused on the number of suggestions before. The quantitative number was important also, but the qualitative number has been regarded as more important, with the purpose of meeting the corporate concept of development. The number of Suggestions per person increased strikingly. Both the number of implementation and reward amounts have increased in general. Examination of the 2010 data permits us to say that reward amount sharply increased over the previous year because increasing both implementations number and quality of suggestions. This indicates how the company has effectively implemented the suggestion system.

### III. Effective factors of the suggestion system

#### 3.1. Strong support of top management.

Top management, particularly the factory manager, strongly and visibly supports the development of the suggestion system. Until last years, to solicit a suggestion from employees, any reasonable suggestion had been welcome so that data could be accumulated in a large quantity.

The goal was to develop employee's capabilities to create a new idea, their involvement in the company's business development, to generate the ability to make suggestions through receiving new knowledge, skills and abilities. As most of the employees have received an experience of suggestion activity, a quantitative approach was encouraged by top management and innovation team and factory turned to a qualitative approach in 2010-11.

Quality of suggestions is focused through feedback and encouragement by top management. Top management, as a main driving force, urges employees to participate in the training program and contributed to the integration of the Suggestion system and Human resource management through rewarding system and feedback. In the next figure, we can see how workers think about the suggestion system.

	Strongly disagree	Disagree	Middle	Agree	Strongly agree	Mean
Top's support	2 (1.3)	8 (5.5)	11 (7.6)	79 (54.8)	44 (30.6)	4.07
Connection to job demands busting	6 (4.2)	21 (14.6)	55 (38.2)	21 (14.6)	14 (9.7)	3.30
Connecting to "Shijoat" movement	2 (1.3)	69 (47.9)	47 (13.9)	20 (13.9)	6 (4.2)	2.72
Support of front-line managers and innovation team is not enough	13 (9.0)	19 (13.2)	52 (36.1)	28 (19.4)	32 (22.2)	3.33

Note: the parenthesized values indicate percentage.

#### 3.2. Involvement and personal development.

An employee's viewpoint, suggestion making itself is an important part of his work life and important for company activity. Also, employees who feel a high level of accomplishment from the job would more suggestions and involvement is an important input to make a suggestion. The following figure indicates how they feel about their job and suggestions.

	Strongly disagree	Disagree	Middle	Agree	Strongly agree	Mean
Importance of job	0 (0)	6 (4.2)	13 (9.0)	69 (47.9)	56 (38.9)	4.07
Importance of suggestions for company	5 (3.5)	19 (13.2)	43 (29.9)	53 (36.8)	23 (15.9)	3.30
Importance of suggestions for development of	3 (2.0)	9 (6.2)	34 (23.6)	28 (19.4)	70 (46.6)	4.06

workers						
Importance of training and education for suggestion-making development	8 (5.5)	13 (9.0)	31(21.5)	49(34.0)	43(29.8)	3.74
Importance of involvement for suggestion-making development	11 (7.6)	14 (9.7)	18(12.5)	20(13.9)	81(56.2)	4.01

### 3.3. Participation

As mentioned previously, employees at this company have extensively been involved in the suggestion process and successful suggestion system is a result of employee involvement practices. This input helps in identifying their commitment to management efficiency and effectiveness. This company actively supports employee involvement, with a participation rate of 82.7% of total workers so that can reap organizational creativity. Subordinates are strongly encouraged to learn how to make suggestions by individual and group. That is, they are motivated to improve quality as they are told clearly what to do and how to do it. An atmosphere of participation encouraged regarding a suggestion.

	Strongly disagree	Disagree	Middle	Agree	Strongly agree	Mean
Suggestion as challenge in works	18 (12.5)	22 (15.3)	47 (32.6)	35 (24.3)	22 (15.2)	3.15
Suggestion is result of managerial stress	4 (2.7)	10 (6.9)	28 (19.4)	41 (28.4)	61 (42.1)	4.01
Suggestion is result of employee development	16 (11.1)	15 (10.4)	53 (36.8)	38 (26.3)	22 (15.3)	3.24
Quality group suggestions are more effective than individual	26 (18.0)	33 (22.9)	41 (28.4)	17 (11.8)	27 (18.8)	2.90

## IV. Evaluation procedure

The Suggestion system in the company has been developed in a manner that employees actively participated in suggestion implementation and can see the current status of the submitted suggestion. The procedure of evaluation is simple, speedy and convenient to participants. The results of the final decision are quickly disclosed regarding implementation. Although employees seem to have some monetary reward, they are quite satisfied with the evaluation procedure.

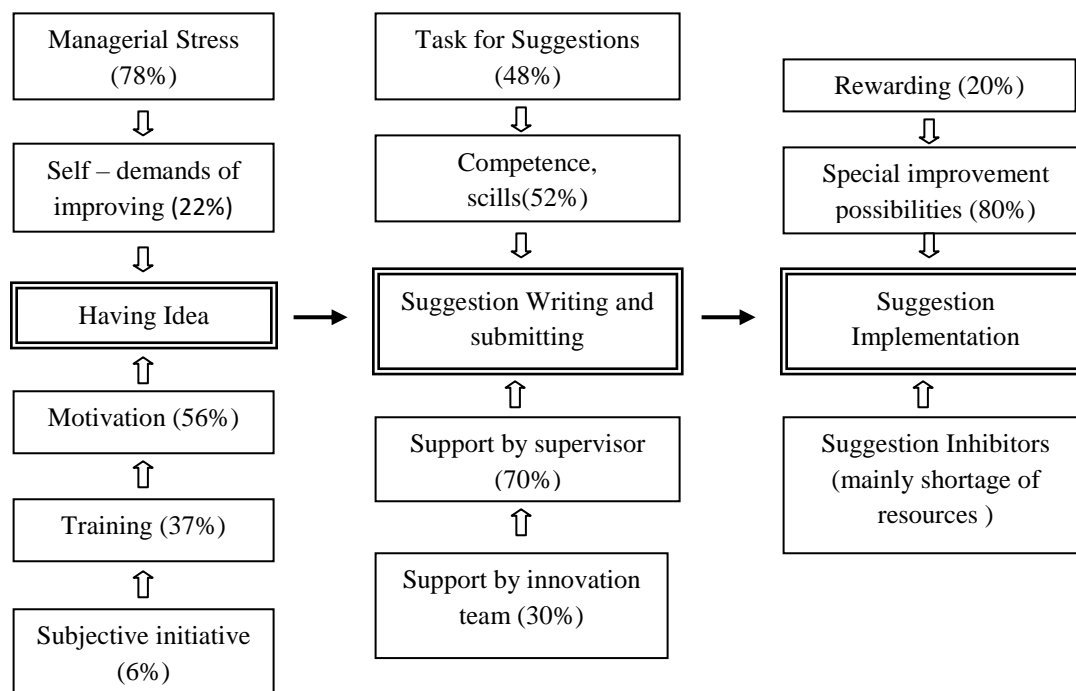
	Strongly disagree	Disagree	Middle	Agree	Strongly agree	Mean
Speed of evaluation and rewarding is good	31 (8.3)	41 (28.4)	37 (25.6)	26 (18.0)	9 (6.2)	2.59
Procedure of evaluation is simple and convenient	29 (20.1)	44 (30.5)	25 (17.3)	31 (21.5)	15 (10.4)	2.72



Rewarding amount is not enough to motivate suggestion-making	8 (5.6)	28 (19.4)	21 (14.6)	28 (19.4)	61 (42.3)	3.71
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## V. CONCLUSION

The generalization of the above-mentioned opinions of workers about Suggestion system and its acted factors for personnel indicates in the next figure.



**Fig. 4.** Structure of Suggestion system factors

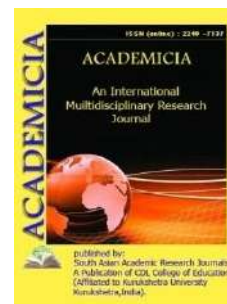
Thus, based on the results of this study, we can say - for Suggestion system as a personnel development tool:

1. messages regarding who is invited to participate must be clear (in principle – all employees);
2. education and training are very important in the first stage of Suggestion system development;
3. the rewarding procedure must be suitable and clear for workers;
4. Suggestion system needs continuous support for the system.

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## ARCHAEOLOGICAL STUDY OF ANTHROPOGENIC LANDSCAPES OF UZBEKISTAN

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### ABSTRACT

*The article covers the archaeological study of the problem of anthropogenic landscape in Uzbekistan, the interaction of mankind with nature in the period from ancient times to the Middle Ages in the territory of Uzbekistan, namely the emergence of new landscapes, that is, anthropogenic landscapes in accordance with the conditions of their habitat. The main objective of the study was to find out what impact humans have on nature according to their needs, living in ancient caves, rural settlements, cities. In the virtual reconstruction of anthropogenic landscapes used Roman, Greek, Chinese sources of antiquity, as well as data from medieval geographers and tourists, methods of analytical study, geo-archaeology, bio-archaeology, palaeoecology, GIS technology and computer graphics, as well as methods of archaeological research. Many methods of analysis of archaeological sites also relate to landscape analysis. The artefacts, obtained as a result of researches of the archaeology of Uzbekistan, testify that our ancestors lived in harmony with nature, influenced the natural landscapes differently, creating a kind of anthropogenic landscapes. The results of this study show humanity's interest in nature, its psycho-emotional, aesthetic views and even its attitude towards housing design.*

**KEYWORDS:** *Archaeological Expeditions, Archaeological Research, Irrigation, Landscape Archaeology, Anthropogenic Landscape, Rock Drawings.*

### • INTRODUCTION

The study focused on highlighting the influence of ancient people on landscapes based on materials obtained in connection with the organization of the first archaeological expeditions in Uzbekistan. In the science of archaeology of Uzbekistan, ancient anthropogenic landscapes on the territory of Uzbekistan have not been explored as a separate scientific direction. Although

landscape studies have been studied by some researchers in terms of the urbanization of ancient times, to date landscape archaeology In Uzbekistan cannot fully reveal the industry direction. Literature related to the study is virtually non-existent, mostly in the form of scientific articles and theses. Information concerning the archaeology of the landscape of Uzbekistan can be obtained from scientific journals and monographs devoted mainly to the results of archaeological research. Although this literature was not devoted to the problem of the anthropogenic landscape. Based on the study of artefacts and data collected in the literature on ancient destinations, graves, flora and fauna of urban remains, farms related to human production, mining and raw materials, it has been found that there is a need for comprehensive research in this field. For this reason, the study aims to highlight the history of the study of anthropogenic landscapes in Uzbekistan by summarizing materials concerning anthropogenic landscapes distributed in various sources.

Archaeology today addresses many areas of geography exploration, along with other historical areas. One area related to the study of landscape formation and development is the study of anthropogenic landscape, which plays an important role in archaeological research.

Since time immemorial, man has made changes to natural landscapes based on his own needs and often alters them. The result is anthropogenic landscapes, not natural ones. [1, p. 293] Archaeological study of the problem of anthropogenic landscape in Uzbekistan is connected with the study of the first complex archaeological expeditions in the region. [2; 3]

In particular, studies of the Thermesian complex archaeological expedition led by M.E.Masson, Excavations in the Fergana Valley in connection with the construction of the Great Fergana Canal led by Y. Gulyamov, Based on the materials collected during the excavations in Khorezma led by S.P.Tolstov, we see that the interaction of mankind with nature in Uzbekistan from ancient times to the Middle Ages created a new landscape, that is, anthropogenic landscapes that adapt natural landscapes to their living conditions. Humanity has created various anthropogenic landscapes from ancient times to the present day, and they have in some ways also had a negative impact on nature.[2; 3; 7]

Scientist A.Valiev, who studied the history of anthropogenic landscapes, stressed that the study of the formation and development of anthropogenic landscapes of ancient cities of Uzbekistan is based on archaeological materials and written sources [6]

The scientist points to the rapid expansion of human settlements and population growth during this period as a key factor in the development of anthropogenic landscapes in ancient times. It has been observed that settlements originate in the nature of the oasis and develop due to their water supply. Such irrigated areas for North Bactria have been studied by M.E. Masson and E.V.Rtweladze, and in their studies, cities and localities have been classified by the nature of the irrigated areas. [7; 8]

Today, archaeologists are faced not only with finding new finds, but also with extensive study of artefacts left behind by humans, the landscapes in which they lived, and their connections to the natural environment. Research in this field is carried out in an area called "landscape archaeology." In studies of landscape archaeology, archaeological methods of study have shown that ancient people chose and mastered areas suitable for hunting or harvesting, farming or animal husbandry, population location including rural and urban habitable areas, ancient agricultural fields, water. It is important to have an idea that sources are located around heat sources. Cooperation from different fields plays an important role in integrated research in

landscape archaeology. The use of GIS technologies in such research, archaeological data, paleobotanists, palaeogeography, anthropology and other sciences allow the creation of a virtual archaeological landscape.

#### • METHODS

In the virtual reconstruction of anthropogenic landscapes of Uzbekistan, we use data of ancient Roman, Greek, Chinese sources, as well as medieval geographers and tourists and methods of archaeological research. At the same time, advances in archaeology-related science, including geoarchaeology, bioarchaeology, paleoecology, paleozoology, are widely used in the study of landscape archaeology. GIS and innovative computer graphics technologies are the main methods of research. Many methods of archaeological monument analysis are also applicable to landscape analysis. The analysis of landscape archaeology covers a number of methods of research. These methods include plant dust analysis, geographic information system (GIS), soil analysis, fauna analysis, geo-radar, archival data (maps) and, of course, archaeological excavation methods. Analysis of plant dust, fauna and flowers provide the archaeologist with information on the natural flora of people living in the area, as well as the flora and fauna grew by humans. Material evidence found in ancient cave sites, as well as rock drawings, the mines they dug to make tools, served as a major source in the study of anthropogenic Stone Age landscapes. The history of early rural settlements, early processes of urban development and their impact on landscape change, crafts and production processes and the raw materials used therein, anthropogenic human impact on natural landscapes in agriculture and livestock, water landscapes, road and garden greening based on archaeological findings and written sources have been studied by comparison.

#### • Results

From ancient times to the present day as a result of human development of natural landscapes with comfort for itself, the discovery of new fields, new roads began to appear peculiar anthropogenic landscapes. As a result of the work on the history of anthropogenic landscapes in Uzbekistan - the development of archaeological research, the socio-economic development of the region at the same time became possible to cover the main stages of irrigation history. Archaeologists who researched such issues as the material culture of ancient people, flora and fauna of this period, as well as natural landscapes and their development by primitive people on the territory of modern Uzbekistan, noted that since the Stone Age, primitive communities have developed certain regions and created a kind of material culture. The development and development of environmentally friendly spaces, in particular the Amu Darya and Zarafshan river basins, as well as many small water bodies in the region, has led to the development of its shores. Archaeologists note that since the last stages of the Mesolithic and throughout the Neolithic period, the development of this region has hardly occurred in the nature of the settlement, and the landscape, climatic and ecological conditions have been in constant decline for a long time. [9, p. 59.]

However, due to the change in the direction of water flow in the river basin, it is observed that the habitat of the population also changes accordingly. Researchers explain the fact that the lands developed by the ancient communities of Central Zhetysay were formed based on certain laws, mainly for natural reservoirs, slopes of large rivers that flow from mountain slopes to the oasis, and slopes of these rivers. It is noted that the location of the sites belonging to the cultural

communities of Central Fergana is related to the slopes of river streams and lake basins. The unique landscape and climatic conditions of each region have served as a decisive factor in the development of these territories by ancient communities.

Most of Uzbekistan's territory has been quickly mastered by mankind since the last stages of the Stone Age. The anthropogenic impact of Stone Age people on nature in Uzbekistan is also known from many rock drawings found in the area. In recent years, interesting research has been carried out in this area and new monuments have been opened. Of great scientific importance in Central Asia are rock drawings found in the Zarauta Gorge.

The images are drawn mainly in connection with the hunting process. The photos show people hunting animals such as bulls, gazelles, pigs, goats and owls using dogs. Petroglyphs belonging to Stone Age communities in Uzbekistan were discovered in Sarmishsai on the Murontov Range, in Khojaksit on the Chatkal Range and in Bukanta.

The overall content of rock images reflects the learning of primitive communities, the relationship between humans and nature. F. Maksudov, a scientist who studied the rock painting of Zarausa, concludes that the first cultivations in Central Asia began in the foothills, as in the Middle East. [10, p. 10]

The start of the first irrigated agriculture in Central Asia, including Uzbekistan, also led to the first water landscapes in the region. Many studies have been conducted in Uzbekistan on the history of irrigated agriculture and irrigation, and great scientific achievements have been made in this area. In particular, major scientific works reflecting the history of development and irrigation of agricultural lands of ancient Khorezm, Zarafshan oasis from ancient times to the present day have been created. When studying water landscapes in Uzbekistan, studies conducted in the Fergana Valley are of particular importance. The Fergana Valley is a fully developed region of Central Asia as an ancient centre of irrigated agriculture. Studies A.Yu. Yakubovsky, M.E. Masson, V.A. Shishkin, S.P. Tolstov, Y.G. Gulyamov, B.A. Latynin, I. Ahrarov, A. Anorboyev, B. Matboboyev, G. Ivanova are of special importance in archaeological research of this area. [2; 3; 7;] Their research focuses not only on the history of agriculture and handicrafts in the region but also on the history of irrigation. The first archaeological study of the Fergana Valley was carried out, especially during the construction of the Great Fergana Canal, which produced a great deal of material to illuminate the anthropogenic landscape of the region. As a result, the history of irrigation in the Fergana Valley was covered by written sources and archaeological research. The Fergana Valley is the oldest agricultural oasis in Central Asia, located in the upper Syr Darya. Soil fertility, availability of water sources and favourable climatic conditions were the main factors in the formation and development of the first sedentary agriculture here. Fergana is one of the regions with the first developed agricultural culture such as ancient Bactria, Sogd and Khorezm. Over the years, archaeologists have discovered monuments of the Paleolithic, Neolithic and Bronze Age. Archaeological monuments such as Kairakkum, Kapchigai, Chust, Dalwarzin, Eilatan, Shurabashat, Oqtom and Kungai became known to science. In studying the history of the ancient material culture of Fergana, remains of Marxamata, Simpepa, Karkidon, Gairattepa, Munhoktepa, Kalai Bolo were discovered, as well as remains of multi-layered cities such as Kasan, Ahsiket, Kuva, and anthropogenic landscapes created by many provide information. Archaeological artefacts associated with ancient farming and crafts from these monuments provide interesting information about how the land developed



at a time where the soil was obtained in pottery, an important industry of crafts, their achievements in the technique of mining and processing metals. The fact that burnt grain in the ruins of the city of Kuva was burned is clear evidence that the population was farming in ancient times, and the fact that this area is rich in water shows us that a unique water landscape and a unique anthropogenic landscape around the city have emerged here. The discovery of a sickle, plough, knife used in horticulture, as well as agricultural tools, attests to the economic activity of the population of the period, and on the other hand, there can be no denying that a garden landscape was created in the city. The discovery of the grain mill once again illustrates the economic activities of the ancient residents of Fergana. [11]

Archaeological and hydrological studies conducted by archaeologists and specialists in the Fergana Valley show that the Sox River was fully used for irrigated farming. This river is one of the wettest rivers in the South Fergana Valley. Naturally, people's development of such large water resources certainly requires some administrative management in social life. As the irrigation system expanded, so did the administration. As a result, new social professions were formed. The road connecting the Fergana Valley with the Zeravshan oasis passing through the ancient town of Fergana, Kokand, shows that from the very first days of irrigated farming these areas were developed by Sogdian farmers [12; 13].

The data obtained from archaeological research in some ways support the information given in medieval Arabic sources. In particular, there are many cities and villages in Fergana, and the presence of rivers, mountains and deserts, as well as the presence of various minerals in the mountains, further expands the understanding of the natural and anthropogenic landscape of the cities of Fergana in the Middle Ages.

## • DISCUSSION

Uzbekistan as an ancient anthropogenic region has been studied by many archaeologists. Among these researchers, O. Islamov notes that in this region the places of humanity can be found not only near river valleys or reservoirs but everywhere. It emphasizes that since the Stone Age mankind has actively influenced nature, building channels, irrigation and distributing water. [13] Geologist O. Islamov demonstrates an anthropogenic impact on landscapes based on the results of many Stone Age seminars and stone processing. [14]

The anthropogenic influence of Stone Age people on nature in Uzbekistan is also highlighted by many experts thanks to the many rock drawings found in the area. Many archaeologists and hydrologists focused on the problems of forming the first aquatic landscapes in Central Asia, including Uzbekistan, with the beginning of the first irrigated farming.

## CONCLUSION

In conclusion, it can be said that the physical evidence obtained from the research of the archaeology of Uzbekistan shows that ancient ancestors lived in harmony with nature, in different ways influenced natural landscapes, while creating unique anthropogenic landscapes.

Archaeologists who researched the material culture of ancient people of the Stone Age on the territory of modern Uzbekistan, Flora and fauna of this period, including natural landscapes and their development by primitive people, Note that since the Stone Age primitive communities have mastered certain regions and created a kind of material culture, Created environmentally friendly spaces for human existence, in particular the basins of the Amudarya and Zarfshan

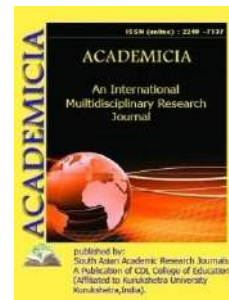
rivers, As well as numerous small water bodies located in the region. They began to develop the coast. The beginning of the first irrigated agriculture in Central Asia, including Uzbekistan, led to the emergence of the first water landscapes in the territory.

As a result of numerous studies on the history of irrigated farming and irrigation in Uzbekistan, an archaeologist has found that ancient Khorezm, Zarafshan oases from ancient times to the present day have been mastered by humans, irrigation history and anthropogenic influence of humans on nature. Of particular importance in the study of the aquatic landscapes of Uzbekistan are studies carried out in the Fergana Valley. It has become known that the Fergana Valley is fully developed as an ancient irrigated farming centre of Central Asia.

The results of this study also show humanity's interest in nature, its psychoemotional, aesthetic views, and even its relation to spatial design.

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## **MARKETING AS THE MAIN FACTOR IN INTRODUCING INNOVATIVE PRODUCTS TO THE MARKET**

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### **ABSTRACT**

*Nowadays, the main regularity of social development is the innovative renewal of the world economy, the transition to the so-called "new knowledge-based economy", the hallmark of which is the accelerated development of the economic activity. Modern society is rapidly evolving in the direction of postindustrial, while the transformations that are taking place are so radical that we can talk about a paradigm shift in economic development. In the new economy, enterprises that produce innovative products are becoming key. However, practical experience indicates a high degree of risk of launching innovative products on the market: on average, about a third of new products are defeated and bring only losses instead of profits. Thus, marketing support for the creation of new products becomes one of the most important problems of an innovative company. This article discusses the importance of marketing research in introducing innovative products to the market, features of the market for innovative products, the effectiveness of marketing activities and features of marketing innovation.*

**KEYWORDS:** *Effectiveness Of Marketing Activities, Factors Of Success Of A New Product, The Market Of Innovative Products, Marketing Of Innovations*

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## INTRODUCTION

Peter Drucker already said, "Business has only two functions - marketing and innovation". He considered marketing and innovation to be an important basis for the company's success. This is reason enough to take a deeper look at the purpose and role of marketing from an innovation perspective. Marketing includes tasks to increase sales. The focus is on customer and market orientation; all products, services and processes are to be aligned with the needs of customers and users [1]. Marketing has a very comprehensive role. These include the famous 4P, market research and strategic task.

- Market research comprises the identification of customer needs, on the one hand, current and future market needs, and on the other hand the exploration of possible market potentials.
- Marketing also plays a strategic role. Based on the corporate strategy, marketing plans are drawn up. In many cases, marketing also plays a leading role in the development of strategies, as they can identify strategically important markets based on market information, for example. 4P is the marketing mix for marketing products. Four levers are available for this purpose: product design, pricing policy, communication and the type of distribution and sales.

As the listing of marketing tasks shows, there are many overlaps between marketing and innovation management. For example, analysing trends, researching customer needs and defining product policy in the marketing mix with product development and product design are also tasks that can be found in the function of innovation management [2,3,4,5].

It is known that modernization of the economy is the main and important condition for the innovative development of the country. Nowadays, at a time when stabilization of the Republic of Uzbekistan is prevailing, it is difficult to achieve the diffusion of innovations, that is the introduction and rapid spread of new ideas, developments and technologies, without deep modernization of the economy. This will require, first of all, the integration of education, science and industry, as well as the introduction of several specific technical solutions that will facilitate the creation of new industries that will encourage the creation of new companies that will increase the demand for innovative products [6,7]. Today one of the most pressing issues facing the national economy is to achieve innovative development of the country in the short term. Otherwise, it is clear that it will be difficult to get a place in the ranks of developed countries for Uzbekistan. One of the main tasks for the positive solution of this issue is the implementation of comprehensive reforms. The Ministry of Innovative Development of the Republic of Uzbekistan is a governmental agency which administrates implementation of single state policy in the field of innovation and scientific and technological development of the country, aimed at comprehensive development of society and state life and increasing the intellectual and technological potential of the country. Innovation development is a systematic process, which involves the implementation of clearly defined measures according to the plan, that is, in a strategic way. In this regard, the decree of the President of the Republic of Uzbekistan dated September 21, 2018, No PD-5544, the strategy of innovative development of the Republic of Uzbekistan during 2019 and 2021, the "road map" on its implementation, the confirmation of the indicators of the Republic of Uzbekistan for innovative development until 2030 have been essential. The main purpose of the strategy is the development of human capital as the main factor determining the level of competitiveness of the country in the international arena and the

development of innovation, and one of the important objectives of the strategy is the entry of the Republic of Uzbekistan into the ranks of 50 advanced countries of the world in terms of the Global Innovation Index ranking until 2030 [8].

## REVIEW OF THE LITERATURE

Initially, it is desirable to introduce clarification of the concept of innovation. In the era of economic globalization, innovative ways of organizing the system of all levels are crucial in the formation of a new model of economic growth. At the same time, the main tool of competition is not the possession of capital resources and material values, but the ability to develop and implement innovations. In this regard, the growing interest in the problem of innovative development on the part of both government agencies and businesses is obvious.

The first most complete description of innovation processes was introduced by the Austrian scientist J. Schumpeter in the work "Theory of economic development" published in 1911. According to J. Schumpeter, "innovation is a source of profit:" profit is essentially the result of performing new combinations", "without development there is no profit, without profit there is no development» [9].

A. B. Titov considers innovations (innovation) as the final result of the creation and development (implementation) of a fundamentally new or modified tool (innovation) that meets specific social needs and gives several effects (economic, scientific, technical, social, environmental) [10].

In our opinion, the essence of innovation should be defined as the final result of a synergistic interaction of research and scientific and technical activities aimed at improving the technical level, as well as the release of new high-performance products and bringing economic, social, environmental, scientific and technical or another type of effect.

Nowadays, the market is dominated by fierce competition between enterprises, and to win in it, companies need to put a lot of effort. Therefore, innovation is one of the main factors of success in market conditions. It is an innovation that gives companies the opportunity to create competitive advantages and successfully operates in the market in a highly competitive environment. In order to achieve this, businesses need to implement innovative transformations in a timely manner, identify new markets, and predict consumer preferences as quickly as possible.

It is an innovation that helps ensure that a newly produced product has the necessary benefits for consumers that distinguish it from competitors' products, as well as protection from copying by competitors. Accordingly, the main condition for the introduction of any innovation at the present time is marketing research and technologies that identify the needs of consumers. Therefore, marketing is the most important component of the innovation management process of an enterprise that seeks to offer and implement a new product on the market.

As L. Ronald Hubbard notes, marketing helps prepare a product, deliver it to the market, and place it there in a way that achieves the highest possible sales and the highest possible response. Marketing allows you to research the needs of the market for innovations, generate demand for new technologies, analyze the company's capabilities, identify the needs of customers and offer the innovative product that will be in demand by the market [11].



By combining the concepts of "marketing" and "innovation" through the application of marketing research at all stages of creating an innovative product, it is possible to derive such a definition as "innovative marketing"[12].

### **Significance of the study**

From our point of view, the main problems of the innovative process in Uzbekistan are largely related to the insufficient development of marketing in scientific-technical organizations and innovative enterprises. One of the most important problems of an innovative company is marketing support for the creation of new products. Practical experience indicates that there is a high risk of introducing innovative products to the market: on average, about a third of new products fail and bring only losses instead of profits.

The specifics of introducing new products to the market are related both to the specifics of the products themselves and to the specifics of the market. Generally, the following fail when entering the market:

- 25-27% of industrial goods;
- 33-35% of personal consumption goods;
- 28% expansion of the existing range;
- 30% of brand innovations;
- 45% of new products themselves [13].

As it can be noticed, the market of consumer commodities is more risky, due to the higher level of competition and the specific behaviour of consumers in this segment. Additionally, these figures demonstrate a higher level of risk when introducing fundamentally new products to the market, which can often be attributed to the so-called breakthrough innovations. Among the reasons for the failure of new products, the following factors are usually identified: insufficient market analysis, product defects, lack of effective marketing measures, excessively high costs, actions of competitors, lack of support for bringing the product to market, production problems.

### **RESEARCH METHODOLOGY**

A systematic approach, generalization and synthesis methods are effectively and appropriately used in the article.

### **RESULTS AND DISCUSSION**

The relationship between the risks of innovative process and the level of marketing development in the company is clearly visible if look at the stages of the innovation project: 6 stages of the 14 stages listed below are directly related to the effectiveness of marketing activities carried out by the innovator/innovative company.

- Search for new ideas
- preliminary market assessment
- the selection of the "right" ideas
- preliminary technical evaluation of the product
- detailed market research
- economic analysis (financial analysis)
- development of a new product concept (production of a prototype)



- 
- technical testing of the product
  - testing by consumers
  - experienced sales
  - experienced production
  - economic analysis (clarification of financial indicators)
  - launch production
  - bringing the product to market

In other words, the factors of the success of a new product are:

- the superiority of the product over its competitors (distinctive properties that contribute to a better perception by consumers) [14];
- marketing know-how of the company (understanding the behaviour of customers, the pace of adoption of new products and the size of the potential market) [15,16];
- Existence of the technological know-how which is protected by a patent or trade secret regime.

As it is seen, commercial success cannot be ensured only by obtaining technological advantage. Thus, any innovator or innovative company will sooner or later have to think about marketing factors.

Innovative products form a specific market for high-tech and scientific-technical products. Its features in comparison with the market of "traditional" goods are diverse and affect all aspects of the relationship between the seller and the buyer, requiring, accordingly, their reflection in the marketing policy of the company. Among the features of this market, the following should be highlighted:

- particular qualities of the product itself (uniqueness; sometimes technological complexity; high costs for its production at the first stages);
- the novelty of the market for the firm (especially for a small innovative company that is at the start-up stage);
- unknown product (and sometimes the manufacturer) for the market;
- the unpredictability of consumer behaviour;
- low elasticity of demand from the price, so, as a result, a limited impact of pricing policy on sales volumes;
- small market capacity (especially for high-tech industrial products);
- lack of direct competitors at the initial stages (due to the monopoly on intellectual property);
- achievements of the company's employees in the theoretical field with a well-constructed policy which can significantly raise the company's rating among consumers;
- dependence of sales of innovative products on the level of innovative potential of the consumer: many pioneer innovations are difficult to sell due to the general technological backwardness of a number of sales markets [9,17].

The problems of bringing innovative products to the market that are unfamiliar to the consumer are primarily associated with the risk of the unpredictability of the reaction of buyers. This is typical for companies operating in any industry, but for the market of high-tech products, where the speed of product updates is particularly high, this is especially relevant. An innovative

product can "fail" without proper consumer training, without an elaborated strategy for bringing this product to market.

As mentioned above, the specifics of the innovation market determine the features of innovation marketing, which is appeared in the following:

- the necessity of research and study potential consumers in several industries at once, since quite often the results of scientific and technical development have intersect oral character;
- selling innovative products requires a long and consistent advertising campaign, so as the buyer must "Mature": they need to be explained in detail the meaning and benefits of innovation, otherwise they will not buy this product, because they are not familiar with it;
- innovative products should not only meet qualitatively new needs or old needs in a qualitatively new way but also provide additional advantages that consumers can understand in comparison with existing analogues and substitutes;
- when promoting complex scientific and technical products on the market, it should be focused on an experienced, so-called the "collective" consumer ("purchasing centre", which can include employees from various departments – from purchasing to production);
- sales of innovative products require lengthy negotiations, since high-tech products are pre-selected in both the production and consumer markets, and therefore purchases are made through multiple comparisons and discussions with experts;
- very often, the technical complexity of innovative products implies the organization of a good after-sales service: in other words, no service - no commercial success of the new product. An example is a promotion of hybrid cars to the market, the spread of which was hindered not only by their price but also by insufficient development at the first stage of their maintenance infrastructure;
- the image of an innovative company is significantly influenced by the results of fundamental research of its employees. In addition, conferences, scientific forums, and other forms of communication in the professional community can serve as marketing communication channels for innovative businesses;
- the complexity of an innovative product creates special prerequisites for the formation of a so-called "whole product", where all its real and potential advantages are considered in a complex.

## **FINDINGS AND CONCLUSION**

All the factors listed above prove the importance of the marketing complex for companies in the innovation sphere. Most of these companies should be classified as small and medium-sized enterprises, so their main characteristics are the small size of the company (including the number of employees) and limited resources. In this regard, marketing has its own characteristics, as mentioned above. There are many definitions of marketing, but the definition given in the small business marketing Guide seems to be the most appropriate for an innovative business.

Marketing includes all the functions of satisfying the needs of the consumer by promoting the right product from the manufacturer to the right consumer at the right price in the right place, at the right time and with the right communication with the consumer.

In other words, the combination of these six "right" leads to customer satisfaction and successful effective marketing.

In our opinion, in modern conditions, marketing should solve the following tasks:

- discover the real needs of real consumers of new products and services;
- satisfy these needs by bringing the right product to market, at the right price, in the right place, at the right time;
- Inform the consumer about the new product by using the right advertising company, using the right information channels.

Thus, innovative marketing works at the forefront of the innovation process to explore market opportunities and customer needs, receives feedback from the customer during development, and sells the product at the back end of the process. In this way, innovative marketing ensures that new products and services are targeted at the market and customers. This is one of the most important success factors in managing innovation to increase profit opportunities and eliminate failures and unnecessary losses [18].

In conclusion, one should say that the responsibility for innovation should be intensively engaged in the topic of innovative marketing and work closely with marketing and sales. The top priority for all of us should be to develop a new product that customers can snatch from their hands.

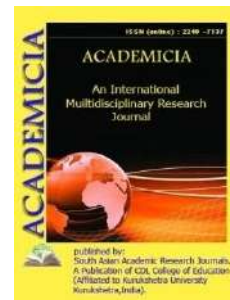
Furthermore, it is essential to note that high-quality marketing research of the innovation market allows to carry out effective innovative activities in the future that meet the requirements and needs of the market. Before starting to develop a new product, the organization needs to determine who is the target audience of an innovative product, and what consumer needs it will meet. This approach contributes to the correct promotion and positioning of a new product (service, technology) on the market.

A set of marketing measures should be aimed at convincing consumers that this product is ideal for them at the present time. That is, the fact that an innovative product is able to meet their specific needs. Before introducing an innovative product to the market, the company will have to conduct trial marketing by testing the product, making trial sales, participating in competitions, exhibitions, and fairs.

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## THE USE OF GIS TECHNOLOGY TO CREATE ELECTRONIC ENVIRONMENTAL MAPS

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### ABSTRACT

*Geographic information systems (GIS) are the main technological means of Geoinformatics, which is based on the use of various sources of information, including cartographic materials, and aims at creating maps.*

**KEYWORDS:** *Geoinformatics, Environmental Mapping, Information Binding, Maps, Ecosystems, Geographic Spaces, Aero and Space Imagery.*

### INTRODUCTION

In the second half of the 20th century, the process towards automated data processing and the introduction of computer technology began in various fields of knowledge. Ideas and achievements of various directions of science and technology united and found their application in Geo-informatics.

How the science of Geoinformatics develops principles, methods and technologies for obtaining, accumulating, transmitting, processing and presenting information in order to generate new knowledge of spatial-temporal phenomena in the geographic shell. In addition, Geoinformatics with mapping is related to the use of cartographic coordinate systems as a basis for geographical localization of spatial information received and stored in GIS, and the advantage of cartographic analysis as one of the most effective ways to identify spatial geographical patterns, relationships and dynamic trends [1].

### MATERIALS AND METHODS

Cartographic images are some of the most appropriate forms of information presentation, so the creation of digital, electronic, computer maps and atlases is often seen as the main GIS function. Despite the obvious links of Geoinformatics with cartography, the tasks of creating and using

GIS are not limited to the production of cartographic products and often go to the level of comprehensive research areas.

There are several dozen definitions of GIS. The following definition most accurately reflects, in our opinion, the essence of this notion.

Geographic Information System (GIS) is an automated system for working with graphic and thematic databases, performing the functions of modelling and calculation, thematic maps and atlas creation, serving for various decision-making and control. GIS allows to quickly perform data search, to combine aerial or space photo image and map, to perform the image transformation, geometric correction, to combine, synthesize large volumes of transformation, to change projection and scale at the user's request, to transform coordinates, to determine and show spatial relationships on the computer display screen using various models for this purpose.

- Geographic information systems have found application in different spheres of activity due to the fact that [2]:
- Thematic and topographic maps are the main source of spatial and temporal information for solving various tasks;
- Geographic and rectangular systems are the basis for linking information;
- The cartographic analysis is one of the most effective ways to identify geographical patterns;
- Operative, automated production of maps, schemes, plans is one of the main GIS functions.

At the modern level of social development, the role of geographic information systems in the Earth sciences is not limited to the collection, processing and storage of information. GIS has become almost the main and undivided tool for modelling natural, economic, social processes and situations, tracing their links, interaction in space and time, and most importantly - a means of ensuring decision-making management. It is possible to formulate the main GIS requirements of cartographers and geographers at present. Firstly, a geographical information system implies a whole complex of machinery and programs necessary for the comprehensive provision of scientific research. It should provide technical, programmatic, informational support for research and development management of territories. The second requirement is "modularity" and "openness" of the system.

The GIS should be represented by a set of modules responsible for specific operations, which can be easily transformed or upgraded as desired by the user.

Electronic maps received by means of computers allow the researcher to work in dialogue with the machine and open wider prospects for the operative construction of the models reflecting not only statics but also the dynamics of the phenomena by comparison of various objects in space-time aspect that is especially important for carrying out of ecological examinations.

Working interactively with electronic maps with the help of manipulators, it is possible to highlight, enlarge separate parts of the image for detailed analysis, as well as combining them to obtain synthesized information, scale the images and thus reflect the development or regression of the phenomenon under study. Organizing access to individual, operator-selectable map elements allows analysis of relationships between components for more accurate event analysis.



Editorial mode provides an opportunity to make quick changes and simulate the existing or projected situation. The possibility of joint illumination of the contour and halftone images of airborne and space images makes the process of map updating much easier.

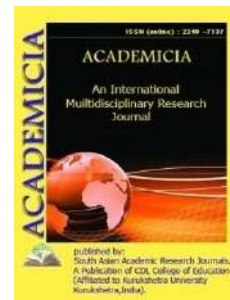
Modern computer technologies make it possible to carry out purposeful processing and automated interpretation of huge arrays of cartographic data, including ecological information, in an acceptable, much more timely time mode. At present, Uzbekistan and other developed countries are conducting large research works aimed at addressing global, national, regional and local environmental problems using Geoinformatics methods and tools. For these purposes, Geoinformation shells developed in the USA, Canada, France, etc. are mainly used. A smaller role is played by domestic software development.

## CONCLUSION

However, almost all foreign and domestic modern programs differ in a rather narrow specialization, focusing on a limited set of specific tasks. This often does not allow the full use of powerful graphic design tools, for example, in analyzing the specifics of the formation, accumulation and redistribution of pollutants in ecosystems, which is especially important for environmental mapping. Therefore, it is often necessary to combine, combine and Refine several software products to conduct a complete and detailed environmental study of the territory.

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## INNOVATIVE TECHNOLOGIES AND FORMATION OF CRITICAL THINKING OF STUDENTS

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### ABSTRACT

*Introduction of innovative pedagogical technologies in the educational process, continuous search for improving the efficiency of education have become a necessity today. When teaching students to think independently, an important role is played by the organization of lessons based on innovative pedagogical technologies in improving the efficiency of education, increasing motivation and interest in knowledge in the development of consciousness, forming a world view, enriching speech.*

**KEYWORDS:** *Critical Thinking, Innovative Pedagogical Technologies, Educational Effectiveness, Distance Education, Information and Communication Technologies.*

### INTRODUCTION

Today, the rapid development of science, technology and industry requires education staff to raise the quality of education to a new level, and each staff member of the system, especially teachers, has a greater responsibility. downloads functions and duties. The main task of the education system today is to help students become a strong state that loves our country, relies on its knowledge and talents, and acquires knowledge independently, using modern information and communication technologies. It consists of healthy, comprehensive and healthy education. These tasks are carried out mainly through effective lessons. At a time when progress is rapidly entering the system of life, complex minds and technologies are gaining ground in the minds of our children. In such a situation, a teacher needs a lot of skills to pass on new knowledge, to teach the student to read and do research. [1.2] It is natural that this process requires every teacher who loves, respects and respects his profession. encourages the study and discovery of new pedagogical methods and techniques.

In primary classes, where the child's consciousness and thinking are already being formed, it is very important to master the teacher's skill, the ability to skillfully implement modern technologies in the learning process, to look for new ways and methods of teaching, and to positively use advanced pedagogical experience. Therefore, the introduction of modern pedagogical technologies in the educational process, the continuous search for improving the effectiveness of education have become a necessity of today.[3.4] in teaching students independent thinking, an important role is played by the organization of lessons based on pedagogical technologies in the development of consciousness, the formation of a worldview, increasing motivation and interest in knowledge in the enrichment of speech.

## **MATERIALS AND METHODS**

Purpose and objectives of the study: to provide methodological and practical recommendations for improving independent critical thinking among students of higher education institutions, to bring up mature intellectually independent and critically thinking people with comprehensive education, organizing the educational process on the basis of new educational technologies, as well as to improve the social and political, theoretical, spiritual and moral knowledge of students, to form independent critical thinking. Methods of research work: In the process of research, methods of analysis, synthesis, comparison, generalization, pedagogical observation, conversation, sociometry, content analysis were used. Modern innovative educational technologies. At present, the teaching methodology is going through a difficult period associated with changing educational goals and developing federal state educational standards based on a competency-based approach. Difficulties are also related to the reduction of teaching hours for individual subjects in the core curriculum. All this requires new pedagogical research, the search for innovative tools, teaching and learning methods, the development and introduction of innovative educational technologies into the educational process.[2-6]. What are "innovative educational technologies"? It is a complex of three interrelated components:

Modern content transmitted to students implies the development of knowledge and, of course, is not only suitable as science. This content should be presented in the form of multimedia training materials, which are transmitted through well-structured and modern means of communication.

Innovative methods of education are not only based on materials science, but also on the interaction between students - they are active methods of building competences and active perception, based on their involvement in the educational process.

Effective use of modern educational infrastructure, including information, technology, organizational and communication components, to effectively take advantage of distance education.

Different authors approach in their own way the methods of solving this current scientific and practical problem. In this regard, the fruitful activities of a number of research scientists can be particularly noted. For example, Malla Ochilov, B. Ziyomukhamedov, M. Tozhiyev, T. Gafforov, N. Saidakhmedov and others tried to express their opinion on modern pedagogical technologies on a large scale.[1.2]

Innovative directions of priority national project "education" or modern educational technologies include the development of education; problem occupations; multistage training; a system of collective education; technology of the solution of problems; research methods; design of

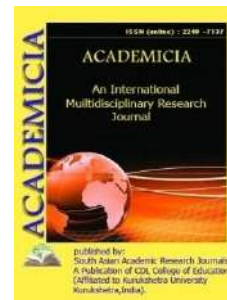
methods of training; technologies of modular training; system lecture семинарно - test training; The use of gaming technologies in learning (role-playing, business and other types of learning games); Joint training (team, group work); information and communication technologies; technologies of health care. Critical thinking technology. Critical thinking is closely related to speech. Psychology shows the presence of oral, written, internal, external, active and passive forms of speech. All kinds of speech should be developed in man. From the oral speech, the student uses "mental attack," discussion, "statement of opinion on the material read, etc. So far, more attention has been paid to the development of oral speech in the course of training. Attention is also drawn to the formation and development of written speech. The traditional teaching method paid sufficient attention to the formation and development of written speech. Written speech is formed later in a person's life. If you don't pay much attention to exercise, it may not develop enough. Written speech plays an important role in the development of the pupil's thinking. Written speech requires a broad and deep understanding of thought, a clear expression, an understanding of the thought presented. New evaluation activity - assessment of personal achievements. The humanistic paradigm associated with its implementation is learning and purposeful study of the individual. Society needs to recognize the personal achievements of each subject of the educational process: student, teacher, family. The introduction of the assessment of personal achievements ensures the development of the following components of the individual: motivation for self-development, the formation of positive guidelines in the structure of self-awareness, development of self-assessment, voluntary regulation, responsibility. As soon as the student learns to think, the thoughts acquired from him will be exceptional and it will be possible to apply them in practice. [8.9.10.11] Pedagogical technology is the main goal of critical thinking of the student. The development of the process of thinking in general, especially critical thinking, is now required. Thinking (thinking) arises in a certain problematic situation. During the solution of the problem, there is a deep analysis, synthesis, comparison, generalization, abstraction, judgment and summation of results in the brain. Critical thinking is expressed in awareness and reflection of the essence of each state. New pedagogical technology requires the development of critical thinking in all parts of the lesson using special methods. In the course of training, students have to seize knowledge based on their active work, work with interests, not strain, fully use the opportunities. If the student works on his own, he carefully learns the knowledge. The student has a sense of creative search.

## CONCLUSION

The study and creative approach to the experience of the introduction of pedagogical technologies, humanization of the educational process, transformation of the student from a passive object into an active subject, will be important in ensuring a clear direction of cognitive activity and reproducibility of the educational process as a production process. Also, teachers form and improve skills of compilation, testing of test tasks of a different shape. And the appeal to various didactic structures created within the framework of pedagogical technology provides an opportunity to rationally and creatively approach the organization of the educational process, to have the freedom of the teacher, to assess the effectiveness of various forms, methods and means used in the lesson. It should be noted that compliance with the principles and rules of pedagogical technology ensures the content of the educational process in accordance with the student's personality, interests, aspirations, characteristics of age periods and individual rates of development.

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## **INCREASING EFFICIENCY OF PRODUCTION OF MACHINE PARTS USING A COMBINED BLADE TOOL**

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### **ABSTRACT**

*The article justifies rational parameters of the combined tool for blade and finishing-strengthening treatment of internal surfaces of rotation. Recommendations on the selection of optimal modes of treatment of external and internal surfaces of rotation by combined tools ensuring maximum productivity have been developed.*

**KEYWORDS:** *Combined tool, Productivity, Сепараторного Инструмента, Инструмент*

### **INTRODUCTION**

Ensuring the maximum efficiency of machining and the specified quality level of the treated surface of machine parts is the most important technological task in their manufacture. One possible solution is to use combined tools for blade and finishing-strengthening treatments, which provide both reductions in labour intensity due to a combination of operations and high quality of the surface layer.

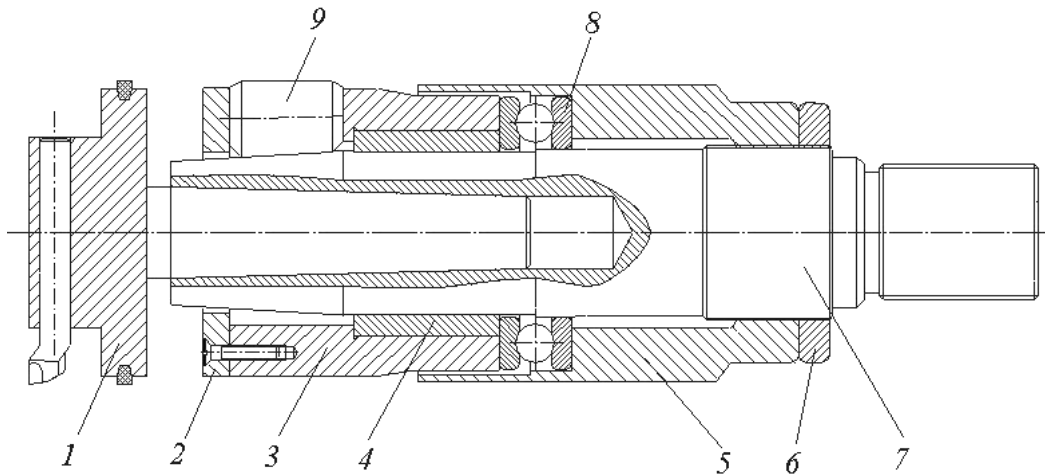
### **MATERIALS AND METHODS**

The purpose of the present work is to justify the rational parameters of the combined tool for blade and finishing-strengthening treatment of external and internal surfaces of rotation, as well as optimal conditions of its operation, which ensure maximum productivity.

As an example, a special combination tool combining cutting and deforming elements is considered to be a joint treatment of the inner surface of the hydraulic strut tube by melting and rolling.



The choice of tool design for specific processing conditions is mainly determined by the size and shape of the workpiece, requirements for accuracy and quality of machining, hardness and equipment used. [1.2.6] When designing the combined tool design, it is necessary to solve the following tasks: to select the tool and cutting scheme, to install the material of the working part, to determine the size and shape of the working elements.



**Figure 1.** - Diagram of combined tool for co-processing by melting and rolling.

When the tool is supplied and the workpiece is rotated, first turning is performed with a cutter installed in the cutting head 1, then surface plastic deformation is performed by rollers 9. Design of this tool is based on the application of a deforming unit of separator type made according to the planetary rolling scheme. The latter is carried out at complex motion of deforming elements: rotation around its axis and planetary motion around the part axis. Such a structure consists of working deforming elements, a separator, a support cone and a housing.

A distinctive feature of the separator tool is that the rollers are located in the sockets of the special separator. This allows the size and number of rollers to be selected based on the optimal ratio of their diameter to the diameter of the part.

Blade treatment at the operation of the combined tool is performed by a prefabricated through cutter with a plate of hard alloy T15K6.

Equipping the cutting insert with a hard alloy will ensure more uniform wear of the stages of the combined tool. [3.4.5] The geometric parameters of the combined tool are determined in the same way as for elementary tools. We take front angle  $\gamma = 12^\circ$ , rear angle  $\alpha = 10^\circ$ , radius at cutter tip  $r = 1$  mm. Justification of conditions of rational operation is made based on optimization of modes of the combined blade and finishing-strengthening treatment of external and internal surfaces of rotation according to the criterion of maximum productivity taking into account power and temperature limitations, as well as limitations on surface layer roughness parameters using linear programming method [2.6.7.8].

The plots of the dependence of the optimum feed  $S_{opt}$  on the surface roughness  $R_a$  in the combined blade and finishing-strengthening treatment of the structural steel for the different radius values at the tip of the cutter  $r$  are shown in Figure 2.

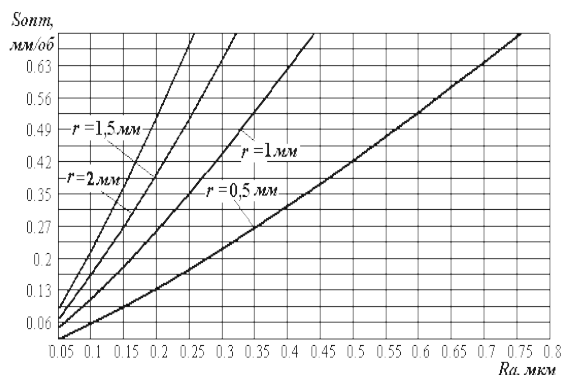


Figure 2.

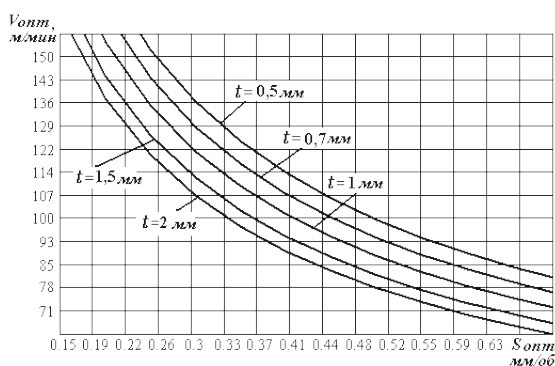


Figure 3.

Figure 2 - Graphs of the dependence of optimal feed  $S_{opt}$  on surface roughness  $Ra$  in combined treatment for different values of the radius at cutter tip  $r$

Figure 3 is a graph for determining the optimum speed  $V_{opt}$  depending on the optimum feed  $S_{opt}$  in the combined treatment for different cutting depth values  $t$ .

Figure 4 shows comparative data on change of economic efficiency parameters due to the application of combined treatment of water-resistant tube by combined melting and rolling-out instead of sequential treatment.

Treatment conditions: cutting depth in blade treatment  $t = 1$  mm, feeding  $S = 0.4$  mm/rpm, cutting speed  $V = 125$  m/min, main processing time  $t_{01} = 2.46$  min,  $t_{02} = 1.65$  min, unit-based processing time  $t_{st.k1} = 5.05$  min  $t_{st.k2} = 3.45$  min.



Figure 4. - Comparative analysis of parameters of economic efficiency of processing

Comparative analysis of economic indices confirms that the use of coherency and rolling-out hydraulic strut for pipe treatment in comparison with separate treatment allows to reduce the rate of time for operation by 36.2%, increase labour productivity by 56.4% and reduce cost by 32.4%.

## CONCLUSION

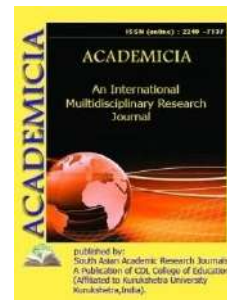
The article justifies rational parameters of the combined tool for blade and finishing-strengthening treatment of internal surfaces of rotation.

Recommendations on the selection of optimal modes of treatment of external and internal surfaces of rotation by combined tools ensuring maximum productivity have been developed.

Based on the performed justification of parameters of the combined instrument and conditions of its rational operation, the advantages of using a comminated blade and finishing-strengthening treatment of rotation surfaces have been confirmed.

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## DEMOGRAPHIC SITUATION AND ANALYSIS

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### ABSTRACT

*The article analyses changes in the process of birth in the families of the countries of the world, their demographic condition and analyses various socio-economic factors of their increase or decrease. Reliable information on the population of the Republic of Uzbekistan and its well-being, long-term forecasts and programmes for the socio-economic development of the country, creation of new jobs and employment programmes, development and sustainable development of the country. Is a important basis for scientific research.*

**KEYWORDS:** *The demographic situation, family composition, sexual ratio, marriage, birth restriction, specific coefficient of birth.*

### INTRODUCTION

A demographic situation is the demographic situation of a certain area during a certain period, which is based on the number, composition, and demographic processes of the population.

The population is a quantitative measure of the number of people in a particular region or group of people. The population is the most important indicator in population geography and demographic research. As mentioned above, the analysis of changes in population dynamics uses its absolute and relative indicators. Rapid population growth or decline can lead to dramatic changes in the demographic situation. The social, young gender and family composition of the population is an important factor in shaping the demographic situation. Gender proportionality, the reproductive age of the population and a high proportion of young people have a positive impact on the process of marriage and childbirth, ensuring sustainable population growth. On the contrary, the high proportion of older people in the population has a certain impact on the demographic situation. In this situation, the natural growth of the population slows down, the formation of labour resources slows down, and so on. Demographic processes play a special role in the emergence of a demographic situation. Demographic processes are the course of events in

people's lives related to the change of generations. The main demographic processes include births, deaths, marriages, and divorces (annulment or dissolution of marriages). Demographic processes have two main characteristics. The first is birth and marriage, which are additional factors in the transmission of generations, the continuation of the human race, and population growth. On the other hand, mortality and divorce are factors that reduce the population and negatively affect generational change.

## **MATERIALS AND METHODS**

Under the influence of demographic processes the population every day, each hour has various demographic phenomena: many kids are born, a certain part of the population closes eyes to life, several marriages are registered, new families are started, some marriages break up, break up, other part moves when a part of the population moves. Thus, the demographic composition changes from year to year. At first glance, such processes are simple, seemingly inevitable processes. But the emergence of these processes is linked to many socio-economic factors. The impact of these factors on demographic processes, the mechanism of their impact, changes over time at different stages of society 's development. As a result, both quantitative and qualitative demographic processes occur differently in each period, in socio-economic formation.

Therefore, when studying demographic processes, first of all, it is necessary to find out: 1) what patterns exist in changing the characteristics of individual demographic processes, reproduction of the population as a whole; 2) What factors are embedded in the formation of demographic processes of formation of separate periods, qualitative peculiarities of population reproduction? Such questions are worth answering. The answers to these questions will be determined through demographic analysis.

The main task of demographic analysis is, first of all, to determine all qualitative patterns of development of demographic processes of population reproduction, socio-economic conditions, a system of factors affecting demographic processes in a certain period or at the socio-economic stage.

The demographic analysis uses absolute (quantitative) and relative (demographic factors) indicators of demographic processes, demographic statistics, cartographic and demographic methods.

The birth of a new generation is an important demographic process in the process of population reproduction. When carefully studying demographic processes, comparing them by different population groups, countries, regions of the world, determining prospects for the future, demographic factors are used. The necessary aspects of the demographic process studied by these factors are studied at a deep and comparative level. Demographic differences between certain historical periods or two regions cannot be determined directly through statistics. Therefore, each demographic process is studied by means of special indicators, i.e. coefficients. For this purpose, the value of the registered demographic process per 1000 people will be determined. This means that 1,000 people are criteria in the study of demographic processes. This indicator as it was already mentioned above, is called "per mille" and is designated as follows - "‰". Demographic factors are separate demographic processes. Demographic factors have general, special and private aspects.

**Birth rate and its coefficients.**

Childbirth is the process of forming a child in a certain population group, which makes up certain generations. Birth is a biological process. But it changes under the influence of the socio-economic environment. Changes in the socio-economic composition of society determine the birth rate. The biological basis of childbirth is human fecundity, (fecundity) the ability to leave offspring, to leave offspring. The biological capacity of men and women, or couples to bear children, called swine, a term used in demographics to more women, what is the total pregnancy of every woman in the period of carrying a child (on average 15-49 years). Fluffiness depends on the biological characteristics, health of men and women. Scientific sources note that healthy women can get pregnant at least up to 35 times during the period of carrying a child (twins are also considered one pregnancy). But every woman can have an average of 10-12 live children, get pregnant 10-15 times (including dead births, miscarriages). Childbirth is a biological process that characterizes children born alive, it is associated with the attitude of people to reproductive tendencies, that is, to procreation. And the reproductive propensity changes in connection with the socio-economic environment in which a person lives. As a result, the person does not fully use their whistle, that is, the biological opportunity to see the child. Taking into account all the socio-economic opportunities necessary for the upbringing and upbringing of their child, they try to build a child, that is, to limit and control the birth of children. As mentioned above, there are General, special, and specific birth rates that are used to determine the birth rate.

**A general coefficient of birth rate.** It is the number of children born per 1,000 of the population and is calculated by the following formula.

$$n = \frac{N}{TP} \bullet 1000 \quad (1)$$

The T-studied period (year)

The R-average population of the study period

N-number of children born during education

The total fertility rate, as mentioned above, is calculated in ppm. This ratio is more used in the expression of fertility. With it is possible to study in general terms the changes that occur at birth in a certain territory or in generations. But the overall fertility rate allows slight deviations in terms of fertility. Because this indicator is directly influenced by the age and sex composition of the population. If the territory understudy has a high proportion of the population of children (0-14 years old) and older persons (60 years old and older) who have reached childbearing age, childbirth leads to a slight decrease in the total birth rate. Demographic scientists B.S. Uralnis, V.A. Borisov determined the criterion for estimating the birth rate with the help of the total birth rate. The total fertility rate in the studied territory or population group by the general criterion is less than 16 ppm, the birth rate is low: if 16-24 ppm-medium, if 25-29 ppm-high, if 30-39 ppm-high, and if 40 ppm-very high [1].

Special birth rates clearly express changes in the birth rate, applied in the comprehensive study of childbirth. This factor can be calculated for both individual male and female groups. Demographic studies are mainly applied to women of reproductive age (15-49 years). The



special birth rate for every 1,000 women aged 15-49 defines the number of children born, as follows:

$$F_{15-49} = \frac{N_{15-49}}{TW} * 1000 \quad (2)$$

$F_{15-49}$ -special birth rate

$N_{15-49}$ -number of children born at the age of 15-49 to women during the training period

T-the study period (year)

W-the average number of women of reproductive age (15-49 years old, in countries with low birth rates receive women aged 15-44 years).

The special birth rate is also calculated in relation to men. At the same time, for every 1000 women aged 15-49 years, there are 14-54% of the total number of men.

Private birth rates are the most accurate coefficients in the study of fertility and characterize the level of fertility in certain age groups. This coefficient is usually every 1000 units 15-19, 20-24, 25-29, 30-34, 35-39, 40-44 it is used to determine the number of children born to women in the 45-49 age group and is expressed as follows:

$$F_{x/y} = \frac{N_{x/x} + y}{TW_{x/x} + y} \cdot 1000 \quad (3)$$

$F_x / V$ -birth rate for a special age group.

NH / H+V-the number of children born to mothers of a certain age group.

T-the study period (year).

W-the average number of women in the age group studied.

The fertility summation coefficient (total) is the indicator that most accurately expresses the level of fertility in which regions of the world are located. it is used to Express the birth rate in States and certain population groups. When comparing the birth rate by region, the total birth rate is also mainly used. The total fertility rate is the average number of children born during the lifetime of each woman belonging to a particular generation (with the same birth rate in each age group, regardless of mortality and age changes). The total fertility rate is equal to the sum of the coefficients of the age groups of fertility.

$$F_{\text{sum}} = \sum_{15}^{49} y \cdot F_{x/x} + y \quad (4)$$

U-period between age groups (interval)

The total birth rate above 4.0 is considered average if the birth rate is below 2.15, and if the birth rate is below 2.15-4.0.

Throughout the development of society, birth has constantly changed by historical periods and regions. Until the second half of the 18th century, the birth rate was high in almost all countries

of the world. And since the second half of the 20th century, the birth rate has started to decrease around the globe.

The birth rate was not the same at all stages of society's development. In the periods preceding the capitalist formation, the birth was of a biological nature, that is, it was not restricted. A multi-ethnic society is also supported by the state. It is difficult to imagine that the current society is at a stage of development. It is worth looking at the essence of the issue, which is directly related to the socio-economic development of those times. Both in the time of slavery and in feudalism, polygamy interested every family, and at the same time society. Why is that?

First of all, the economic role of the child in the family was very great. In many countries, child labour was used in family work, Handicrafts, agriculture and animal husbandry. This means that child labour is supported by society since it accounts for a certain share of national income. Even in some States, such as Russia, the land given to peasants for work was distributed according to the number of children. In such conditions, as can be seen from itself, each family was interested in increasing the number of children.

Thus, birth, which is a biological process, is a series of social (literacy rate, socio-economic status of a woman. The role of the family in the State, society, customs, values, religion, ethnic composition, urbanization, etc.) (employment, women 's employment, family income, social security, etc.) medical (contraceptives and women 's knowledge of them, mother and child health) and demographic (young sex, women of reproductive age) "I, marriage, divorce (death processes) occur under the influence of factors. If we want to interpret the countries of the world according to their current state of birth, we must conditionally divide them into three groups. It is known that if the total fertility rate is less than 2.1, the fertility rate will be lower: if it is 2.1-4.0, the fertility rate will be medium and 4, If 1 or higher, the fertility will be higher. By this demographic criterion, the countries of the world can be divided into groups.

The first group includes countries with high fertility rates: Africa (excluding MSR, Tunisia, Maurice and Seychelles), many countries in Asia and South America, and some countries in Australia and Oceania. The average number of children in their families ranged from 4.1 to 7.0, and in some cases even higher. The countries with the highest fertility rates are Afghanistan, Guinea-Bissau and Niger, where the total fertility rate is 7.1-7.7, Yemen 6.7, Mali and Congo 6.2. Several factors are contributing to this high birth rate in families in these countries. The main ones are: the above countries are mainly economically developing countries, especially women with relatively low levels of education; Traditions that support many children are more preserved; Women are less involved in social production; Urban life formation is slow; The concept of birth control and the medical devices it requires are not widespread.

It should be noted that high fertility had some demographic implications. In particular, the population is growing rapidly, many new families are forming, and the number of children among the population is high. These demographic effects, in turn, lead to several socio-economic problems.

In high-fertility countries, the population grows at a rate of 2.5-3.2% per year over the next 15-20 years. Today, the total fertility rate in more than 40 countries is 4.1-7.5. It should be noted that the number of countries with the highest fertility rates in the world has declined over the past 10 years. There were 79 such states in 1989, dropping to 37 in 2005 to 42. While in 1989 the

proportion of the population living in these countries was 23%, by 2018 the figure was almost 18%.

The second group is countries with an average fertility rate of 2.1-4.0. Between 1989 and 2018, the number of countries with average fertility in the world increased from 48 to 66, an increase of 18. In 1989, Uzbekistan was included in the group of high-fertility countries, and in 2018 it was included in the group of medium-fertility countries. In 2018, the population living in the middle fertility group was 43.0% of the world's population. Fertility rates worldwide have already fallen sharply due to socio-economic factors. Where fertility is moderate, population growth rates are stable. They do not expect a sharp increase or decrease in the population. It will be easier to manage the development of the population, to solve the problems of economic development.

The third group is the low-fertility countries. In these countries, the population grows by 0.7-0.9% per year. Most families have only 1 or 2 children. It should be noted that between 1989 and 2018, the number of low-fertility countries increased from 44 to 75 or more than doubled. Today, almost half of the world's population lives in these countries. This means that by the middle of the 21st century, almost half of the world's population lives in families with few children. This decline in fertility among families living in the latter group of countries is primarily due to the spread of capitalist relations. As we have seen, the development of industry in capitalist production, the growth of cities and the spread of urban lifestyles have led to a decline in fertility in the third group of countries. Fertility rates across Europe have already fallen sharply, especially in urban areas.

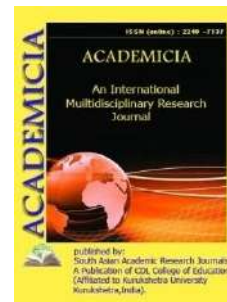
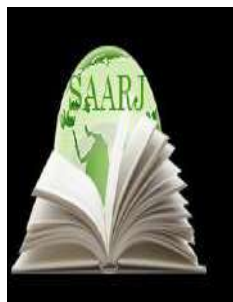
The next factor that has led to the decline in fertility rates currently in the States of this group is the greater participation of women in social production and employment. Another factor leading to a decline in fertility in economically developed countries is the excessive number of family violations, that is, marriage. As mentioned above, the short duration of marriage leads to a spontaneous decline in the number of children in the family. Also, among all economically developed countries, as a result of the development of science and technology in North America and the penetration of productive sectors, unemployment in the population structure is increasing. Unemployed, homeless people have no economic opportunity to build a family and raise children. Such cases also lead to decline in fertility. In general, the widespread and development of capitalist relations leads to a decline in both the economic and spiritual needs of the family for children. As evidence of our idea, we refer to fertility rates in one of the developed capitalist countries in US families. While an average of 3-4 children was born in each American family in 1950, that figure fell to 2-3 in 1970. Recently, the number of families without children has been increasing in the United States. Research in this state found that in most families only one child, 44% of whom were born unexpectedly and 15% were reluctant. Experts call this situation a "crisis in the American family." Is this crisis a problem for the United States? It should be determined based on the history of the population of that State.

## CONCLUSION

So, we looked at changes in the birth process in families around the world. It appears, the process of the birth of people of the world is not identical today. Birth rates worldwide have already fallen sharply. This, as mentioned above, is due to various socio-economic factors.

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## STRUCTURE AND CONTENT OF THE FERGANA VALLEY ECOLOGICAL ATLAS

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### ABSTRACT

*The article presents the structure, project and a cartographic basis for creating thematic layers, models of maps of the ecological atlas of the Ferghana Valley on the basis of the geographic information system.*

**KEYWORDS:** *Ecological Mapping, Digitization, Vectorization, Layers, Themes, Synthetic, Electronic Maps, Modelling, Analytical Mapping, Structure, Optimization, Criteria, Estimates.*

### INTRODUCTION

In the world, environmental mapping gives preference to synchronization methods where specific atlas maps are systematically created by interconnecting environmental characteristics, that is, several maps that interactively interact with their didactic texts in GIS software are deployed on a computer screen at the same time. These research programs ArcGIS, QGIS, and SWAT model software focus on database creation, electronic map visualization, modelling, and analytical mapping.

### MATERIALS AND METHODS

In various industries of the republic GIS-technologies, in particular, the programs AtlasGIS, WinGIS, ArcInfo, MapInfo, ArcGIS, QGIS (USA), GeoDraw GeoGraph (Russia), Hydrus 1D (Germany) are used during the creation of cards, loading of space images, during the processing of images, digitization and vectorization, during the creation of the database and drawing up

legends of cartographic images, creation of the chart and modelling of schemes. The Strategy for Further Development of the Republic of Uzbekistan for 2017-2021 defines important tasks to "Prevent environmental problems that may harm the environment, public health and gene pool." In carrying out these tasks, it is very important to use GIS technologies in mapping and modelling environmental problems in the emerging environmental situation.

To this end, the Fergana Ecology database and its thematic layers were developed, and a structure, a project of the Fergana Valley Ecological Atlas of Maps, was developed based on the geographic information system.[1]

According to the content of the atlas maps are divided into 3 large sections: reasons for the destruction of the ecological condition; The effects of environmental degradation; Optimization of the environmental condition of the Fergana Valley.

Texts and legends have been produced for maps that facilitate the use of atlas with modern GIS systems (see table 1). The content and configuration have been modified to meet the new requirements. The rapidly growing trend of environmental cartography is highlighted based on new methodological approaches, evaluation criteria and sources of information.[2]

**TABLE 1 STRUCTURE OF THE ECOLOGICAL ATLAS**

#	Name of the card	Scale	Main contents of maps
<b>Causes of environmental degradation</b>			
1.	Map of anthropogenic environmental impacts	1:1 000 000	Anthropogenic factors are covered by the scope of action and measures to improve and protect land resources.
2.	Map of pollution in industrial cities	1:1 000 000	Industrial centres, the amount of toxic gases emitted from industrial nodes is given.
<b>Effects of environmental degradation</b>			
3.	Map of the level of atmospheric air pollution	1:1 000 000	Level of atmospheric air pollution. The amount of toxic substances such as dust, sulfur gas, carbon monoxide, nitrogen oxide, ammonia, sulfur-hydrogen compounds are shown.
4.	Reclamation map (irrigation networks)	1:1 000 000	Newly developed regions, irrigation, agricultural activities against deflation have been identified. Territories of recultivation are shown.
5.	Card of a demoeko-logical state	1:1 000 000	The map is a database that provides anthropogenic stress on the natural environment.
6.	Environmental Stress Assessment Map	1:1 000 000	Degree of environmental tension in the Fergana Valley, environmental regions; stabilization.
<b>Optimization of the environmental condition of the Fergana Valley</b>			
7.	Ecological map	1:1 000 000	The horizontal range limit is specified in the paths.



		000	The distribution of natural resources affecting human health and the ecosystem is reflected in the distribution of territories.
8.	Degree of anthropogenic load on landscapes	1:1 000	The map lists two ecological spaces and economic groups that combine content. Degree of anthropogenic stress on landscapes, agrodemographic pressure, anthropogenic pressure on agriculture, ecological gene groups in the land fund.
9.	Environmental protection map	1:1 000	Degree of variability of natural complexes, human economic and other activities, anthropogenic impact on nature and its consequences.
11.	Environmental maps of the cities of Ferghana, Margilan, Kuvasoy, Kokand, Andijan and Asaka	1:25 000	The natural, demographic, technogenic, anthropogenic and other indicators of the cities, reflecting an ecological condition of tension are shown.

Also, using modern programs (digital models) of thematic layers, synthetic maps of GIS data were analyzed in the software ArcGIS, QGIS and a series of specialized maps were produced that reflect natural factors.[3]

1. Data of electronic tachometers and GPS devices, image processing equipment, expedition materials, digital data, author 's originals, existing maps and other source materials were collected. The mapping and source materials were scanned and placed on the same scale as the raster images and then placed in memory.
2. Thematic layers of maps of ecological atlas and their tables have been compiled, they have been analyzed using GIS programs of Fergana Valley, a database has been created.
3. Object classifications, existing tables (attributes), and text data have been included in the computer memory.
4. A system of conditional signs has been developed.
5. Thematic map layers were downloaded and map images were created, which were edited separately.
6. The map layout has been developed and finalized to prepare for publication.

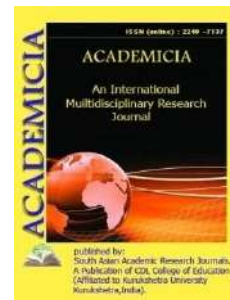
A mapping base has been prepared for the creation, analysis of thematic layers of models of the Fergana Valley ecological atlas and their drawings, as well as for the creation of a database and map. Cartographic foundations were developed from general geographic elements - foundations of cartographic and aerospace materials from elements of mathematical foundations (relief, land users, soil cover, settlements, roads, borders) according to the scale and projection of the map.[4]

The experience of creating ecological atlases is improved every year. Methodological developments related to atlas theory and practice are not as great. Today 's environmental atlases

are characterized by the fact that they are based on the system principle for updating and processing geographical information, as well as on the necessary adaptive functions. Proposals have been made for the use of a system approach in mapping the nature and ecological condition of the Fergana Valley, which has allowed the creation of a series of analytical and synthetic environmental maps. The development of the composition and content of the environmental atlas by ArcGIS, QGIS and SWAT models has enabled the creation of an environmental database. Simplified and improved multi-layered mapping sources obtained from environmental atlas maps have been proven to be the basis for other maps.

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## WAYS TO IMPROVE THE EFFICIENCY OF INVESTMENT PROJECTS IN CONSTRUCTION

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### ABSTRACT

*This article analyses the state of investment projects in the construction industry in the Republic of Uzbekistan and makes recommendations to increase their efficiency.*

**KEYWORDS:** *Investment, Investment Project, Foreign Investment, Construction, Capital, Commercial Bank, Interest Rate, Project.*

### INTRODUCTION

In recent years, significant efforts have been made in the country to improve the investment process, determine the procedure for the formation of state development programs, increase transparency and the effectiveness of project selection, as well as their financing.

At the same time, the lack of investment projects developed taking into account the raw materials, infrastructure and labour potential of the regions and sectors of the economy makes it difficult to actively attract foreign capital.

Today, improving the efficiency of the economy (capital and capital investments, energy and material capabilities of the final product, labour efficiency and efficiency of capital investments, standards of income, competitiveness and economic security) is not a priority in state programs and tasks; Only the problem of inflation and the budget deficit was formed, the achievement of an accurate picture of GDP.

It is also determined by the successful implementation of investment projects in innovative sectors and the improvement of the selection system for investment projects and its adaptation to existing and changing economic conditions. The above shows that the methodological issues of assessing the financial, technical and economic efficiency of investment projects to create new innovative networks or modernize existing ones are very relevant from both a scientific and a practical point of view.

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## ANALYSIS OF THEMATIC LITERATURE

A lot of scientific work has been done abroad and at home on the problems of investment efficiency and financing.

The theoretical foundations and practical aspects of the formation of foreign investment projects and programs, assessing their effectiveness are considered in scientific works Krasovsky V.P., Vilensky P.L., Livshits V.N., Smolyak S.A., S.Kryukov, E. Berezovskaya, R .M. Melnikov, M.V. Gracheva G. Alexander, J. Bailey, W. Sharp and others.

Problems of increasing the efficiency of investments in our country and scientific and practical recommendations for their elimination are studied in the scientific work of B.S. Mamatov, S.R. Umarov, D.Yu.Khŷzhamgulov, E.I. Nosirov, N.G. Karimov, Sh .I. Mustafakulov, O.M. Azizova, D.G. Gozibekov, B.Kh. Khodiev R.Kh. Khozhimatov, D.Kh. Nabiev, Sh.R. Razhabbaev, B.Sh. Muminov, A.Kh. Khudoiberdiev, Sh.N. Zainutdinov, M.K. Ziyaev, A .N. Dzhabriev, R.I. Nurimbetov, A.S. Turdieva.

However, today the factors affecting the effectiveness of investment projects in construction are not well understood and are among the issues that need to be addressed.

## ANALYSIS AND RESULTS

The role of foreign investment, primarily direct investment, is important in further deepening structural changes in the economy, accelerating the investment activity of enterprises, modernizing production, technical and technological re-equipment programs. The experience of developed countries shows that attracting foreign investment is one of the decisive factors for the high level of development of these countries. At the same time, in the Program of Action Strategy for 2017-2021, proposed by the President of the Republic of Uzbekistan Sh. Mirziyoyev, special attention is paid to further improving the investment climate in the country, creating new jobs by creating modern enterprises. In this regard, current reforms aimed at attracting foreign direct investment to our country, as well as providing reliable legal protection and guarantees for foreign investors, play an important role.

To develop the attraction of investments in the economy, it is necessary, first of all, to effectively organize the organizational and technological mechanism of the economy, focusing on private investment. The establishment of specific principles in the macroeconomic regulation of attracted investments will give the effect of its mechanism.

In 2019, the volume of investments in the Republic of Uzbekistan from all sources of financing reached 220.7 trillion. Sumy, which is 2 times more than the approved forecast for the year. At the same time, the volume of investment in fixed assets amounted to 189.9 trillion. Sum and the growth rate compared to 2018 was 1.3 times. The share of investments in fixed assets in GDP increased from 30% in 2018 to the current 36.2% (the share of total investments in GDP was 42.1% in 2019). During the reporting period, more than 2800 social facilities, infrastructure and production facilities were commissioned: 145 large production facilities, 167 large regional projects, more than 2500 social facilities and infrastructure.

The main foreign partners in attracting foreign investment into the country are China, Russia and Germany, and the total number of countries investing in the economy of Uzbekistan has

exceeded 50. As a result, the share of large investing countries in the total volume of foreign direct investment and loans has decreased to 34%.

Compared to 2018, the active growth of foreign direct investment and loans attracted the production of electrical products (growth - 7.5 times), metallurgy (growth - 4.6 times), textiles (growth - 2.5 times), leather. shoes (growth - 2.1 times) and oil and gas (growth - 2 times).

The growth rate of foreign direct investment and credit flows will intensify in projects of regional significance, the total volume of which will reach \$ 4.8 billion in 2019 (including \$ 4.2 billion in fixed assets), which is 4 times more than in the corresponding period of 2018 of the year. and increased 24 times compared to 2017. With the participation of foreign capital alone, 167 projects worth 858.5 million dollars were commissioned in the regions.

**TABLE 1 LIST OF THE NUMBER OF REGIONAL INVESTMENT PROJECTS WITH A FOREIGN DIRECT INVESTMENT THAT WILL BE IMPLEMENTED IN 2019  
EKV.MLN.DOLLAR**

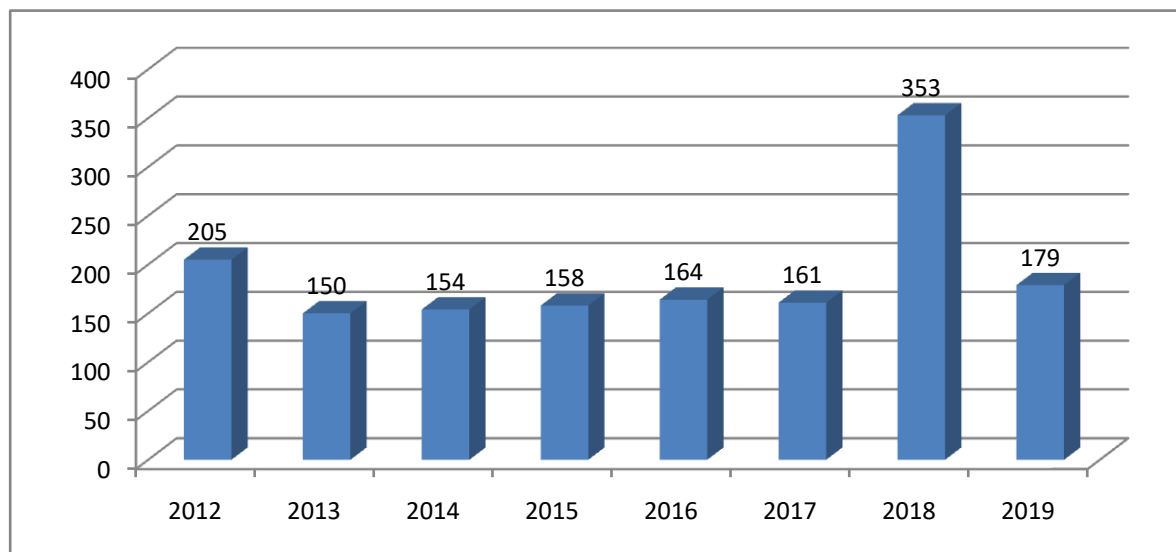
№	Regions	Number of projects for implementation	Total project cost
1	Republic of Karakalpakstan	7 projects	203,0
2	Andijan region	11 projects	104,6
3	Bukhara region	19 projects	174,8
4	Jizzakh region	22 projects	732,9
5	Kashkadarya region	12 projects	243,3
6	Navoi region	14 projects	74,9
7	Namangan region	10 projects	174,1
8	Samarkand region	7 projects	96,0
9	Syrdarya region	9 projects	254,7
10	Surkhandarya region	17 projects	103,7
11	Tashkent region	8 projects	188,4
12	Ferghana region	12 projects	130,0
13	Khorezm region	7 projects	153,0
14	Tashkent	24 projects	738,9

The table shows that in 2019 a total of 179 investment projects were submitted, with the largest number of investment projects in the regions, 24 projects in Tashkent, 22 projects in Jizak, 19 projects in Bukhara, 17 projects in Surkhandarya and the least implemented projects in the Republic of Karakalpakstan. 7 projects have been implemented in the Samarkand region. Investment projects implemented in the country today should be focused primarily on priority industries, such as oil and chemical industry, transport, energy, mining, construction, telecommunications, agricultural production and expansion, tourism development.

**TABLE 2. INFORMATION ON MAJOR INVESTMENT PROJECTS IMPLEMENTED IN THE REPUBLIC OF UZBEKISTAN IN RECENT YEARS**

№	Year of the launch of major investment projects	Number of large investment projects launched	The volume of large investment projects launched, USD USA
1	2012	205 ta	More than 1.6 billion
2	2013	150 ta	2.7 billion
3	2014	154 ta	4.2 billion
4	2015	158 ta	7.4 billion
5	2016	164 ta	5.0 billion
6	2017	161 ta	2.4 billion
7	2018	353 ta	3276.6 million dollars USA
8	2019	179 ta	\$ 3,372.2 million USA

Table 2 provides information on projects implemented in 2012-2019 and the funds spent on them.

**Chart 1.** The main investment projects implemented in 2012-2019.

At the same time, serious attention should be paid to attracting investments and loans from near and far abroad. An increase in their participation and contribution to financing large investment projects will become an important factor in modernizing the economy. It was announced that a new system will be created in the regions and industries to expand the scope of projects with foreign direct investment, to create a strict control mechanism for their implementation. According to him:

First, provincial governors are taking steps to attract foreign direct investment by visiting a district or city once a week and liaising with ambassadors. In the same way, industry leaders visit one region every week to work with local businesses to speed up existing projects and work on additional investment projects. Teaches local leaders and entrepreneurs on how to develop investment projects as needed. The Prime Minister and his deputy regularly discuss the state of



development of foreign investment in the regions and sectors with the participation of ambassadors. Depending on the results, governors and industry leaders receive a reward or a fine of 50 per cent of their salary. The heads of republican departments at the regions together with the governors and ambassadors of the regions will study the status of the implementation of projects with foreign direct investment in each district (city) and take concrete measures to accelerate their implementation. Proposals for additional projects will also be developed and foreign investors will be involved.

Second, the State Investment Committee summarizes the effectiveness of proposals for investment projects of regions and industries, assesses their effectiveness and forms a single electronic "online" database.

Third, the Ministry of Foreign Affairs and Ambassadors to the regions attract foreign investors to projects included in a single electronic database.

Fourth, the Cabinet of Ministers will take steps to formalize agreements with foreign investors for the implementation of selected promising projects and approve a roadmap for monitoring their implementation. [2]

The President of our country, Shavkat Mirziyev, noted that to further activate preferential investors for new projects, the company will spend one year in all regions of the investment forum with the participation of foreign investors, as well as a large share of the most valuable investments in the country.

This year, Duda is ready to continue the Rules on diversification and investment management by attracting investment funds, implementing projects of the priority team, similar in electricity, aimed at creating a value chain for the deep processing of existing cheese.

According to the investment program approved by the President of the Republic of Uzbekistan dated January 9, 2020, No. PP-4563, in 2020, for all sources of financing, fixed capital will amount to 233.2 trillion. It is planned to develop the number of capital investments, while foreign direct investment and loans - 7.1 billion UAH. doll. The USA, foreign investments and loans under state guarantees - 2.7 billion UAH. doll. The development of dollars is planned.

The mobilization of investments in many projects is based on the high efficiency of projects. The reason is that such investment projects give a big profit. As a rule, after making high profits, investors will be interested in financing such projects. But not all investors evaluate their various economic indicators, the level of risk before a chemical financial investment project, and put their own requirements for a financial project, this type of deviation. Naturally, projects that meet the desires and goals are accepted for financing.

As a rule, not all investment projects have the same results. Some indicators may be illegal if one project is high positive, another indicator, but there is a lower opinion about the product than in another. The cash of such (mutually beneficial) information from projects specific to one industry creates competition between us. Making investment decisions creates difficult situations, especially in a competitive investment environment.

Factors affecting the effectiveness of investment projects include:

- economic and social policy of the state;
- investment risk;

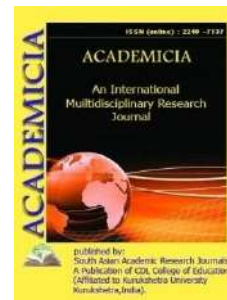
- the state of the tax system;
- inflation rate;
- Central Bank refinancing rate;
- investment attractiveness;
- formation of the normative base in the sphere of investment activity;
- the level of investment infrastructure improvement;
- The conditions created to attract foreign investment, if we identify the impact of each of them and form it, we can improve efficiency.

## CONCLUSION

In short, the assessment of the efficiency of investment projects in construction and differences in regional risk levels are not taken into account at all or without sufficient methodological justification. It will first of all affect quality of indicators of economic efficiency of investment projects in construction, received as a result of calculations, and also on the necessity of improvement of the mechanism of increase of efficiency of investment projects in construction. Based on these circumstances, it is necessary to use the method of regression in determining the importance of factors affecting efficiency and to develop mechanisms to improve their effectiveness depending on their level.

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## **A STUDY ON RATIO ANALYSIS WITH REFERENCE TO ANANTHA PVC PIPES PVT. LTD ANANTAPURAMU DISTRICT**

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### **ABSTRACT**

*Ratio Analysis The starting point for making plans before using any sophisticated fore casting and budgeting procedures. The Ratio Analysis is the most powerful tool of the financial analysis. The Ratio Analysis is also useful in security analysis. The major focus on security analysis is one of the long term profitability. The Ratio Analysis is a tool which helps to study the changes that take place over a given period of time. It helps to judge the profitability, liquidity, stability and turnover with the comparison of present ratios with the past ratios. The ratio analysis is a widely used technique to evaluate the financial position all performance of a business. A positive net working capital will arise when current assets are more than current liabilities. In the industry which is one of the leading in PVC pipes manufacturing industry. It shows that the company is maintaining sufficient investments in quick assets.*

**KEYWORD:** *Determine, Significantly, Operating, Performance*

## INTRODUCTION

Ratio analysis of financial statements stands for the process of determining and Presenting relationship of items and group of items in the statements .There are different ratios which an analyst can employ depending on the purpose for which the analysis is made. A creditor who likes to know the ability to meet its current obligations may think of current and liquid ratios similarly managers and investors who want to know operationally efficiency may think of return on investments, turnover and fixed assets earnings per share book value per share book and dividend per share.

Ratio analysis is a powerful tool of financial analysis. It is a process of identifying the financial strength and weakness of the firm by properly establishing relationship between the items of balance sheet and profit and loss a more meaningful understanding of the financial position and performance of a firm. A Ratio is a mathematical relationship between the two related items expressed in quantitative form. A ratio is used as an index yard stick for evaluating the financial position and performance of a firm.

### Advantages of Ratio Analysis:

The nature of Ratio Analysis will differ depending on the purpose of the analyst. Ratio Analysis The starting point for making plans before using any sophisticated fore casting and budgeting procedures. The Ratio Analysis useful for the following reasons.

#### 1. Employees:

The employees are also interested in the financial position of the concern especially profitability. Their wages increases the amount of fringe benefits are related to the volume of profits earned by the concern. The employees make use of information available in financial statements.

#### 2. Creditors:

Creditors are concerned primarily with liquidity and to pay interest on redeems loan a specified period.

#### 3. Government:

Government is also interested to know the strength and weakness of the firm. Government makes the future policies, plans on the basis of financial information available from various units of the company.

#### 4. Management:

Management of the firm executive would be interested in every aspect of the financial analysis. It is their overall responsibilities to see at the resources of the firm are used most effectively and the firm's financial condition is sound.

### Significance of Ratio Analysis:

The Ratio Analysis is the most powerful tool of the financial analysis. The many diverse group of people re interested in analyzing the financial information to indicate the operating efficiency and the various aspects of the firm's financial position. The people use ratios to determine a particular financial characteristic of the firm in which they are interested.

A short term creditor will be interested in current financial position of the firm, while a long – term creditor will pay more attention to the solvency of the firm and also be interested in profitability of the firm.

The equity share holders are generally concerned with their return and many bother about the firm's financial condition only when their earnings are depressed. In fact it has to be realized that the short term and the long-term financial position and the profitability of the firm are based on every kind of financial analysis, the emphasis would differ.

In credit analysis, the analyst will usually select a few important ratios. He may use the Current Ratio or Quick Asset Ratio to judge the firms Liquidity or Debt Paying ability. The Ratio Analysis is also useful in security analysis. The major focus on security analysis is one of the long term profitability. From time to time management uses ratio analysis to determine the firm's financial strength and weakness and accordingly takes action to improve the firm's position.

The ratio of affirm in itself does not reveal anything. For meaningful interpretation, the ratios of the firm should be compared with the ratios of similar firms and industry. This comparison will reveal whether the firm is significantly out have like. The ratio analysis will reveal the financial condition of the firm more reliably when trends in relation over time are analyzed. The importance of trend analysis of ratios lies in the fact the analyst can know the direction of movement i.e., whether the movement is favorable or un favorable.

### **CLASSIFICATION OF RATIOS:**

Ratios may be classified in a number of ways keeping in view of the particular purpose. Ratios indicating profitability are calculated on the basis of the profit and loss account, those indicating financial position are computed on the basis of the balance sheet those which show operating efficiency or productivity resources are calculated on the basis of figures in the profit and loss account and the balance sheet. This classification is rather crude and unsuitable to determine the profitability and financial position of the business. To achieve this effectively, ratios may be classified as:

#### **1. Liquidity Ratio:**

It is extremely essential for a firm to be able to meet its obligations as they become due liquidity ratios measure the ability of the firm to meets its current obligations in fact analysis of liquidity needs the preparations of cash budgets and cash flow statements but liquidity ratios by establishing in a relationship between cash and other current obligations provide a quick measure of liquidity

Also that it is not too much meets its obligations due to lack of sufficient liquidity will result in bad credit rating loss of creditors confidence or even in lawsuits resulting in the closure of the company a very high degree of liquidity is also bad therefore it is necessary to strike a proper balance between liquidity

The ratios which measured and indicate the extent of firm s liquidity aer known was liquidity ratios or short –term solvency ratios commonly used liquidity ratios included.

- a. Current ratio (or) working capital ratios
- b. Quick ratio (or) acid test ratio
- c. Cash position ratio (or) super quick ratio

**2. Leverage Ratios :**

The long term creditors like debentures holders, financial institutions, etc., are more concerned with the firm's long term financial strength. To judge the long term financial position of the firm, capital structure ratios are calculated. These ratios indicate the funds provided by the owners and creditors. As a general rule there should be an appropriate mix of the debt and owners equity in financing the firm's assets.

Firms with low leverage have less risk of loss, but they also have lower expected returns. Conversely firms with high leverage ratios have risk of large losses. But also have a chance of earning huge profits. Therefore, before deciding whether a firm should have debt must most commonly examine Leverage Ratios are:

- i) Debt Equity Ratio
- ii) Fixed Assets Ratio
- iii) Current Assets to fixed Assets Ratio

**3. Activity Ratio:**

The funds of creditors and owners are interested in various kinds of assets to generate sales and profits. The better the management assets the larger will be the amount of sales. Activity ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. These ratios are also called turn over ratios because they indicate the speed with which assets are being converted into sales. Activity ratios thus involve a relationship between sales and the various assets. A proper balance between sales and assets generally reflects that assets are managed well. Following are some of the important activity ratios.

- i) Assets turnover ratio
- ii) Fixed assets turnover ratio
- iii) Current assets turnover ratio
- iv) Total Stock turnover ratio
- v) Debtors turnover ratio
- vi) Creditors turnover ratios

**4. Profitability Ratios:**

A company should earn profits to survive and grow over a long period of time. Profits are essential but it would be wrong to assume that every action initiated by management of the company should be aimed at maximizing profits, irrespective of social consequences.

A profit is the difference between Total Revenue and Total Expenses over a period of time. Profits are the ultimate output of a company and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of the company. Generally two major types of profitability ratios are calculated.

- A. Profitability in relation to sales.
- B. Profitability in relation to investment.



- i) Gross Profit Ratio
- ii) Operating Ratio
- iii) Operating Profit Ratio
- iv) Net Profit Ratio

**Objectives of Study:**

The main objectives of the present study is to obtain a true in sight in to financial position of Anantha PVC Pipes Ltd Anantapuramu. The Ratio Analysis is a tool which helps to study the changes that take place over a given period of time. It helps to judge the profitability, liquidity, stability and turnover with the comparison of present ratios with the past ratios.

**Scope of Study:****It helps in evaluating the firm's performance:**

With the help of ratio analysis conclusion can be drawn regarding several aspects such as financial health, profitability and operational efficiency of the undertaking. Ratio points out the operating efficiency of the firm i.e. whether the management has utilized the firm's assets correctly, to increase the investors wealth. It ensures a fair return to its owners and secures optimum utilization of firm's assets.

**It helps inter-firm in comparison:**

Ratio analysis helps in inter-firm comparison by providing necessary data. An inter firm comparison indicates relative position. It provides the relevant the comparison of the performance of different departments. If comparison shows a variance the possible reasons of variations may be identified and if results are negative the action may be initiated immediately to bring them in line.

**It simplifies financial statements:**

The information given in the basic financial statements serves no useful purpose unless its interrupted and analyzed in some comparable terms. The ratio analysis is one of the tools in the hands of those who want to know something more from the financial statements in the simplified manner.

**Research Methodology:**

The data relating to financial statement of Anantha PVC Pipes LTD, Anantapuramu and information relating to ratio analysis has been collected using primary and secondary means.

**A. Primary Data:**

The information which is not available in annual reports and other books of accounts has been collected consulting the accounting officers of the Anantha PVC Pipes LTD, Anantapuramu.

**C. Secondary Data:**

The relating to financial statements of Anantha PVC Pipes LTD, Anantapuramu has been collected from published annual reports for the years 2013 to 2018 which were obtained from the administrative officers of the company.

### LIMITATIONS OF THE STUDY:

The ratio analysis is a widely used technique to evaluate the financial position all performance of a business. But there are certain problems in using ratios. The following are the limitations of the ratio analysis.

- ❖ It is difficult to decide on proper basis for comparison.
- ❖ The comparison is rendered difficult because of difference in situation of two companies or one company over years.
- ❖ The price level changes make the interpretations of ratios invalid.
- ❖ The differences in definition of items of balance sheet and income statements make the interpretation of ratios difficult.
- ❖ The ratios calculated as a point of time are less informative and defective as they suffer from short-term changes.
- ❖ The ratios are generally calculated from past financial statements and thus are no indications of the future. The ratio analysis is merely a tool of financial statement.

### DATA ANALYSIS AND INTERPRETATION

#### 1. LIQUIDITY RATIOS:

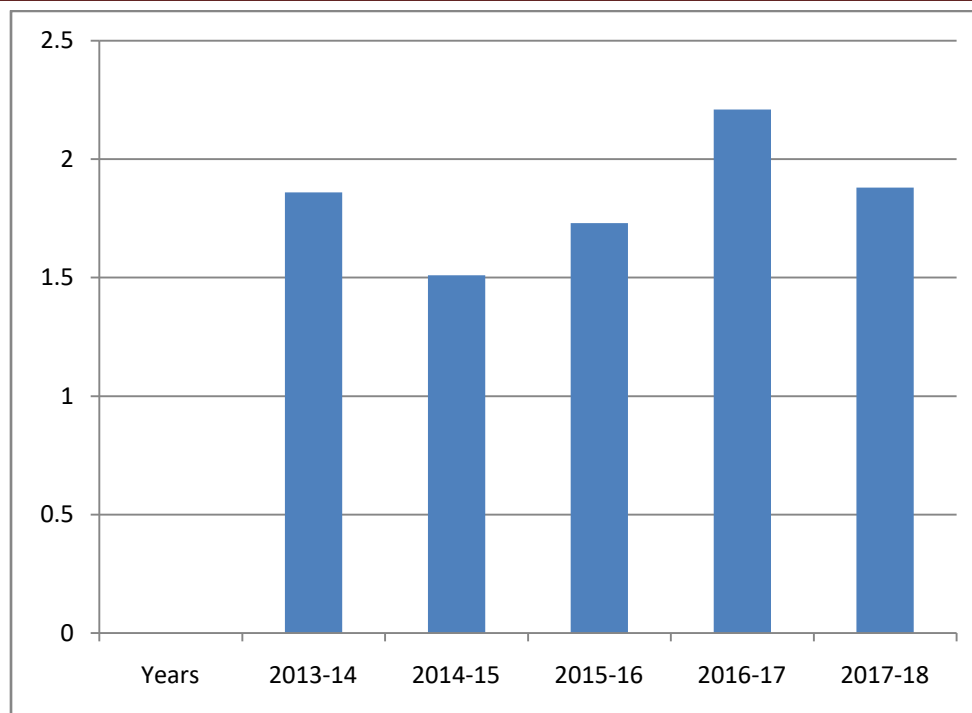
##### a. Current Ratio:

If the Current Ratio is two or more times of the current liabilities, there will be no adverse effect on business operations when the payment of current liabilities is made. It shows a firm's ability to cover its current liabilities with its current assets. Generally 2:1 is concerned ideal for a concern. Le. Current assets should be twice of the current liabilities. If the ratio is less than 2, difficulty may be experienced in the payment of current liabilities and day to day to operation of the business may suffer if the ratio higher then to it is very comfortable for the creditor but, for the business concern, it is indicator of the idle funds a lack of enthusiasm for work. It is calculated as follows:

**Current Ratio**= Current Assets/Current Liabilities.

Years	Current Asset	Current Liabilities	Current Ratio
2013-14	57359601	30675680	1.86
2014-15	55425619	36602273	1.51
2015-16	62039947	35766535	1:73
2016-17	59855287	27011470	2:21
2017-18	61987548	32987347	1:88

**Chart showing Current Ratio**



### Interpretation:

The above table shows the current ratio during the study period. The ratio was 1.86:1 in 2013-14 which increased to 2.21:1 in 2016-17 and which is too above from the standard ratio that is 2:1.

### b. Quick Ratio:

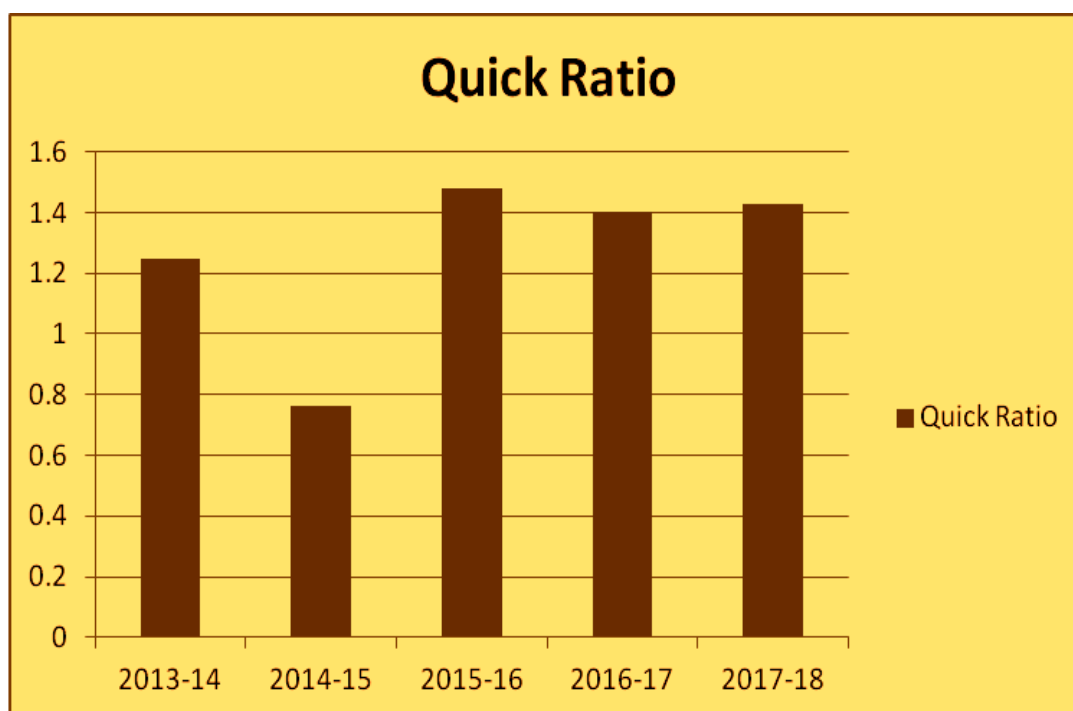
This is the ratio of liquid assets to liquid liabilities. It shows firms ability to meet current liabilities with its most liquid assets.

The standard ratio 1:1 is considered ideal ratio for a concern. Liquid assets are those, which can be easily converted into cash within a short period of time without loss of value. This ratio can be calculated by using the formula.

### Quick Ratio = Liquid Assets/Liquid Liabilities

Years	liquid assets	liquid Liabilities	Quick Ratio
2013-14	45274667	36075680	1.25
2014-15	27637499	36602273	0.76
2015-16	52791174	35766535	1.48
2016-17	37904668	27011470	1.40
2017-18	49856782	34754834	1.43

Chart showing Quick Ratio



From the above table we see that the quick ratio was standard during the study period. The ratio was 1.25:1 in 2013-14, which increased 1:43:1 in 2017-18. Which is also higher than the standard ratio is 1:1.

## 2. LEVERAGE RATIO:

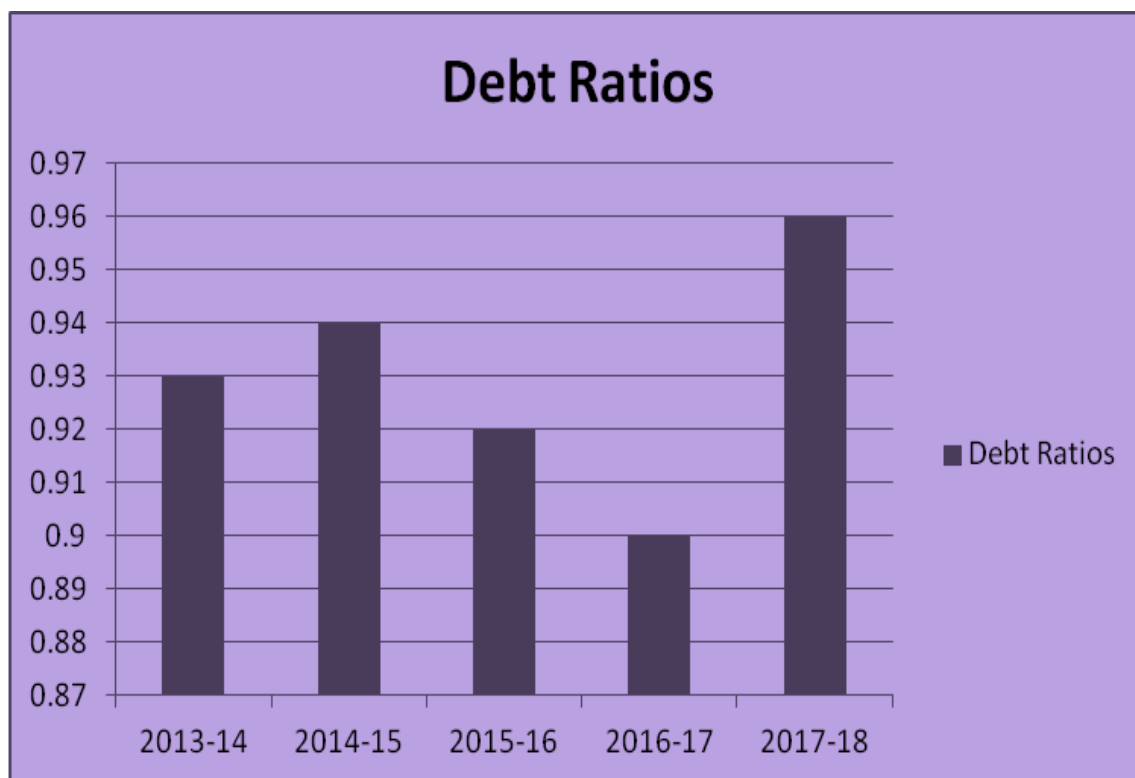
### a. Debit Ratio:

Several debt ratios may be used to analyses the long term solvency of a firm. The firm may be interested in knowing the proportion of the interest dearing debit in the capital structure. It may therefore, compute debit ratio by dividing total debit by capital employed or net assets. Total debit will include short and long-term borrowing from financial institutions, debentures/bonds, deferred payment arrangement for buying capital equipments, bank borrowings, public deposits and any other interest – bearing loan.

**Debit Ratio = Total Debit/Net Assets.**

Years	Share holders' funds	Total Assets	Debt Ratios
2013-14	39120062	41993667	0.93
2014-15	53471728	56659232	0.94
2015-16	55065294	59300871	0.92
2016-17	48208099	53254693	0.90
2017-18	55254398	57854398	0.96

Chart showing Debit Ratio



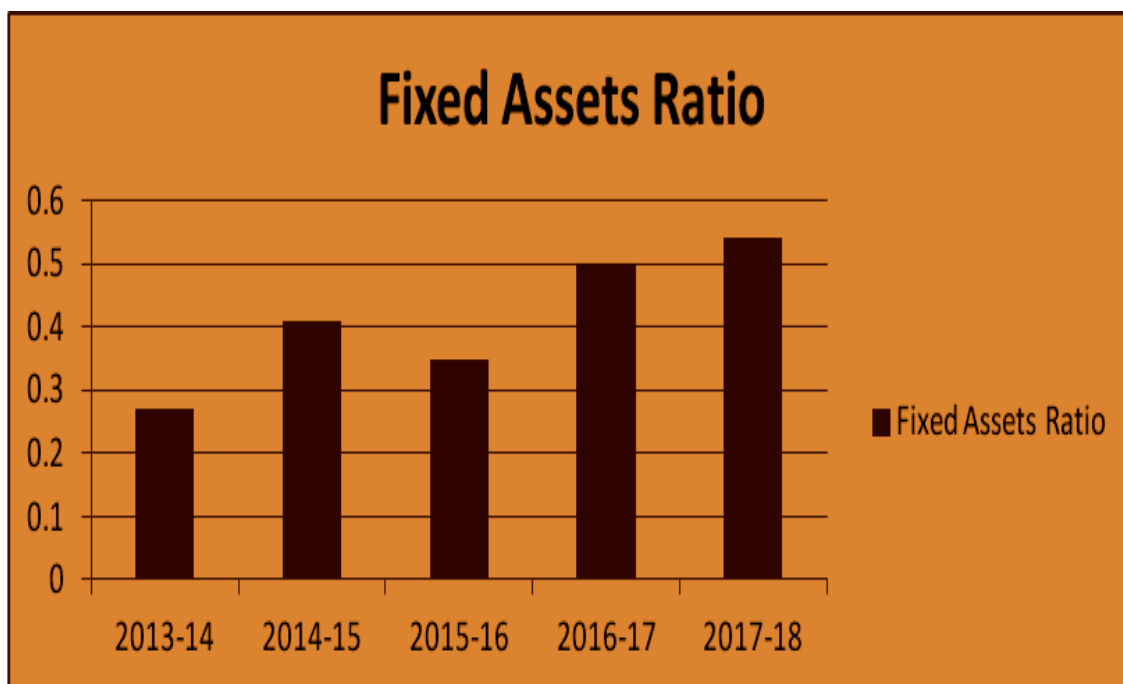
In the above table shows the Debit Ratios. The Ratio is 0.93:1 means that lenders have financed increased 0.94 in 2014-15 and 0.96 in 2017-18 that is highest value recorded.

#### b. Fixed Assets Ratio:

This ratio shows the relationship between fixed assets and capital employed. Fixed assets ratios explain whether the firm has raised adequate long term funds to meet its fixed assets requirements and it gives an idea as to what part of the capital employed has been used in purchasing the fixed assets for the concern. If the ratio is less than one it is good for the concern.

**Fixed Assets Ratio** = Fixed/Capital Employed

Years	Fixed Assets	Capital Employed	Fixed Assets Ratio
2013-14	20709746	78009347	0.27
2014-15	37835887	93261506	0.41
2015-16	33027458	95067406	0.35
2016-17	40410876	80266164	0.50
2017-18	42785427	79545790	0.54

**Chart showing Fixed Assets Ratio**

The above table shows the fixed asset ratio during the study period. The lowest ratio was recorded as 0.27 in 2013-14 and the highest ratio was recorded as 0.54 in 2017-18. Which is also too below from the standard ratio that is 0.67:1. It means the firm does not raised adequate long term funds to meet its fixed asset requirement.

### 3. Turnover or Activity Ratio:

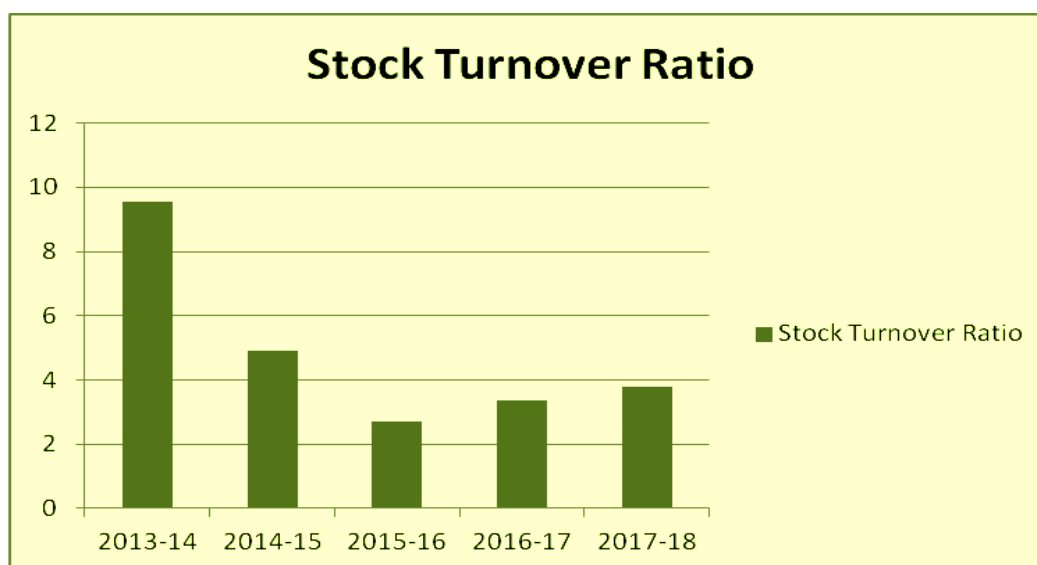
#### a. Inventory Turnover Ratio:

This ratio also known as Stock Turnover Ratio establishes relationship between cost of goods sold during a period and the average amount of inventory held during that period. This ratio reveals the number of times finished stock is turned over during given accounting period. Higher the ratio the better it is because it shows that finished stock rapidly turnover. On the other hand a low stock turnover ratio is not desirable because it reveals the accumulation of obsolete stock, or the carrying of too much stock. The ratio is calculated as follows:

**Stock Turnover Ratio = Cost of good sold / Average Stock**

Years	Cost of goods sold	Average Stock	Stock Turnover Ratio
2013-14	325467165	3408016	9.55 Times
2014-15	320371081	6539024	4.89 Times
2015-16	232812321	8544103	2.72 Times
2016-17	309341431	9238741	3.34 Times
2017-18	314789532	8346368	3.77Times



**Chart showing Stock Turnover Ratio**

The above table shows the inventory turnover ratio. The highest ratio was recorded as 9.55 times during the year 2013-14, and the lowest ratio was recorded as 2.72 times during the year 2015-16. By seeing this ratio we can say that the company is showing that finished stock is rapidly turned over into sales.

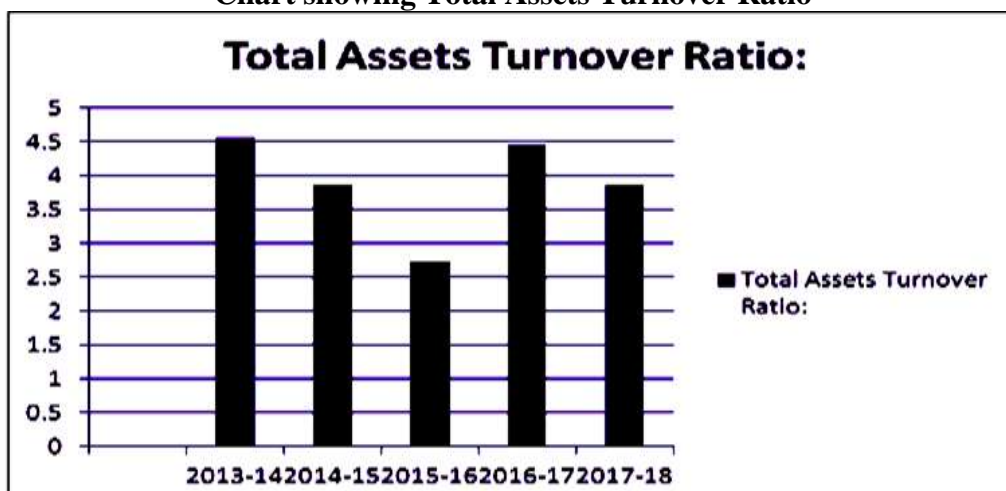
**B. Total Assets Turnover Ratio:**

Overall performance and efficiency of the firm are measured by this ratio. This ratio is calculated by dividing the annual sales value by the value of total assets. The norm that is usually adopted for this ratio is 2:1, A high ratio is an indicator of over trading of total assets while a low ratio reveals idle capacity. The formula of this ratio is

**Total Assets Turnover Ratio = Sales / Total Assets**

Years	Sales	Total Assets	Total Assets Turnover Ratio:
2013-14	356019032	78069347	4.56
2014-15	360160508	93261506	3.86
2015-16	261410580	95067406	2.74
2016-17	356574550	80661643	4.44
2017-18	332368799	85794847	3.87

Chart showing Total Assets Turnover Ratio



The above table shows the total assets turnover ratio, the highest ratio was recorded as 4.56 times in 2013-14 and the lowest ratio was recorded as 2.74 times in 2015-16.

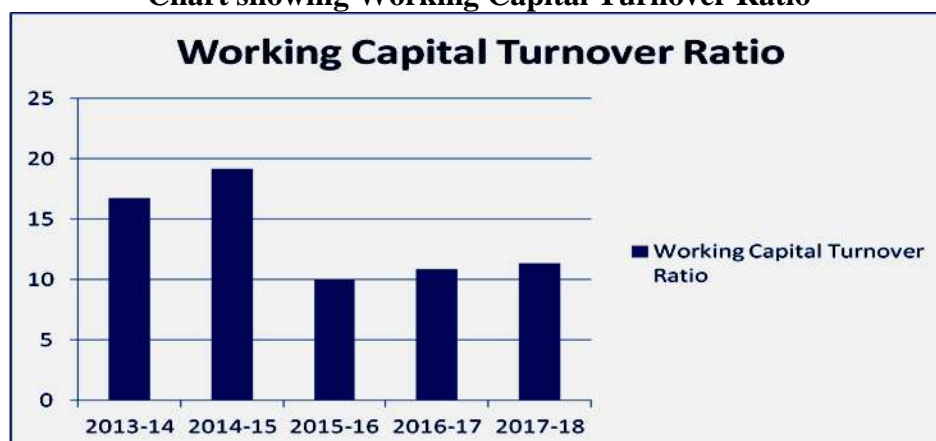
### C. Working Capital Turnover Ratio:

The term net working capital refers to the difference between current assets and current liabilities. A positive net working capital will arise when current assets are more than current liabilities. A negative net working capital occurs when current liabilities are more than current assets. This ratio calculated as under

**Working Capital Turnover Ratio** = Net Sales/ Net Working Capital

Years	Net Sales	Net Working Capital	Working Capital Turnover Ratio
2013-14	356019032	21283921	16.72
2014-15	360160508	18823345	19.13
2015-16	261410580	26273412	9.94
2016-17	356574550	32843816	10.85
2017-18	361276435	31705456	11.39

Chart showing Working Capital Turnover Ratio



In the above table when compared to 2013-18 the net working capital turnover ratio is decreased in 2014-15 year. The highest value recorded as 19.13 in the year 2014-15 and also lowest value recorded as 9.94 percentages in 2015-16.

#### 4. Profitability Ratio:

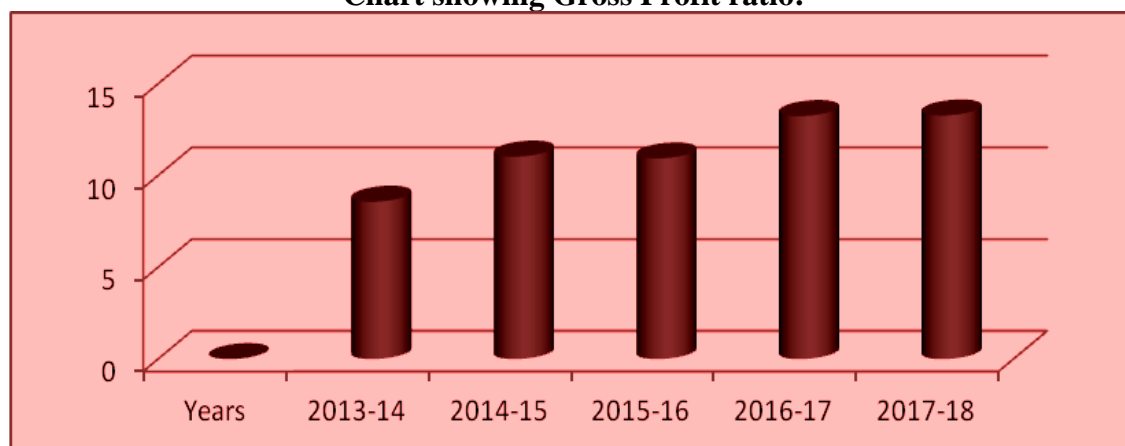
##### a. Gross Profit Ratio:

This ratio tells gross margin on trading. The gross profit should be adequate to cover fixed expenses, dividends and building of reserves. An important factor, which will affect the ratio of gross profit to sales is that of the practice of increasing or reducing the sale price of goods sale by making-ups and marks-down. It is important that business keeps up its margin of gross profit; otherwise it may not cover its operating expenses and thus provide an adequate return to properties. Higher the ratio the better it is a low ratio indicates unfavorable trends in the form of reduction in selling prices not accompanied by proportionate decrease in cost of goods or increase in cost production. This ratio is calculated as under:

**Gross Profit Ratio** =  $\text{Gross Profit} \times 100 / \text{Net Sales}$

Years	Gross Profit	Net Sales	Gross Profit Ratio (%)
2013-14	30551866	356019032	8.58
2014-15	39789427	360160508	11.04
2015-16	28598259	261410580	10.94
2016-17	47233118	356574550	13.25
2017-18	45936448	345960345	13.28

**Chart showing Gross Profit ratio:**



The above table shows the gross profit ratios. The highest gross profit ratio was recorded as 13.28 % in 2017-18 and the lowest gross profit ratio was recorded as 8.58 % in 2013-14 by seeing this ratio, we can say that the gross profit of the firm is bad because the cost of goods is increasing every year.

##### B.Net Profit Ratio:

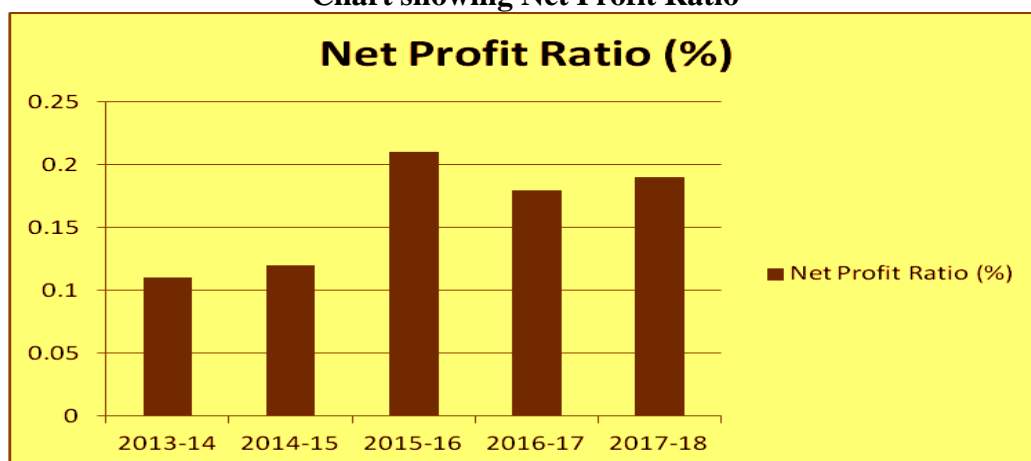
The ratio is that establishes the relationship between net profits to net sales and is expressed as a percentage. The higher the net profit ratio, higher the greater will be the profitability and higher

return to the share holders as well as enable the firm to with stand adverse economic condition. On the other hand a lower net profit ratio is an indication of poor profitability of an enterprise. This ratio is calculated as under.

**Net Profit Ratio** = Net Profit/Loss X 100/Net Sales

Years	Net Profit/Loss	Sales	Net Profit Ratio (%)
2013-14	419515	356019032	0.11
2014-15	442689	360160508	0.12
2015-16	564824	261410580	0.21
2016-17	648920	356574550	0.18
2017-18	639690	334532688	0.19

**Chart showing Net Profit Ratio**



The above table shows the net profit percentage 0.11 during the period 2013-14. The net profit every year increase few percentage and 2015-16. Net profit decreased compare to previous year. The company maintaining the smooth growth percentage in net profit.

### **FINDINGS:**

- The current ratio of the company is well the standard 2:1 throughout the study period. It decreases from 2.21 times to 1.51 times which indicates the firm is in a very good position to meet its short term obligations.
- Generally the quick ratio standard is 1:1 throughout the study period it from 1.48 times to 0.76 times. It shows that the company is maintaining sufficient investments in quick assets.
- The Debit ratio of the company slightly increased from 0.90 to 0.94 times, but not up the standard ratio 1:3. It is mainly caused by decrease in total tangible assets.
- The stock turnover ratio of the ratio of the company has been increased from 27.22 times to 95.50 times. It indicates the company sale has been increasing rapidly.

**Suggestions:**

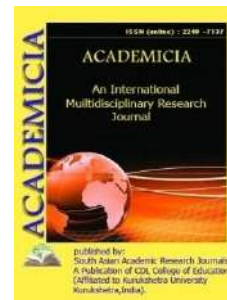
- ✓ The company shall maintain the stable financial position. So that, the company can earn better profits.
- ✓ The company may increase investment in current assets to meet its short term obligations.
- ✓ The company needs to adopt sales forecasting and budgetary control methods to check the rising expenses.
- ✓ The company may increase its capital employed turnover ratio by increasing sales every year.

**CONCLUSIONS:**

The term net working capital refers to the difference between current assets and current liabilities. A positive net working capital will arise when current assets are more than current liabilities. In the industry which is one of the leading in PVC pipes manufacturing industry. It shows that the company is maintaining sufficient investments in quick assets. The higher the net profit ratio, higher the greater will be the profitability and higher return to the share holders as well as enable the firm to withstand adverse economic condition. The company shall maintain the stable financial position. So that, the company can earn better profits.

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## **ROLE OF PRACTICAL LESSONS IN PROVIDING PREPARATION OF UNIVERSITY STUDENTS IN THE FIELD OF PEDAGOGICAL WEB DESIGN**

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### **ABSTRACT**

*This article identifies the need to identify a set of pedagogical conditions that contribute to the effective formation of web-competence of university students and the development of practical lessons for the module "Pedagogical web-design" for students of all forms of training in specialized specialties.*

**KEYWORDS:** *Web Design, Pedagogical Design, Pedagogical Web Design, Multimedia, Html, Ease Editing*

### **INTRODUCTION**

The development of pedagogical web-design presents a new social order for the education system to train graduates who own web-space technologies. Thus, teaching pedagogical web-design becomes an important component of education.

Using a systematic approach to the formation of special competency in the field of web design for university students in the course of studying the discipline "Pedagogical web design" implies the inclusion of students in multilateral educational activities, characterized by a system of methods of cognition and types of educational activities, which allows to achieve the integrity of its construction, to establish logical the relationship of the structural components of the discipline and the pedagogical process as a whole.

### **Main part**

One of the driving forces of professional development is the personality itself, its need for self-actualization of its personal professional potential. "Orientation to the personality means that the content of education, organizational forms, and learning technologies are subordinate to meeting the learner's need to be a personality," which is facilitated by a personal approach to education.



The content of the “Pedagogical web-design” module from the perspective of an active approach is designed with the full consideration of the future professional activities of the graduate of the educational institution. Thanks to this, the student is included in an active, significant and valuable educational activity for him, the formation of a holistic structure of professional activity.

The competency-based approach involves replacing the system of the formation of knowledge, abilities, skills and controlling the level of their assimilation (it is traditionally used to judge the quality of education) with a set of competencies - new subjective qualities of the graduate, formed on the basis of activity and personality-oriented learning content.

Aesthetic expressiveness to a web site is given by its compositional and color scheme, usually made by means of a graphic editor.

Site creation technologies are divided into two main large groups: providing a static presentation of information and providing a dynamic presentation of information. Static web pages always have the same look. Dynamic pages do not exist in a predefined form, but are formed using server-side scripts.



**Fig. 1. The structure of modern web design**

The usability of the website is important for the convenience of using the site by potential customers. The qualities evaluated include the page loading time, the ways in which users find the information they need, the optimality of the resource structure, the convenience of design, navigation, etc. [2].

### Key concepts

Web-design - a project activity to create a web-site information architecture using web-technologies with its simultaneous decoration and optimization of the program code for the most efficient use and promotion on the Internet.

Pedagogical design is an educational discipline that has developed into science over the past forty years. This is a new profession, the theory and content of which is based on psychology, the

theory of multimedia environments, etc. Simply put, pedagogical design is a pedagogical tool, thanks to which teaching and learning materials become more attractive, effective, efficient [4].

Pedagogical web-design is such a project activity that characterizes the ability and readiness for independent design and implementation of the main components of web-design in order to most effectively use and promote the Internet.

Nowadays, pedagogical web design is a fashionable and sought-after trend. It can be reasonably likely that many university graduates who choose professions in the field of information technology will work in this area or at least directly contact those who work there. Therefore, it is extremely important to show the future teachers of computer science the basic ideas and directions of a modern approach to the development of web pages.

Of course, many professional sites with dynamic content are built on the basis of ready-made content management systems (Eng. CMS == Content management system), on which the template is stretched (design style). However, a web developer of any level is not only useful, but also needs to know “what's inside”, how the web page that the scripts generate is built. Only such an approach allows us to solve real problems that go beyond the limits of the “click on buttons” technique.

Since the study of server languages such as PHP and the CMS device does not fit into the program (even in-depth!) Of a school course in computer science, it remains to use the available teaching hours to learn the HTML language and create static web pages. At the same time, getting to know only HTML, while remaining at a level that was still somehow acceptable 10-15 years ago, is now impossible. Not to talk about CSS and JavaScript is already impossible, although some textbook authors manage to do this.

A serious enough problem is the search for practical work on creating websites that can be used in the lessons. At one time, the author was unable to find finished works on this topic that meet modern requirements, so he was forced to develop his own. This article provides a description of these works and a brief theoretical material necessary for their implementation. For a more detailed familiarization with the question, readers can use textbooks [3-4] and various materials on web design on the Web.

All work can be performed on any operating system, for this you need only a text editor (preferably with HTML syntax highlighting) and a browser. As one of the possible solutions for Windows users, we can recommend the free Ease Editing editor, which allows you to immediately view the results of the Internet Explorer, Chrome, Mozilla or Safari browser in the program window.

### **The text of the web page**

Web pages are text files (in the “text only ” format) that contain links to additional files (style description files, scripts, images, sounds, and videos). Therefore, a simple Notepad-type text editor in Windows is enough to work with them.

Students should understand that HTML is not a programming language, but a markup language. For this purpose, special commands are used-tags enclosed in angle brackets. Tags can be paired or unpaired. The scope of paired tags (containers) is defined by the opening and closing tags; the closing tag begins with the “/” symbol (“slash”).

The entire page consists of an html container, which contains the head (“head”, service information) and body (“body”, the main part of the page) containers. Of the tags placed in the head container, at first the most interesting is the title container — the page name, which is shown in the browser window header and serves as the most important information for search engines.

In the main part of the page, select the headers (containers h1, h2, h3, h4, h5 and h6, from the English. header-title) and text paragraphs (p containers, from the English paragraph). For these elements, you can set the alignment mode using the align attribute (property), for example, as follows: `<h1 align='center'>...</h1>`

The `<br>` tag is used to move to a new line within a single paragraph. You need to pay attention to special characters that are not present on the keyboard. For example, the `&section;` and `&copy;` sequences are used to insert paragraph (§) and copyright (©) characters. Traditionally, Uzbek texts use French quotation marks (“Christmas trees”), which are encoded as `&laquo;` and `&raquo;`. An important role is played by an indissoluble space (`&nbsp;`), which separates the initials of a person from his last name (Abdulla Avlony), numbers from units of measurement (25 kg) and dashes (`&mdash;`) from the previous word (so that the new line doesn't start with a dash).-

### Practical work # 1

1. After starting the Ease Editing program, select the icon from the list of tools. Open it dogs.htm file. See how this document will look in the browser.
2. Add the tags needed for the correct HTML document. In the title of the page, write the document name and the author's last name.
3. Use the H1 and h2 tags to highlight the document title and section titles. Before the section number, add the sign " § " (after this sign, put an unbroken space).
4. Make out whatever the poem is, using the command to move to a new line br. Put the copyright mark “©” before the author's name.
5. Select the text paragraphs using the p tag and set the width alignment.
6. Replace the "minus" signs with a dash, and put an unbroken space between the dash and the previous word.
7. Replace the upper quotation marks with “Christmas trees”.
8. Put indissoluble spaces between numbers and units of measurement, for example, 25 kg.
9. At the beginning of the last paragraph to put the copyright symbol: ©

*As a result, this will appear on the screen (Fig. 2.):*

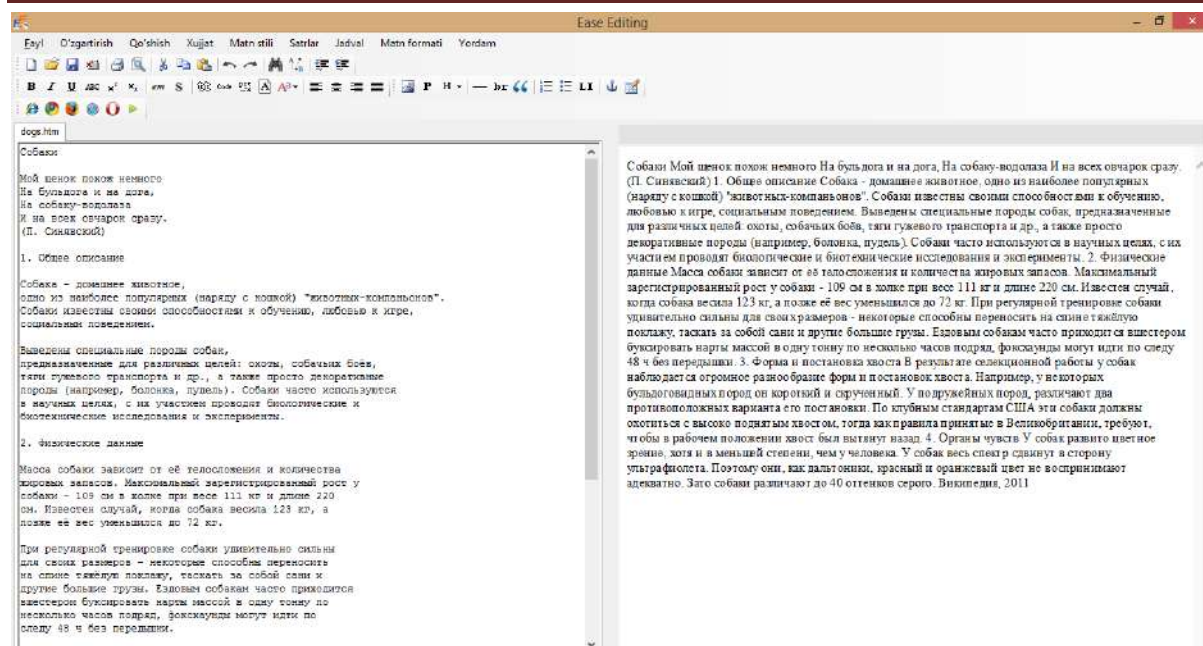


Fig. 2. Viewing the Easy Editing program after downloading the file dogs.htm

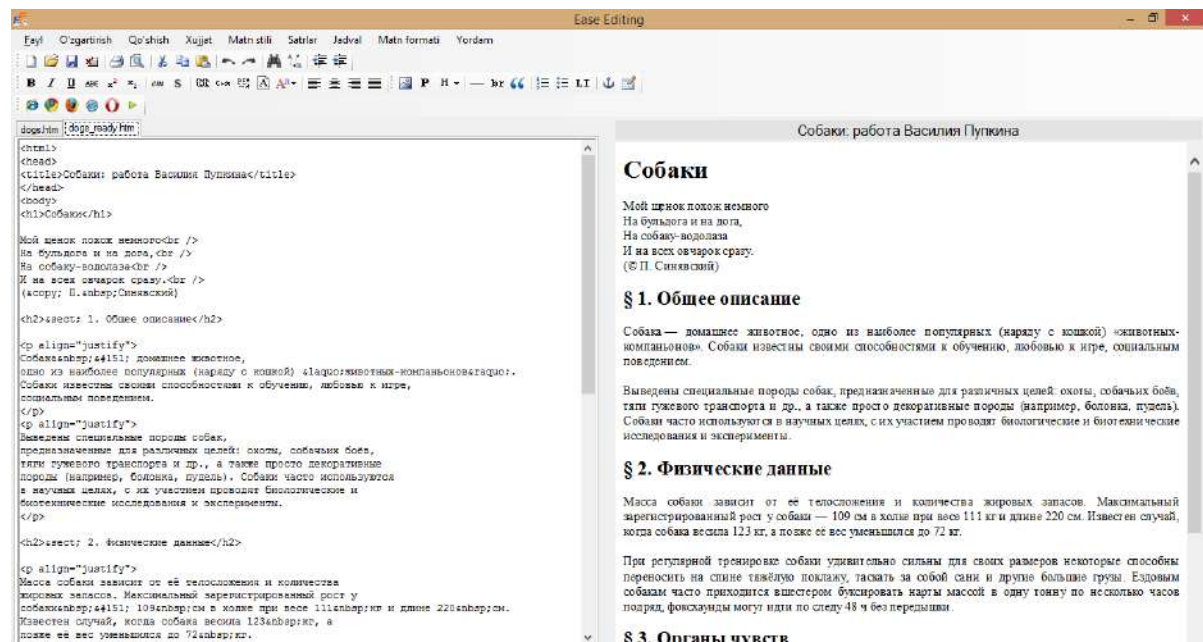


Fig. 3. After making changes to this file

## CONCLUSION

The article presents one example of practical work on the topic "Creating websites", included in the workshop for the module "Pedagogical web design". Unlike many existing analogues, they are an introduction to the methods of developing modern websites based on HTML (including HTML5 elements), cascading style sheets (CSS), and the JavaScript programming language. Various JavaScript libraries (jQuery, etc.), as well as server-side languages (for example, PHP),

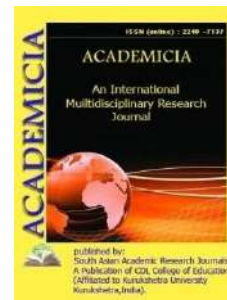
which interested students can study as electives, elective courses, or independently, were left out of the material considered.

In the activity of the designer-teacher, the subject of knowledge becomes all the richness and beauty of the environment. Explain, outline, teach to notice and analyze the beauty of the subject environment in the process of learning and project creativity can only be a specialist whose training content includes these tasks. This is the designer-teacher, who is able to realize himself as a teacher of professional education in the field of design, who has integrated qualities of the profession and creative, systematic design-imaginative thinking.

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## **AUTOMATED CONTROL SYSTEM FOR PUMPING UNITS FOR SHORT-TERM EMERGENCY SITUATIONS**

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### **ABSTRACT**

*This article discusses and solves the issue that is often encountered at pumping stations on pumping units with a non-return valve in the system. In rural areas, there is often a short-term loss of voltage, which leads to a system failure. And also when the pump unit is switched off in a system with a non-return valve, water is not stored in the pipeline, and this leads to additional time for refueling the pump. It takes time to fill the pump, which stops the process. For continuous operation of the process in the control circuit, add the automatic reclosing circuit (ARC). This scheme solves these issues. Namely, with a short-term voltage loss, this circuit is used to restart the pump unit. Given the shortage of water resources in our country, water-saving technologies for irrigation of agricultural crops are of great importance. The pumping station as a whole, in addition to the above, is automated depending on the purpose and the specified operating mode. Often, automatic switching on the reserve, restoration of the stations after short-term power outages, and others are carried out. Although the station is a complete unit of structures, when automating the irrigation and drainage system as a whole, it is considered as a link in a single chain of system as objects, the work in which is interconnected and interdependent, which imposes additional, special requirements on the automation of the pump station.*



**KEYWORDS:** *Transistor, Thyristor, Pumping Station, Water Distribution, Resistance, Capacitor, Staff On Duty, System, Control, Protection.*

## INTRODUCTION

Given the shortage of water resources in our country, water-saving technologies for irrigation of crops are of great importance. In the literature of our and foreign scientists, various methods and devices are described that allow for economical irrigation. Such methods include watering from hose devices, watering technologies using siphons, watering trays, watering using stationary, semi-stationary pipelines, drip watering technologies, sprinkling irrigation, and others. All these methods to one extent or another can save water, carry out normal irrigation, and some improve the quality of irrigation itself. However, the possibilities of saving irrigation water from surface sources can be limited, and in this sense for underground farms, which will always strive for autonomous sources, the importance of underground water. The development and improvement of automation of water treatment processes for irrigation in farms using a pumping station requires the fulfillment of certain requirements for the technology of process formation [9]. These requirements include the study of the object (s) of management, as the structure of an automated process control system in the regulation and water distribution system.

A pump installation with all its auxiliary hydromechanical and electrical equipment, control and monitoring sensors is an independent automation object. The more complex the pump unit and the technological scheme, the more complex the automation scheme and the more difficult it is to ensure its reliable operation. Therefore, when choosing a hydromechanical scheme, they seek to ensure the prostate and reliability of auxiliary equipment and, if possible, minimize it. Accordingly, the number of sensors, relays, and other automation devices decreases [18]. Pumping stations, as a rule, are designed with the calculation of their operation without permanent duty personnel. At large stations provide a small staff, which mainly carries out control functions [1]. Set the automatic mode of operation of pumping units. General station installations are also automated.

Actually, the pumping station is part of the machine-building waterworks construction site, which in the general case includes water intake, sludge, receiving and water-discharge structures, suction pipes, pumping station, pressure pipelines and so on. All these structures and devices are involved in the process of pumping water, and the automation of their work is usually included as part of the total automation of the pumping station.

Statement of the problem and relevance of work. On September 6, President of the Republic of Uzbekistan ShavkatMirziyoyev held a meeting on the priority tasks of agricultural development in 2020-2030. Uzbekistan has great potential in the agricultural sector. Success in solving many socio-economic issues from the abundance of markets and delivery on the table to ensure additional income from exports depends on the development of this industry. Decree of the President of the Republic of Uzbekistan in the country, large-scale work is underway to create the necessary and organizational and legal foundations for the development of agriculture and water management. In the implementation of structural transformations and the introduction of market relations mechanisms, special attention is paid to creating additional conditions for farms. Pumping stations are usually designed with the expectation of their operation without permanent

duty personnel. At large stations, a small staff is provided, which primarily carries out control functions. Set the automatic operation of pumping units [2]. The industry supplies stations with control of pumping units, providing from a single pulse the entire sequence of operations when starting and stopping the unit, including all its auxiliary mechanisms, protecting the unit from possible malfunctions and shutting it down in case of emergency, warning and alarm systems.

All these structures and devices are involved in the process of pumping water and automation of their work is usually included as part of the total automation of the pumping station. The pumping station as a whole, in addition to the above, is automated depending on the purpose and the specified operating mode [3]. Often, automatic selection of switched-on units, withdrawal of the reserve, restoration of the station after short-term power outages, etc., and finally, is carried out, although the station is a complete unit of structures, when automating irrigation and drainage systems as a whole, it is considered as a link in a single chain of system objects whose operation interconnected and interdependent, which imposes additional, special requirements for the automation of the pumping station. From the aforesaid it follows that pumping stations are very common, necessary and responsible objects of irrigation and drainage systems [17]. Their automation gives a great economic effect and in many cases without automation it is impossible to ensure their effective operation [4]. A pump unit is a pump coupled to a wired electric motor, and a pump unit is a pump unit with a set of auxiliary equipment mounted according to a certain scheme and ensuring the operation of the pump unit according to this scheme.

When automating a pumping station, the operation of pumping units is primarily automated. Moreover, among the initial data defining automation, a significant place is occupied by the operating characteristics of the types of adoption of pumps [7]. The essence of automatic reconnection is that an element of the power supply system that is switched off by means of relay protection is switched on again under voltage (if there is no prohibition on reconnecting) and if the reason that caused the disconnection of the element has disappeared, the element remains in operation and the consumer continues to receive power practical without interruption [8]. Operational experience shows that a lot of damage in the power supply systems of industrial enterprises is unstable and can be eliminated after a short-term voltage failure.

Among the most common causes of unstable damage to system elements are the overlapping of wires in strong winds or dances, shorting of a line or bus with various objects, disconnection of a line or transformers due to short-term overloads [9]. The use of an automatic re-inclusion device of various elements of the automation system significantly increases the reliability of the process.

Purpose and objectives of the work. In production and at pumping stations, there are a number of units with electric motors that require continuous operation. These include all kinds of pumping units operating in water supply systems, pumping water and water distribution, as well as power electrical equipment (for example, thyristor voltage converters). A common cause of such shutdowns are short-term (from one to several seconds) power surges.

Therefore, these units require the constant presence of service workers who can perform quick manual restarting [16].

Another option is also possible - the installation of devices for automatic restarting of electric motors (AR). At the same time, the constant presence of people near the unit becomes optional.

### Solution methods

The solution to this problem is a circuit that automatically re-activates the pump unit. The proposed scheme is simple. In Fig. 1, it is shown in a practical version in the form of a block together with the circuit of a conventional non-reversing starter. The block is made as an addition to the starter circuit, which does not require breaking existing electrical connections.

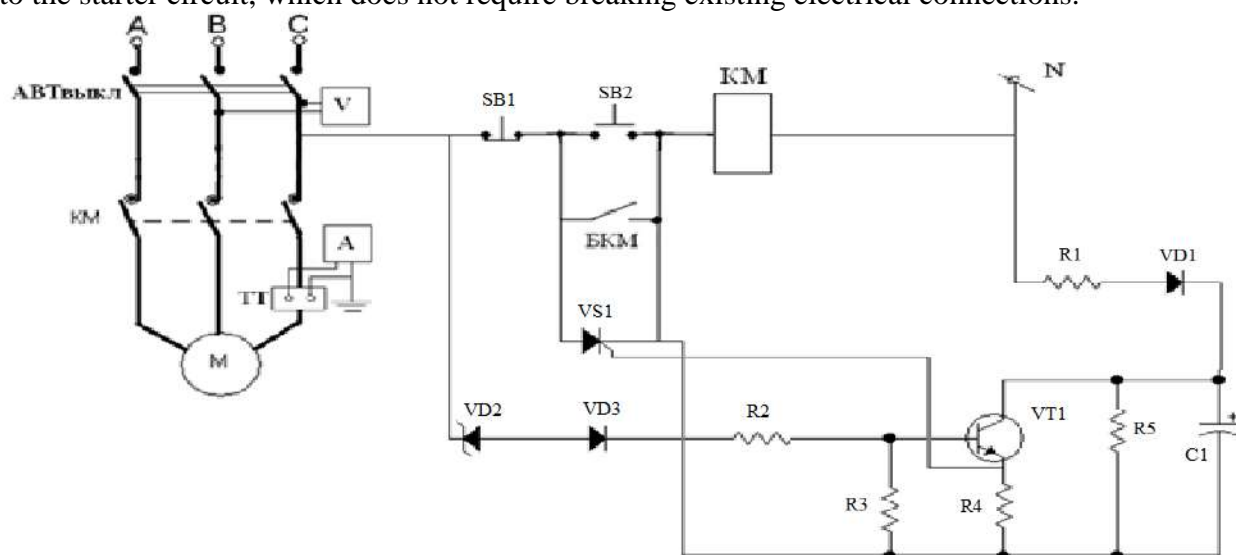


Fig. 1. Schematic diagram of the management of the re-inclusion of the pump unit.

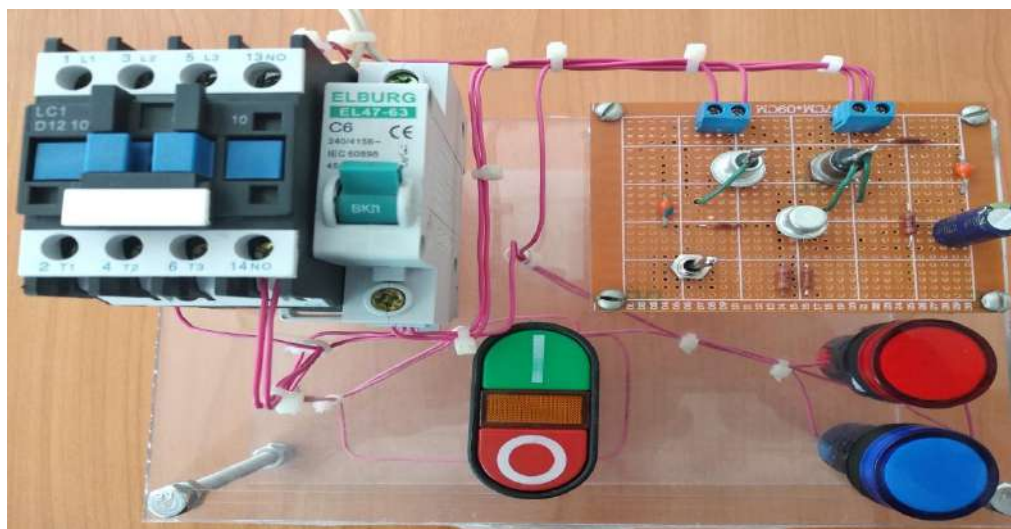


Fig. 2. The prototype control circuit reclosing the pump unit.

When the voltage disappears in the electric network 380 V, the KM starter is disconnected. The capacitor is slowly discharged through the resistor R5 [10]. When voltage is restored, transistor VT1 opens, the capacitor discharges through its K-E junction and thyristor VS1 control junction [11], which is turned on during control half-cycles and switches on the KM motor starter itself.

The exposure time of the automatic reclosure operation during voltage setting is determined by the time the discharge of the capacitor C1 through the resistor R5 depends on the values of C1, R5 and the voltage on C1 [5]. The voltage across the discharged capacitor is determined by the ratio of the resistors R1 and R5 [12].

It should not exceed the rated voltage of the capacitor. The Zener diode VD2 prevents the fast discharge of C1 during a smooth voltage landing [13]. At the values indicated in the circuit, the duration of the action is about 15 s [14]. When the SB1 button is pressed, "Stop" VT1 opens and C1 quickly discharges through the K-E transitions VT1 and CC VT1. The shutdown time shall not exceed 0.5 s. During this time, the discharge current becomes less than the thyristor turn-on current [6]. For these reasons, the capacitance of the capacitor C1 and the voltage of the charge on it (determined mainly by the value of R5) should be as small as possible to ensure the necessary readiness for the action of automatic reclosure [15]. This time should not be set excessively long, more than 15 s. It should be less than the time for which the employee servicing the installation will have time to approach it after a sudden stop of the electric motor. This complies with labor safety standards.

## CONCLUSIONS

At pumping stations, pumping units operating in water supply, water drainage and water distribution systems are met with a short interruption in the power supply, which leads to a stop of the pumping unit and a shutdown of the process. A common cause of such shutdowns are short-term (from one to several seconds) power surges. One option is manual mode, which personnel must monitor the process.

The proposed circuit is simple in conjunction with a conventional non-reversing starter circuit. This circuit is an addition to the control circuit of the pump unit, which does not require breaking existing electrical connections. At the same time, the constant presence of people near the unit becomes optional.

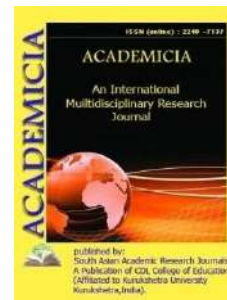
This scheme is very practical and economical. The circuit in the automated control system is stable and convenient for operation. Above the indicated material, we can say that scientific development will find its application at the pumping station.

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## DETECTION OF MYOCARDIAL DYSTROPHY ON THE BACKGROUND OF PHYSICAL OVERSTRAIN OF HEART IN HIGH-CLASS ATHLETES

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### ABSTRACT

*The article presents the results of studies monitoring the functional state of the cardiovascular system in 25 highly qualified athletes in a one-year training process. According to the ECG, a high percentage of rhythm, conduction and repolarization processes was detected. In most cases, due to load correction and rehabilitation treatment, the revealed violations were transient. In 5 athletes (20%), ECG changes in the end part of the ventricular complex were recorded throughout the season, who were diagnosed with myocardial dystrophy due to chronic physical overstrain of degree 1-2 against a background of chronic cardiac overstrain.*

**KEYWORDS:** *Myocardial Dystrophy, Physical Overstrain, Echocardiography, Retrospective Analysis, Myocardial Dystrophy Due To Chronic Physical Overstrain.*

### INTRODUCTION

The growth of sports results, especially in recent years, has led to an increase in the amount of stress on the athlete's body. The intensification of sports training has become regarded as the only guarantee of success. As shown by various researchers, the fee for adaptation to the loads of modern sports is quite high. The main link that limits the athlete's physical performance is the cardiovascular system, which most integrally reflects the functional capabilities of the body. Adequate physical activity increases the cost-effectiveness of the functioning of the cardiovascular system, excessive loads, as well as inadequate physical activity, especially in combination with psycho-emotional stress, lead to the development of physical overstrain of the cardiovascular system (CVS). The failure of the adaptation of the cardiovascular system is expressed in the phenomenon of myocardial dystrophy due to physical overstrain, the frequency of which, according to various authors, ranges from 6 to 16% in athletes [1; 3; 6; 8].

For the decades that have passed since the publication of the fundamental works of G.F. Lang (1936), who laid the foundation for the study of pathological sports heart and myocardial



dystrophy (MD) in athletes, ideas about this condition have come a long way. Lang's student professor A.G. Dembo et al. (1960) proposed calling the pathological changes that occur during irrational exercise, myocardial dystrophy due to chronic physical stress (MDCPhS). Based on the analysis of the resting ECG, he proposed a classification of the stages of MDCPhS, based on the severity of disturbances in repolarization processes. Isolation of this pathology into a separate nosological unit in many respects contributed to the development of domestic and world sports cardiology, it was of great scientific and practical importance [5]. At the same time, the diagnosis of MDCPhS in foreign sports and medical schools remains unrecognized and absent in the international classification, however, in many countries of the CIS, the authors adhere to this terminology to date. Myocardial dystrophy is most often diagnosed based on an ECG.

The solution to this problem comes to the fore primarily because sudden cardiac death (SCD) remains a huge social and medical problem. According to some authors, the risk of sudden death among athletes is 5-10 times higher than among physically inactive people. Among the causes of SCD in athletes, hypertrophic cardiomyopathy is most often called [2; 3].

**Objective:** To conduct a retrospective analysis of clinical and medical history and functional parameters in athletes with abnormalities in the cardiovascular system and to develop a prognostic algorithm for myocardial dystrophy due to chronic physical stress.

**Materials and research methods:** In order to study the detection of myocardial dystrophy against the background of physical overstrain of the heart in high-class athletes, studies were conducted among 25 athletes out of 87 highly qualified.

**Results and discussion:** According to the results of an in-depth medical examination, all athletes were found to be practically healthy.

All athletes underwent anthropometry and ECG studies were carried out in dynamics in the morning from 8-10 hours according to the generally accepted method on a 3-channel apparatus of the company Chiller; echocardiography was used to exclude cardiac abnormalities and detect small heart abnormalities on an echocardiograph with a Doppler study performed on an SIEMENS ACUSON X-300 apparatus.

The average height of the examined was  $167,0 \pm 7,0$  sm, weight -  $62,0 \pm 10,8$  kg, body surface -  $1,72 \pm 0,2$  m<sup>2</sup>, SAV -  $113,6$  mmHg. col., DAV -  $73,3 \pm 9,6$  mmHg. col., Heart rate -  $62,0 \pm 8,9$  bpm.

When analyzing electrocardiograms of 25 athletes identified:

- Sinus arrhythmia (more than 0.50 s) in 29.8% of cases;
- Pacemaker migration - 8.3%;
- atrial rhythm - 2.4%;
- Incomplete blockade of the right leg of the bundle of His - 7.2%;
- Slowdown of AV conduction - 3.4%;
- disturbances in the processes of myocardial repolarization in the form of a negative T wave in leads V2-4 - 25.7%; in the form of ST segment elevation in leads V2-5 - 21.2%;
- A single atrial extrasystole - 3.1%;
- ventricular extrasystole - in 2.8% of cases.

In some athletes, combined ECG changes were noted. Since athletes rarely complain about the state of the cardiovascular system, the diagnosis was confirmed only by electrocardiography. ECG changes in most athletes were transient. The dynamics of the ECG over the preparation periods showed that sinus arrhythmia, transient disturbances in the processes of myocardial repolarization, when the volume of physical activity increases, are most frequent. Most often they arose during intense training, in the preparatory period. The same is observed in athletes who begin to force loads after a long break due to injuries and diseases. In 5 athletes (20%), ECG changes in the final part of the ventricular complex were recorded throughout the season, which were diagnosed with grade 1-2 MDCPhS against a background of chronic overstrain of the heart.

Echocardiography was performed in 12 (48%) of the 25 observed athletes. Anomalies of development (mitral valve prolapse, false chords, trabeculae, abnormal location of chords) were detected in 6 people. (24%).

Case Study Athlete K., 29 years old, height 167 cm, weight 74 kg. Over the past year, 6 times reduced weight by 7-8 kg.

According to the results of an in-depth medical examination recognized as practically healthy. Recently complains of rapid fatigue during training and competition. When determining body composition, a chronic violation of body composition was revealed by the ratio of muscle mass / fat mass - high MM (up to 55%) and low breast (up to 5.9%). Hormonal profile: with the normal ratio Testo / Epi-Testo, the levels of both indicators are reduced (T 31.06 pkg, Epi - T 30.47 pkg).

Ultrasound of the abdominal cavity - signs of chronic cholecystitis. Chest x-ray without pathology. A general analysis of blood and urine is normal, biochemical tests - periodically exceeding the normal levels of AST and ALT, urea. Echocardiography: Interventricular septum 0.9 cm, final diastolic size 5.1 cm, posterior wall of the left ventricle 1.0 cm, final systolic size 3.3 cm, ejection fraction 65%, final diastolic volume 128.9 ml, final systolic volume - 45.6 ml, stroke volume - 83.3 ml, left ventricular myocardial mass - 194 g, Left ventricular myocardial mass index to area - 105 g / m<sup>2</sup>, Left ventricular myocardial mass index to growth - 116 g / m, Left ventricular myocardial mass index to a height raised to a power of 48.5 g / m<sup>2.7</sup>, false chord in the cavity of the left ventricle.

Arterial pressure at rest 120/78 - 130/78 mm hg. col. With 24-hour Holter monitoring, the average heart rate in the daytime was 62 beats / min, at night - 52 beats / min, rhythm disturbances in a non-pathological amount. On the ECG, over the course of a year, stable disturbances of repolarization processes in leads V-V4, III, and VR with a deterioration of repolarization processes in leads to V5-V6, II are observed on the ECG. He was diagnosed with chronic overstrain of heart, MDCPhS 2<sup>nd</sup> degrees.

Despite repeated intensive rehabilitation therapy in a hospital, hyperbaric oxygenation before and after responsible competitions, changes in the ECG persist with a tendency to worsen. Given the possible complications of the cardiovascular system, regulation of the training process (aerobic exercise) and weight loss are recommended.

Thus, in general, regular monitoring of electrocardiography indicators contribute to the timely detection of myocardial dystrophy. Changes in the heart of this athlete, of course, are associated with physical exertion, which can cause a number of metabolic disorders in the body - in

particular, this athlete: a violation of the neuroendocrine regulation of the cardiovascular system, primarily the ratio of catabolic and anabolic hormones (decreased testosterone) and electrolyte disturbances as a result of frequent weight loss. The appearance of these metabolic changes may have contributed to the existing congenital anomaly of the heart [4; 5; 8]. However, with the same level and type of training, other athletes showed no changes. In this regard, the contribution of the genetic component to the nature and extent of these changes cannot be ruled out [9].

Recently, publications have appeared on the revision of the term MDCPhSto cardiomyopathy. Most sports doctors have MDCPhSand disturbances in the processes of repolarization on the ECG - in fact, are synonyms. As a result, myocardial hypertrophy, its calcification and fibrosis, rhythm and conduction disturbances, as well as myocardial contractility are not decisive in the diagnosis [3].

For the prevention of complications, a thorough medical examination is necessary at the stage of selecting people who have an increased risk of developing an abnormal sports heart and sudden death, taking into account the phenotypic markers of connective tissue dysplasia, ECG and EchoCG data, which will allow differential monitoring of this contingent of athletes, predicting their activities and achievements in sports.

Thus, the study of the functional state of the cardiovascular system of highly qualified athletes revealed by ECG a high percentage of violations in the functional state of the heart at the stages of shock training loads. In most cases, due to load correction and the use of restorative means, the revealed abnormalities in the heart function of athletes were of a transitory nature. In 20% of cases, registered violations in the form of myocardial dystrophy due to chronic overstrain of the 1<sup>st</sup>, 2<sup>nd</sup> degree of heart persisted throughout the season and required a deeper examination: echocardiography with Doppler, Holter monitoring, clinical and biochemical blood tests and other diagnostic methods.

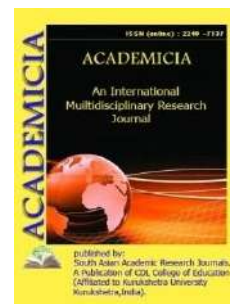
### **FINDINGS:**

1. The study of the functional state of the cardiovascular system of highly qualified athletes revealed, according to ECG and Echocardiography, a high percentage of violations in the functional state of the heart at the stages of excessive training loads.
2. In most cases, the detected abnormalities in the heart of athletes were transient.
3. In 20% of cases, the recorded violations in the form of myocardial dystrophy due to chronic overstrain of the heart persisted throughout the season and required a deeper examination: echocardiography with Doppler, clinical and biochemical blood tests and other diagnostic methods.

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## INFLUENCE OF REPEATED AND INTERVAL CROPS ON PHYSICAL PROPERTY OF SOIL

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### ABSTRACT

*Repeated and interval crops are sown after winter wheat in the system of short crop rotation in the condition of saline soil of the Republic of Karakalpakstan and it was defined that they influence positively on physical property of soil. . It should be mentioned that, in variants 6 and 7, when repeated and interval crops were sown after winter wheat; in variant 5, when repeated crops were sown and additional 20 t/ha manure was given; and in variant 8, when repeated, interval crops were sown and additional 2 t/ha amount of manure was given, soil capacity mass was 1,31-1,33 g/cm<sup>3</sup> in 0-30 cm layer in spring, and it was less than the indicators of controlling variant to 0,02-0,04 g/cm<sup>3</sup>.*

**KEYWORDS:** Winter Wheat, Repeated and Interval Crops, Manure, Soil Productivity, Capacity Mass, Positive.

### INTRODUCTION

Water-physical properties of soil are the main factors of soil productivity. Researches were carried out on the influence of physical, biological properties of ploughing layer compactness of irrigated soil of Uzbekistan on the growth, development and fertility of cotton. As soon as soil structure becomes compact, the amount of moisture, which is difficult for the plant to acquire, increases, moisture is mainly situated in a very small hollows. Soil, which has a little amount of humus and low structure, is inclined to compactness in irrigation and treating between rows (Kashkarov, 1969; Smetov, 1994; Ismailov, 2004; Xalikov, Namozov, 2016 and others).

Soil capacity mass is directly connected with soil productivity, and if soil productivity is high, capacity mass is low, and if productivity is low, capacity mass is high. The indicator of capacity weight should be low for the good development of the root system of cotton and agricultural crops.

Field experiment was carried out in central soil-climate region of the Republic of Karakalpakstan, in study-experiment household of Nukus branch of Tashkent State Agrarian University in Khodjeli region. The soil is pasture-alluvial, mechanical structure is average, groundwater is situated in 1,5-2,0 m, salted.

It should be studied in the experiment, the influence of organic fertilizer in the amount of 20 t/ha together with repeated crops as mung bean, sesame, corn, which were sown after winter wheat in the system of short crop rotation, and the growth, development and productivity of cotton, which was sown after them.

The following variants were studied in the experiment: variant 1, cotton (control), variant 2, 1:2, winter wheat + repeated crop (mung bean): cotton: cotton, variant 3, 1:2, winter wheat + repeated crop (sesame) : cotton: cotton; variant 4, 1:2, winter wheat + repeated crop (corn) : cotton : cotton, variant 5, 1:2, winter wheat + repeated crop (corn) + 20 t/ha manure : cotton: cotton, variant 6, 1:2, winter wheat + repeated crop (mung bean) + interval crop (mung bean) : cotton : cotton, variant 7, 1:2, winter wheat + repeated crop (corn) + interval crop (mung bean) : cotton : cotton, variant 8, 1:2, winter wheat + repeated crop (corn) + interval crop (mung bean) + 20 t/ha manure: cotton : cotton. The area of each variant is 240 m<sup>2</sup>, it was carried out on four times repeating.

In order to identify influence of crops, which are included in the system of short crop rotation, soil capacity mass was defined before experiment, during the experiment, at the beginning and end of the action period. Indicators of soil capacity mass before starting the experiment were 1.42-1.44 g/cm<sup>3</sup> in 0-30 layer in autumn, 2017. After crops, which are included in the crop rotation system, in spring, 2019, soil capacity mass was average 1.31-1.35 g/cm<sup>3</sup> in 0-30 cm layer on variants and 1.49-1.53 g/cm<sup>3</sup> in 30-50 cm layer of soil. Soil capacity mass increases at the end of action period in all variants. In this, the highest indicator was in variant 1, when cotton is sown after cotton, it was 1.46 g/cm<sup>3</sup> in 0-30 cm layer in controlling variant. It is more than the indicator in spring to 0,11 g/cm<sup>3</sup>. In variants 2, 3 and 4, when repeated crops were sown after winter wheat, soil capacity mass was 1.42-1.43 g/cm<sup>3</sup>, and capacity mass increased to 0,08-0,09 g/cm<sup>3</sup>. In variant 5, when repeated crop was sown after winter wheat and amount of 20 t/ha manure was given in autumn, soil capacity mass was 1,39 g/cm<sup>3</sup> in 0-30 cm layer and it is more than in spring to 0,06 g/cm<sup>3</sup>.

Soil capacity mass, g/cm<sup>3</sup>

Variants	Soil layers	Indicators before starting the experiment, autumn, 2017	2019	
			spring	autumn
1	0-30	1,43	1,35	1,46
	30-50	1,54	1,53	1,55
2	0-30	1,42	1,34	1,42
	30-50	1,53	1,50	1,52
3	0-30	1,42	1,34	1,42
	30-50	1,54	1,51	1,52
4	0-30	1,43	1,34	-1,43
	30-50	1,51	1,52	1,53
5	0-30	1,44	1,33	1,39
	30-50	1,51	1,50	1,50
6	0-30	1,43	1,32	1,40



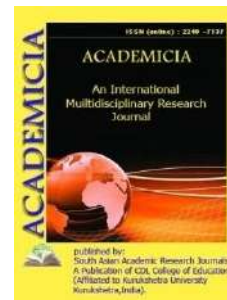
	30-50	1,51	1,50	1,51
7	0-30	1,42	1,32	1,39
	30-50	1,49	1,49	1,52
8	0-30	1,43	1,31	1,37
	30-50	1,53	1,49	1,53

In variants 6 and 7, when repeated and interval crops were sown after winter wheat, soil capacity mass was 1,39-1,40 g/cm<sup>3</sup> in 0-30 cm layer and it was more than the indicators in spring to 0,07-0,08 g/cm<sup>3</sup>. It should be mentioned that, in variants 6 and 7, when repeated and interval crops were sown after winter wheat; in variant 5, when repeated crops were sown and additional 20 t/ha manure was given; and in variant 8, when repeated, interval crops were sown and additional 2 t/ha amount of manure was given, soil capacity mass was 1,31-1,33 g/cm<sup>3</sup> in 0-30 cm layer in spring, and it was less than the indicators of controlling variant to 0,02-0,04 g/cm<sup>3</sup>. In variant 8, when repeated and interval crops were sown after winter wheat and additional 20 t/ha manure was given, soil capacity mass was 1,37 g/cm<sup>3</sup>, it was more than in spring to 0,06 g/cm<sup>3</sup> and less than the indicators of controlling variant to 0,09 g/cm<sup>3</sup>.

So, it influences positively when it is sown in the following system on soil mass capacity in 1:2 crop rotation system: winter wheat + repeated crop (corn and mung bean) + interval crop (mung bean) : cotton : cotton; 1:2, winter wheat + repeated crop (corn) + interval crop (mung bean) + 20 t/ha manure : cotton : cotton, and the indicators of capacity mass decreases.

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## THE IMPORTANCE OF THE WORK "TARIXI RASHIDIY" IN THE STUDY OF THE MEDIEVAL HISTORY OF CENTRAL ASIA

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### ABSTRACT

*In this case, Mirzo Muhammad Haydar substantiates his views on the basis of the situation and historical situation of that time, as well as from the point of view of history: - "... I started this history with poor Tughluq Temurkhan. By summarizing the scientific conclusions and results of research conducted by professional historians who are experts in the fields of historical sciences, it is possible to get an overview of past and present historical processes, the content and significance of events. After the death of Sultan Said Khan in 1533, Mirza Haydar for some reason left the country and went first to Badakhshan, and then from there to Lohur - to Babur's son Komron Mirza. In 1540 he went to Agra and entered the service of Humayun. One of the Russian orientalists V.V.Velyaminov-Zernov said about this work: - The work "Tarixi Rashidiy", especially its second part, is of great importance. This work is the only source that sheds light on the history of the last Chigatay rulers. Openness, clarity and objectivity are at the forefront of the events described by the author on the basis of all that he has seen and experienced. For example, the authors of Haydar Ali Razi's "Tarixi Haydariy" and Mahmud ibn Wali's "Bahr ul-asror fi manoqib ul-ahyar" on the history of the Chigatay rulers in Yorkend have often referred to Mirza Muhammad Haydar's "Tarixi Rashidiy" in their writings left. I found it necessary to shed light on information not given in the history books. There is enough history until the time of Tughluq Temurkhan, and to repeat it again is like digging a well on the banks of the Euphrates River.*

**KEYWORDS:** *Euphrates, Digging, Orientalists*

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## INTRODUCTION

The interest of society in the processes of the past and the desire to know and understand it have been conveyed and explained to people through research conducted by historians and the historical works created. History is often seen as a science that studies the past. This idea or view is less accurate. The science of history studies not only the past, but also the events that are happening today, at the same time. By summarizing the scientific conclusions and results of research conducted by professional historians who are experts in the fields of historical sciences, it is possible to get an overview of past and present historical processes, the content and significance of events.

Another historian who lived and worked in the 16th century and achieved some excellent results in the field of historiography was Mirzo Muhammad Haydar, whose two major works have survived to the present day. Muhammad Haydar is the author of the famous historical work "Tarixi Rashidiy" and a Turkish poetic treatise on geography "Jahonnoma" [1].

"History is a great treasure. It is the duty of every society to pass on the events of the past to future generations. The next generation will learn that history, prolong their lives and increase their experience. He learns from the good deeds of his predecessors and tries not to repeat his mistakes. This has always been the case throughout human history" [2].

Historian, statesman Muhammad Mirzo Haydar Duglot was born in 905 (1499) in Tashkent. His father, Muhammad Hussein Koragon, was the governor of the Uratapa region on behalf of Sultan Mahmudkhan, the khan of Tashkent at the time. After his father Muhammad Husayn Shaibanikhan was executed in Khorasan in 1509, Mirza Haydar, who was in Bukhara at that time, escaped death and came to Kabul via Babakhshan to Babur, where he lived for three years. Bobur takes good care of him and gives him a good upbringing. He appoints teachers and encourages his aunt to acquire knowledge. Muhammad Haydar remembers this with great gratitude in his work. Later, with the permission of Mirza Haydar Babur, he went to Andijan and Kashgar to his cousin Sultan Saidkhan (1514-1533). He also demonstrated his commanding talent when he was in the service of Sultan Saidkhan until 1533. According to the khan's order, he led military campaigns in Badakhshan, Kafiristan and Tibet. After the death of Sultan Said Khan in 1533, Mirza Haydar for some reason left the country and went first to Badakhshan, and then from there to Lohur - to Babur's son Komron Mirza. In 1540 he went to Agra and entered the service of Humayun. He conquered Kashmir on behalf of the Baburis in 1541 and ruled the country until 1551 as an almost independent ruler. He was wounded and killed in a battle with the mountain tribes in 1551. His grave is currently in the Sirinagor (Sultan's Tomb) Cemetery in Kashmir.

It is true that Muhammad Haydar Mirza's "Tarixi Rashidiy" covered the events of the second half of the XV century - the XVI century in Central Asia and the Middle East on the basis of justice, expressed the author's deep views on the events he described. That is why we know him first of all as a historian, a commander and a great statesman of his time [4].

Well-known scientist N.Juraev spoke about the research of historical science, the role of sources, in particular, the in-depth scientific analysis of any events in the sources, historical evidence, theoretical conclusions, socio-political and economic study of the period under study. the events of that period

He pays special attention to the scientific and theoretical aspects of the period under study, and among such sources is the work of Muhammad Haydar Mirza "Tarixi Rashidiy" [5].

Muhammad Haydar Mirza's "Tarixi Rashidiy" was written in 1541-1546. Haydar Mirzo called his book "Tarixi Rashidiy". The book is named after Sultan Said Khan's son Abdurashid Khan.

The book "Tarixi Rashidiy" is the work of Mirza Muhammad Haydar Koragon ibn Muhammad Husayn Koragon (may God enlighten their graves) and dedicated it to Abdurashidkhan ibn Sultan Saidkhan Saidkhan in 951 AH. written with and described in detail the condition of each khan and king in terms of his position. It also examines, observes, and identifies as much as possible the latitude, climate, and cities, mansions, cemeteries, deserts, parks, rivers, mountain deserts, and customs of the peoples of Kashgar, Yorkand, and Khotan provinces. made. What is clear is that the description of these provinces and the mention of the Mongol khans are not mentioned in any other book. Although some historical works say little about chance, these are very brief pieces of information. In "Tarihi Rashidi", the stories of special Mongol khans and the events in Mongolia are so detailed that it is impossible to imagine more than that. "[7]

One of the Russian orientalists V.V.Velyaminov-Zernov said about this work: - The work "Tarixi Rashidiy", especially its second part, is of great importance. This work is the only source that sheds light on the history of the last Chigatay rulers. Openness, clarity and objectivity are at the forefront of the events described by the author on the basis of all that he has seen and experienced. Such a situation could be expected from the author, because the current socio-political situation itself allowed him to describe the events in real terms "[8].

Muhammad Haydar Mirza's main work is known as "Tarixi Rashidiy" and the book consists of two parts. Researchers, based on a number of features of the work, rightly admit that the work "Tarixi Rashidiy" is second only to "Boburnoma" in the art of Oriental architecture [9].

In the first part of the work, the history of the peoples of Mongolia covers the history of almost a century (1348-1533) from the reign of Tughluq Temur to the reign of Abdurashidkhan [10]. In the coverage of this section, it is noted that Mirza Muhammad Haydar referred to about a dozen sources, and in the process of obtaining the data, a very comparative analysis of them was carried out [11]. In this case, Mirzo Muhammad Haydar substantiates his views on the basis of the situation and historical situation of that time, as well as from the point of view of history: - "... I started this history with poor Tughluq Temurkhan. There are three reasons for this: The first is that they wrote about the khans before Tughluq Temurkhan, and there is no information about the next ones. I found it necessary to shed light on information not given in the history books. There is enough history until the time of Tughluq Temurkhan, and to repeat it again is like digging a well on the banks of the Euphrates River. The second reason: after Tughluq Temurkhan, no khan had such a great career, so many victories, so much glory and kingdom. The third reason is that after Tughluq Temurkhan was the first of the Mongol khans to embrace the path of Islam, the whole Mongol people got rid of the shackles of disbelief and became Muslims like other nations." [12] The second part of the work is written in the form of a memoir, describing the author's experiences in the struggle for power in Central Asia, Khorasan, Mongolia and India, East Turkestan [13].

Mirzo Haydar's "Tarixi Rashidiy" has become one of the most popular works in Oriental historiography, and copies of it are kept in the manuscripts of many countries around the world. Many historians and geographers of the East, who lived and worked after Mirza Haydar, have

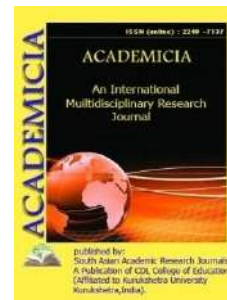
shown that they obtained medieval information about Central Asia, East Turkestan, India, etc. from Mirza Haydar's "Tarixi Rashidiy" [14]. For example, the authors of Haydar Ali Razi's "Tarixi Haydariy" and Mahmud ibn Wali's "Bahr ul-asror fi manoqib ul-ahyar" on the history of the Chigatay rulers in Yorkend have often referred to Mirza Muhammad Haydar's "Tarixi Rashidiy" in their writings left

While the author's approach to the coverage of his work provides invaluable information about the processes of statehood in the above-mentioned regions, the depiction of historical processes in the form of memoirs and memoirs is a perfect storytelling.

From the above, it can be seen that Muhammad Mirza Haydar's "Tarixi Rashidiy" is an important and unique source not only in the study of the medieval history of Central Asia, but also in the history of Mongolia, India, Khorasan, East Turkestan and surrounding areas.

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## INFLUENCE OF MINERAL AND NON-TRADITIONAL FERTILIZERS ON THE GROWTH AND DEVELOPMENT OF COTTON

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### ABSTRACT

*The influence of mineral and non-traditional fertilizers on the growth and development of cotton has been studied in the conditions of saline lands. It has been established that the norm of mineral fertilizers N180P135K90 kg/ha and glauconitic and glaukophos of 600 kg/ha are considered the most optimal when used together.*

**KEYWORDS:** *Mineral And Non-Traditional Fertilizers, Saline Soils, Additional Fertilizing, Cotton, Growth And Development.*

### INTRODUCTION

The main task of agriculture is to constantly increase agricultural production, improve their quality, safety, processing.

The intensification of agricultural production, as cotton growing, requires increasing yields based on the effective use of mineral fertilizers. It is generally known that the importance of mineral fertilizers in improving the condition of the soil, in increasing its fertility and productivity of crops, while observing the optimal norms for applying them to the soil. In addition to the well-known nitrogen, phosphorus and potassium fertilizers, the use of trace elements containing (Fe, Cu, Co, Mo, B, Zn,) fertilizers is of great importance, which enhance the growth of plants, increase the efficiency of enzymes that promote the intensity of photosynthesis, and thus increase yield, stability plants to drought, cold and some diseases.

Cotton, rice, wheat and corn, produced and cultivated in Karakalpakstan, noticeably respond to changes in the regime of nutrition, the composition of nutritious macro- (nitrogen, phosphorus, potassium) and microelements. Therefore, scientific institutions are required to develop new methods for producing and using effective mineral fertilizers, as well as developing technology for their application.



In this, much attention is paid to the problem of developing and using mineral fertilizers obtained on the basis of local natural raw materials, which include a highly dispersed variety of bentonite clays, glauconite, phosphorite, etc., containing up to 15 different trace elements.

To study the effect of mineral and non-traditional fertilizers on the growth and development of cotton in saline lands, a field experiment was conducted in which they studied: variant 1, using only mineral fertilizers for additional feeding cotton N250P175K125 kg/ha, variants 2 and 3, using only glauconite and glaukophos 900 kg/ha, variants 4 and 5, NPK norms reduced by 25% (N180P135K90 kg/ha) + glauconite and glaukophos at 600 kg/ha, variants 6 and 7, N185P135K90 kg/ha + glauconite and glaukophos at 900 kg/ha, variants 8 and 9, N185P135K90 kg/ha + glauconite and glaucophos of 1200 kg/ha.

The soils of the experimental plot are meadow-alluvial, medium saline, the level of groundwater occurrence is 1.5-2.0 m.

To study the effect of mineral and non-traditional fertilizers, phenological observations were carried out on the first of July, August and September.

When accounting for the growth and development of cotton on September 1, it was found that in all cases, there were no significant differences in the height of the main stem and the number of sympodial branches, which was on August 1. The number of bolls doubled. In terms of the number of bolls, variants 2 and 3 (7.2-7.5 pieces), where glauconite and glaukophos without mineral fertilizers were introduced, have relatively low rates. When applying mineral fertilizers with the norm N250 P175 K125kg/ha (var. 1), the number of bolls was 10 pieces, which is 2.5-2.0 more than in comparison with variants 2 and 3.

The use of mineral fertilizers together with glauconite and glaucophos (var. 4-9) contributed to an increase in the number of bolls by 1.2-3.2 pcs. The largest number of bolls is observed in variants 4 and 5, where mineral fertilizer was applied at the rate of N185 P135 K90 kg/ha, glauconite and glaukophos of 600 kg/ha-10.6-10.4 pcs. An increase in the norms of glauconite and glaucophos to 900 kg/ha did not contribute to an increase in the number of bolls, on the contrary decreased by 1.3-1.0 pcs. An increase in the norm of glauconite and glaucophos to 1200 kg/ha, the number of bolls remained at the same level with variants 6 and 7.

The obtained data on the growth and development of cotton confirm that variants 4 and 5 have the advantage, where mineral fertilizer was applied at the rate of N185P130K90 kg/ha together with glauconite and glaucophos of 600 kg/ha.

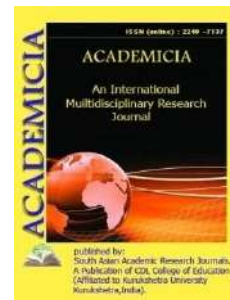
Raising the rate of agro-ore to 900 and 1200 kg/ha (variants 7–9) did not ensure significant growth and development of cotton.

The introduction of a full standard of mineral fertilizers (N250P175K125 kg/ha, variant 1) provides an advance in the number of sympodial branches and the number of cotton bolls compared to other variants, with the exception of var. 4-5.

Thus, for normal growth and development of cotton, a more favorable nutritional regime is created at the rates of mineral fertilizers N185P135K90 kg/ha and glauconite and glaucophos 600 kg/ha. An increase in the norms of glauconite and glaucophos to 900 and 1200 kg/ha is not economically profitable, since there is no significant difference in the number of bolls.

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## ONTOGENETIC CYCLES OF MEDICINA VALERIAN (VALERIANA OFFICINALIS L) UNDER THE CONDITIONS OF INTRODUCTION

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### ABSTRACT

*The article presents the results of studying the biology of the growth and development of Valerian officinalis in different periods of ontogenesis. The beginning of the growing season is the first decade of March, it lasts until mid-November.*

**KEYWORDS:** *Introduction, Hypocotyl, Epicotyl, Ontogenesis, Periods: Latent, Virginal, Generative.*

### INTRODUCTION

One of the most pressing issues today is the introduction of medicinal plants and the local supply of raw materials needed for their reproduction and production under the conditions of introduction.

*Valeriana officinalis* L. – A perennial herb of the family *Valerianaceae*, 60-150 cm tall. It grows mainly in wetlands, meadows, along rivers and among bushes. In nature, it is found in Eastern Europe, Russia, Ukraine, Belarus, Moldova and the Caucasus.

Drugs derived from valerian are the main means of calming the nervous system in medicine (in insomnia, nervous excitement and other neurological diseases) and in the regulation of cardiac activity [8].

In order to propagate valerian in the conditions of introduction, to create a raw material base, we conducted scientific research to study the stages of ontogeny of *V. officinalis* in Tashkent (botanical garden).

**Object and methods of research.** *Valeriana. officinalis* in determining the mass of 1000 seeds S.S. The Lishuk method was used [6].

In the study of the morphological structure of the plant in the stages of ontogeny, L.A. Zhukova's methods [3] were used. During the latent period, 100 seeds were taken, their length, width and thickness were measured, and the weight of 1000 seeds was weighed ten times and their shape and color were analyzed. In the study of the formation and growth of grass organs, V.K. Vasilevskaya [1] and E. A. Kondratieva-Melville [5] methods were used. Statistical processing of the results obtained in the course of scientific research G.N. It was carried out mainly on the basis of Zaitsev's [4] manuals.

**Research results.** Latent period. Seed fertility is one of the main indicators of plant reproduction and regeneration, which determines the fate of the species and determines the quality of the seed [3].

*V. officinalis* The fruit is light brown or brown, the seeds are ovate, 2.5-5 mm long. The slender stalks on the tip of the seed consist of 10 long hairs. They are pale yellow. Absolute seed weight is 0.4-0.6 g.

There is information in the literature that *V. officinalis* seeds retain their fertility for several years [2].

Virginil period. We first observed the fertility characteristics of *V. officinalis* seeds in the laboratory. Observations were made on seeds stored for one, two and three years. The germination rate of seeds stored for one year at a temperature of 10-13 ° C in a thermostat for 25 days was  $25.2 \pm 2.2\%$ . Seed viability at 16-18 ° C for 16 days was  $52.3 \pm 2.5\%$ . When the temperature rose to 20-23 ° C, the germination of seeds for 14 days increased to  $90.5 \pm 1.5\%$ . These values are 22.5 days at 10-13 ° C,  $19.5 \pm 2.0$ - $12.2 \pm 1.6\%$ , respectively, in seeds stored for two and three years; 20-21 days at 15-18°C,  $40.4 \pm 2.5$ - $20.8 \pm 2.0\%$ ; At 20–23° C for 18–20 days, it was  $65.0 \pm 2.4$ – $48.0 \pm 2.5\%$  (Table 1).

**TABLE 1 FERTILITY OF VALERIANA OFFICINALIS L. SEEDS UNDER LABORATORY CONDITIONS (N=400)**

Best before, years	Temperature, °C	Forgetfullnes, %	Germination period, day	Thrust energy
1	10-13	$25,2 \pm 2,2$	19	1,3
	15-18	$52,3 \pm 2,5$	16	3,3
	20-23	$90,5 \pm 1,5$	14	6,5
2	10-13	$19,5 \pm 2,0$	22	0,9
	15-18	$40,4 \pm 2,5$	20	2,02
	20-23	$65,0 \pm 2,4$	18	3,6
3	10-13	$12,2 \pm 1,6$	23	0,5
	15-18	$20,8 \pm 2,0$	21	1,5
	20-23	$48,0 \pm 2,5$	20	2,4

Therefore, long-term storage of *V. officinalis* seeds reduces its viability. Seed germination is obtained when studied in the field, and in the observation of seed germination, their shade and sun exposure, sowing time (spring, spring) and sowing depth to the soil (soil surface, 0.2 cm to 0.5 cm) vary. Both air and soil temperatures were significantly monitored during the observations.

In early spring (March), when the temperature in the shade is 14.0 °C and the soil temperature is 10.5 °C, the fertility of seeds sown on the soil surface is  $18.7 \pm 2.3\%$ , at a depth of 0.2 cm  $24.0 \pm 2.5\%$ , or  $20.6 \pm 2.3\%$  in the 0.5 cm layer. In April, when the air temperature was 15.6 °C and the soil temperature was 11.8 °C, the fertility of seeds sown on the soil surface was  $21.2 \pm 2.4\%$ , at a depth of 0.2 cm  $27.3 \pm 2.6\%$ . and  $23.0 \pm 2.4\%$  at a soil depth of 0.5 cm. These values were  $23.0 \pm 2.4\%$ ,  $30.8 \pm 2.7\%$ , and  $25.2 \pm 2.5\%$  in May (air temperature 20.7 °C and soil temperature 16.0 °C), respectively. was made. Seed germination in the summer months (July air temperature 31.7 °C - soil temperature 25.7 °C or August air temperature 30.5 °C - soil temperature 24.1 °C) on the soil surface  $34.0 \pm 2.7$ -  $30.4 \pm 2.6\%$ , at a depth of 0.2 cm  $60.0 \pm 2.8$ - $56.6 \pm 2.9\%$ , and at 0.5 cm  $50.0 \pm 2.9$ - $47.3 \pm 2.9\%$  were registered. Seeds sown in autumn (November) begin to germinate in February next year (Table 2). The seeds sown in the sunny exposition did not germinate.

According to the results of experiments, in the summer period (July, August) in the shade exposure was observed high fertility of seeds sown at a depth of 0.2 cm. We concluded that the achievement of the required air and soil temperature (30-25 °C) has a positive effect on seed germination.

**TABLE 2 BIOLOGY OF VALERIANA OFFICINALIS L. SEEDS**

Planting time	Months	Average monthly air temperature, °C	Average monthly soil temperature, °C	Seed sowing depth and germination rates, %		
				Soil surface	0,2 cm	0,5 cm
Spring	march	14,0	10,5	18,7±2,3	24,0±2,5	20,6±2,3
	april	15,6	11,8	21,2±2,4	27,3±2,6	23,0±2,4
	may	20,7	16,0	23,0±2,4	30,8±2,7	25,2±2,5
Summer	July	31,7	25,7	34,0±2,7	60,0±2,8	50,0±2,9
	august	30,5	24,1	30,4±2,6	56,6±2,9	47,3±2,9
Autumn	Novembe r*	12,0	9,8	16,5±2,1	21,2±2,4	17,3±2,2

*Germination was observed in February of the following year.*

**Grass ladder.** Grasses consist of green leaves that are capable of photosynthesis and a root system that can perform its function. Its main feature is the preservation of seed pods. In some plants (ephemerals) the seeds and leaves are preserved until the generative period. E. A. According to Kondratieva-Melville [5], the grass stage is the initial stage of ontogenesis from

seed germination to the full spread of the seed leaves and stem formation. The interdependence of plant organs is observed very early in ontogeny [5]. The growth of *V. officinalis* grass begins with the prolongation of hypocotyl in the laboratory. As a result, the apical root tears the seed coat. The two adjacent seeds gradually begin to grow as a result of the division and elongation of the leaf cells. Seed leaves begin to separate from the seed coat in 2-3 days of grass. From this point on, the growth of all the organs of the grass accelerates. In two-day grasses, the seed leaves split in two. They were  $2.0 \pm 0.2$  mm long and  $1.0 \pm 0.1$  mm wide. Urugpalla leaves are elliptical in shape, the tip is blunt or slightly pubescent, the base is triangular-shaped.

Embryo grows and elongates faster than the leaf axils. On four-day grasses, the leaves are  $2.3 \pm 0.3$  mm long,  $1.6 \pm 0.1$  mm wide, and the average band length is 2.5-3.0 mm. In ten-day grasses, the average length of seed pods is  $2.5 \pm 0.2$  mm, and the seed pods are 3.0-3.5 times longer than the leaves (Table 3).

The hypocotyl of *V. officinalis* is thinly white and grows an average of 1-2 mm per day from the date of germination. The slow growth and shortening of the hypocotyl indicates that it is not possible to sow the seeds deep into the soil. This is because if the seeds of *V. officinalis* are sown deeper than 0.5 cm, the seeds that begin to rot will rot in the ground. In ten-day grasses, its length is  $3.5 \pm 0.3$  mm, growth slows down in the following days, and the grass stops growing when it is fifteen days old (Fig. 1).

It was found that in the growth of grasses, all the organs are correlated with each other, that is, the growth of the leaves of the seed is directly correlated with the elongation of the hypocotyl. With the cessation of leaf growth, the hypocotyl stops growing.

The roots of grasses grow faster than other members. The roots of three-day-old grasses grow  $7.2 \pm 0.2$  mm, and in the budding part there are root hairs. The root grows on average 2-3 mm per day, reaching  $15 \pm 1.1$  mm on ten-day grasses and  $30.0 \pm 1.9$  mm on 20-day grasses. The elongation of the root is due to its elongated part. The length of the root hairs varies. The root hairs, located close to the root collar, are longer and denser (Fig. 1). This is because each rhizoderma cell produces hair that grows on the surface. The hairs on the underside of the rootstock do not grow long, and the third part of the root is wrapped around the root sheath.

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When the grass is fifteen days old, the three coats begin to move, and the buds of the first leaves begin to appear. At this time, the growth of seed pods leaves and bands slows down.

Juvenile stage. On twenty-day-old grasses, the seed leaves stop growing, the first leaf, which assimilates from the three buds, appears, and the epicotyl does not develop well. This is because the initial joints of the stem are very short, and the next leaves are formed one after the other (Fig. 1).

When the second leaves appear on the three-leaf clover of the thirty-day-old grass, 2-3 seed stalks appear and grow near the leaf nodes or in the upper part of the hypocotyl. From them, on average, grow up to 1-3 side branches. The main root gradually stops growing. With the emergence of rhizomes, the growth of new leaves, formed by the three-jacketed, accelerates. At the grass stage, this interdependence of the members A. Kondratieva-Melville [5]. In forty days the main root stops growing in the grass. Urugpalla thickens the leaf axils and the upper part of the hypocotyl. The 3-4 root stalks that appear in it rapidly grow and branch.

Two leaves appear on thirty-day-old grass, three on forty-day-old grass, and a fourth leaf begins to form. The shape and size of the assimilating leaves differ sharply from those of the seeded leaves. The leaves are broadly ovate or circular, the edges are wavy or slightly trimmed, the base is round, the leaf band is long.

From the day the seeds germinate, the formed root system grows rapidly and helps the grass to stay firmly in the soil and provide them with moisture.

Thus, the germination of *V. officinalis* seeds is epigeal, the branches are shortened, the stems are arranged in a series, the leaves are in the form of a simple circle, the leaf band is long. The root system of *V. officinalis* consists of rootstocks and additional roots.

**TABLE 3 GROWTH DYNAMICS OF VALERIAN OFFICINALIS L. MEMBERS IN THE GRASS PERIOD(MM)**

Days	Seed leaves		Hypocotyl	Root
	length	width		
1	—	—	$0,7 \pm 0,1$	$0,5 \pm 0,1$
2	$2,0 \pm 0,2$	$1,0 \pm 0,1$	$2,3 \pm 0,3$	$2,5 \pm 0,2$
3	$2,0 \pm 0,2$	$1,2 \pm 0,1$	$2,3 \pm 0,3$	$7,2 \pm 0,2$
4	$2,3 \pm 0,3$	$1,6 \pm 0,1$	$2,5 \pm 0,2$	$8,1 \pm 0,3$
5	$2,3 \pm 0,1$	$1,7 \pm 0,3$	$2,7 \pm 0,3$	$11,0 \pm 0,4$
10	$2,5 \pm 0,2$	$1,8 \pm 0,2$	$3,5 \pm 0,3$	$15,0 \pm 1,1$
15	$2,7 \pm 0,3$	$2,1 \pm 0,1$	$3,5 \pm 0,3$	$20,0 \pm 1,9$
20	$4,5 \pm 0,4$	$3,0 \pm 0,3$	$3,5 \pm 0,3$	$30,0 \pm 1,9$

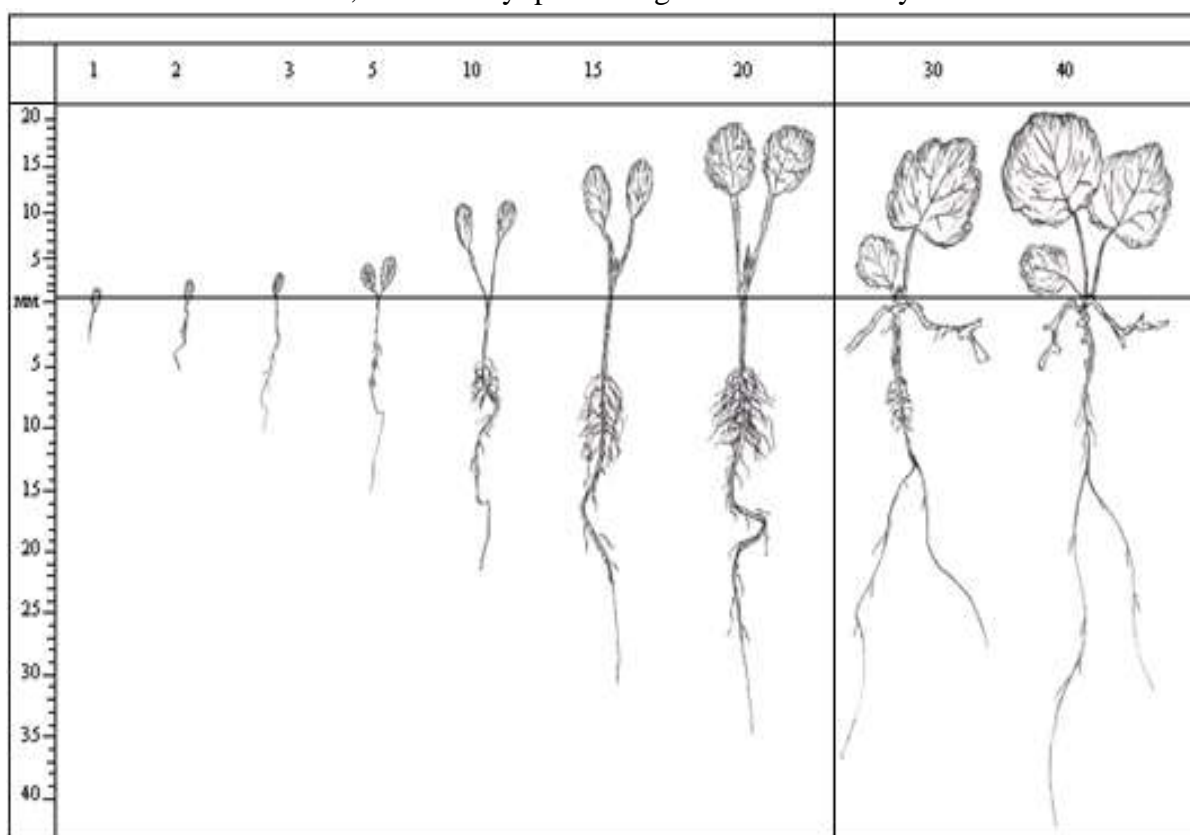
30	—	—	—	35,0±2,1
40	—	—	—	38,0±2,5

**Immatur stage.** After 3-4 simple leaves, 3-4 complex leaves appear, forming up to 13 segments. At this stage, the length of the roots reached  $8.6 \pm 0.3$  cm. The subsurface is composed of stems and additional roots (Fig. 2).

It was noted that the adult virginil plant has 5 pairs of compound leaves and an average of 11-15 segments in each. The height of the plant was  $75 \pm 1.2$  cm and the length of the roots was  $23 \pm 1.0$  cm.

**Generative stage.** *V. officinalis* enters the generative period from the second year of vegetation in natural conditions [2].

In the introduction, the plant has been in the forefront since the first year of life. In the first vegetation year, the height of the stem reached  $80 \pm 2.1$  cm and the length of the stem reached  $27 \pm 1.0$  cm. At the end of the first vegetation year, the upper part of the earth is dry. In the second growing season, the height of the stem was  $125.8 \pm 2.9$  cm and the length of the stem was  $37.0 \pm 1.5$  cm, which increased to  $95.2 \pm 2.0$  cm and  $33 \pm 1.4$  cm in the third growing year (2 -figure). The root system is of the popuchimon type. The generative period was 60-70 days. In the introduction of *V. officinalis*, the subsonyl period begins after the third year.



**Figure1. Virginil and generative cycles of *Valeriana officinalis* L.**

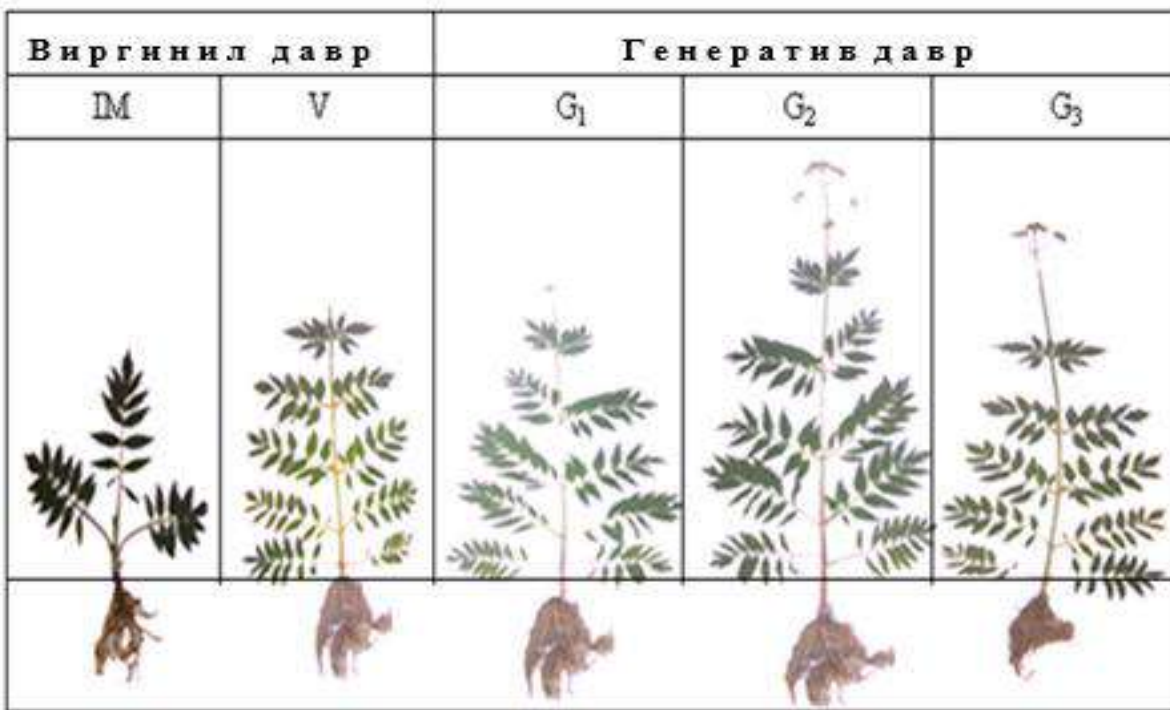


Figure2. Virginil and generative cycles of *Valeriana officinalis* L.

## CONCLUSION

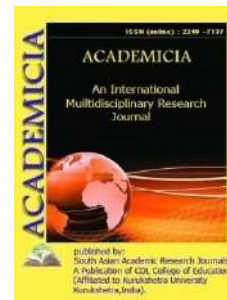
Studies have shown that the seeds of *V. officinalis* germinate 90-95% in 5-8 days under laboratory conditions, and the optimum temperature for germination is 20-23 ° C. In the field, the optimal conditions for seed germination in the summer months (July, August) in the shade exposure and at a soil depth of 0.2 cm, seed germination for 8-10 days was  $56.6 \pm 0.85$ - $60 \pm 2.58\%$ . The optimum temperature is 30<sup>0</sup> C. The seeds retain their viability for up to 3 years.

The rapid growth of *V. officinalis* occurs in the early stages of the virginil period. The duration of the virginil cycle was 50-60 days and the generative period was 60-70 days. Plants planted in the fall have a greater number of generative members than plants planted in the spring. This is due to the fact that they adapt to the substrate in the winter, and in the spring to form strong plants.

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## EFFICIENCY OF PAST CROPS SOWN BEFORE WINTER WHEAT

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### ABSTRACT

*The effectiveness of the selection of past crops for winter wheat in the short-term crop rotation system to increase soil fertility in saline soils has been established. At the same time, as a past crop, the positive effect of mash, sesame and soybean crops on the bulk density and humus content was revealed.*

**KEYWORDS:** Crop Rotation, Winter Wheat, Soil Fertility, Mash, Sesame, Soybeans, Past Crops, Nutrient Elements, Green Manure.

### INTRODUCTION

In our country, supporting measures to improve the culture of agriculture, basic tillage, introduce new technologies, as well as increase crop yields, mainly by reducing manual labor and cutting costs, it is necessary to develop a system of new agricultural technologies that are new and economical, and positively affect on soil fertility, water-physical properties of cotton, wheat and secondary crops, and also provide high yields.

Another important problem when growing wheat is the selection of high-quality wheat varieties suitable for various soil and climatic conditions, and the introduction of an appropriate crop rotation to obtain a high volume and high-quality grain crop. Along with growing crops, it is important to increase soil fertility and improve land reclamation. Improvement of land reclamation can be achieved due to the quality of land reclamation measures, the effective use of organic and mineral fertilizers to increase soil fertility and productivity, and the introduction of crop rotation. For each farm, it is important to introduce crop rotation with a short crop rotation, which provides increased soil fertility and the right choice of past crops for main crops.

U. Ismayilov's [1] studies show that almost all irrigated lands of the Republic of Karakalpakstan are saline, low soil fertility, soil salinity reduction, agro-reclamation measures to improve soil

fertility and productivity and soil quality, the right choice of past crops in crop rotation, the introduction of organic and lateral fertilizers in the soil is one of the most optimal measures.

B. M. Khalikov [2] found that 9-10 tons of organic residues per hectare accumulated in the soil, and the amount of humus in the soil increased by 0.020-0.035%, total nitrogen by 0.018-0.022% during crop rotation as a result of the introduction of triticale from intermediate crops, mash, as a repeated culture in short-turn (1:1, 2:1) alternating planting systems in typical gray soils of the Tashkent region.

According to K. Eshmirzaev [3], one of the main conditions for maintaining and improving soil fertility in irrigated lands is that the field is continuously covered by plants for a long time.

The scientific substantiation of the right choice of crops is relevant in the selection of past crops, increasing their soil fertility and crop yields.

On this issue, field experiments were carried out in the Khojaili district of the Republic of Karakalpakstan, and after spring sowing of past crops, winter wheat was sown. In this case, in the 1st variant, winter wheat: winter wheat, in 2 variant, mash + winter wheat for grain in the 1: 2 rotation system, in variant 3, sesame + winter wheat for grain, in variant 4, soybean for grain + winter wheat, in variant 5 mash for grain + 10 t/ha manure + winter wheat, in variant 6, sesame for grain + 10 t/ha manure + winter wheat, in variant 7, soybean for grain + 10 t/ha manure + winter wheat, in variant 8, mash for grain + intermediate crop (mash) +20 t/ha manure + winter wheat, in variant 9, sesame for grain + intermediate crop (mosh) +20 t/ha manure + winter wheat, in variant 10, soybean for grain + intermediate crop (mash) +20 t/ha manure + winter wheat.

Based on the goals and objectives of the study, phenological observations and biometric measurements were carried out on plants.

The influence of soil on agrochemical and agrophysical properties was established during sowing of sesame, mash and soybeans before winter wheat. The yield of any crop depends on the fertility of the soil, that is, on the amount of nutrients in it, bulk density of soil, water availability, structure.

The study revealed the effect of short-term crop rotation and organic fertilizers on soil fertility.

According to the results obtained, when sowing winter wheat at 20 t/ha after harvesting mash for green manure, soybean and sesame for grain, in variants 8,9 and 10, a decrease in soil bulk mass in the layer of 0–30 cm to 0.07–0.08 g/cm<sup>3</sup> was found compared with the option in which only winter wheat was sown after winter wheat. In this case, it can be said that green manure and organic fertilizers have a positive effect on soil density. At the same time, it also had a positive effect on the increase in soil porosity and played an important role in improving the state of the soil structure. This is important for improving the agrophysical properties of the soil when applying 20 t/ha of organic fertilizers in combination with legumes for the correct selection of past crops in crop rotation compared to winter wheat only.

The same picture is observed in a crop rotation system with a short crop rotation, as past crops have different effects on the amount of humus and nutrients in the soil, affecting the number of common and mobile forms of nitrogen, phosphorus and potassium in the soil, and their dynamics affect the amount of humus in the soil.

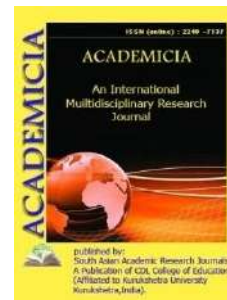


It was found that in the experiment, after adding 20 t/ha of manure, in variants of wheat grown after past crops, such as mash for green manure, soy and sesame for grain, it was observed that the amount of humus in the soil layers was approximately 0.010 and 0.050% more compared with the control variant, in which winter wheat was grown only after winter wheat, and that the indicators obtained in terms of the number of common and mobile NPK forms were higher than in the control.

Thus, it was found that the addition of 20 t/ha of fertilizers per hectare after past crops such as mash for green manure, soybeans and sesame for grain, and then sowing winter wheat, had a positive effect on soil fertility as a result of improved agrophysical and agrochemical properties the soil.

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## MODERN APPROACH TO THE DEVELOPMENT OF VALLEOLOGICAL COMPETENCE OF FUTURE PHYSICAL EDUCATION TEACHERS THROUGH INFORMATION TECHNOLOGY

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### ABSTRACT

*The article considers the issues of creating opportunities for quality education by developing the valleological competence of future physical education teachers on the basis of information and communication technologies and achieving the educational goals of their socialization.*

**KEYWORDS:** *Valeology, Healthy Thinking, Physical Education, Health, Future Specialist, Professional Competence, Development, Information And Communication Technologies.*

### INTRODUCTION

To save the nation's gene pool on a population scale and for individuals in the world, it is important for people to lead a healthy lifestyle. As a basis, special attention is paid to the development of valleological competence like good health, physical and intellectual development of future learners.

There are ample opportunities for developing the professional potential of future specialists, in the process of integration of the training system with the priorities of science and technology in our country. The issues of achieving the future professional development of students, adaptation to social life within the combination of common sense and beliefs occupy a leading place. Also, the development of valleological competence of future physical education teachers, improvement of healthy thinking and high spiritual qualities among professionals become more important. Fulfilling Presidential decrees of the Republic of Uzbekistan, PD-2909 on 'On further development of the higher education system', PD-3151 of 27- July 2017-year on 'On measures to further expand the participation of industries and sectors of the economy in improving the quality of training of highly educated specialists', PD-3775 of 5-June 2018-year on 'Additional measures to improve the quality of education in higher education institutions and ensure their

active participation in the ongoing comprehensive reforms in the country' and including other regulations are very essential nowadays[1,2,3,4,5,6].

The formation of valleological competence of future physical education teachers through information technology has an effective impact on the process of visualization of educational data. Drawings, graphics, animation, hypertext, multimedia, modelling elements, the sound will expand the opportunities for students to acquire virtual knowledge. It will also strengthen the valleological competence and motivation of future physical education teachers to acquire knowledge and become fundamentals for ensuring educational outcomes.

The valleological competence of future physical education teachers allows them to complete any complex tasks on the basis of information technology. Multimedia programmed products will be effective in the acquisition of valleological knowledge by future physical education teachers.

Valleological competence in future physical education teachers serves to develop the skills of attention, perception, imagination, logical observation in the use of information and communication technologies. Their creative thinking skills, emotional feelings are formed. It also allows future physical education teachers to organize their activities on the basis of theories and views on valeology.

The cycle of components in the development of valleological competence of future physical education teachers through information technology determines the essence of the system function. The pedagogical system is made up of components, the change of which depends on internal contradictions. The openness of the system serves to connect with the external environment through many communications, and the relationship of the environment has an impact on the movement and development of the system. 'Receiving and transmitting information from the pedagogical system are methods of interaction of system components with each other and with the whole system, as well as with the external environment of the system' [7, B.-21]. Therefore, the activities of educational entities in the field of valeology, healthy lifestyles, the need for education that meets the standards through information and communication means, alternative opportunities to meet it and other various factors are characterized as a single dynamically evolving system.

In our country, caring for the health of young people, the formation of a healthy lifestyle, the acquisition of skills of regular, independent participation in physical culture and sports is an integral part of the educational process. It is no coincidence that the head of our state Sh.Mirziyoev has put forward 5 important initiatives to raise the morale of young people and meaningfully organize their leisure time. In particular, the second initiative is aimed at creating the necessary conditions for the physical training of young people, to demonstrate their abilities in sports. In recent years, large-scale work has been carried out in our country to promote physical culture and sports, to ensure that young people follow a healthy lifestyle. The activity of sports clubs has been revived, regular competitions in mass sports have been organized.

The valleological competence of the teacher lays the groundwork for increasing the effectiveness of his pedagogical activity. Valleological competence, which is part of the general pedagogical culture of the pedagogue as a pedagogical phenomenon, combines the following alternatives: knowledge of health technologies, civility; possession of universal values; the ability to have a healthy lifestyle inherent in the national culture and to form it in students; active participation in

the social life of the country; respect for the culture of other nations and fostering these qualities in students, and so on.

Scientific substantiation of the studied problem helps to find the solution of the following contradictions in the pedagogical process: The contradictions between the expansion of the needs of students who are participants in education and the current situation in pedagogical practice; The differences between the social educational needs of the subjects of education and the teacher's readiness to teach the subject on the basis of the valleological context; differences in the interpretation of scientific concepts based on their scientific integration-based interpretation of ICT-based teaching, and so on.

Such ICT tools include e-learning assignments for stratified work, e-exercises of a logical nature, questions and e-assignments to introduce students to the environment, healthy lifestyle skills development, physical education and physical culture, e-learning and self-monitoring, and assignments, as well as a series of exercises, can be included (**Figure 1**).

#### **Types of ICT tools aimed at developing the valleological competence of future physical education teachers**

<b>№</b>	<b>Types of ICT tools</b>	<b>Expected result</b>
1	<b>E-learning assignments</b>	Creating a favorable environment for a healthy lifestyle, intellectual development
2	<b>Electronic exercises of a logical nature</b>	Developing healthy thinking, the ability to make healthy decisions
3	<b>E-assignments to introduce the environment</b>	Cultivation of valleological thinking, development of physical cultural maturity qualities
4	<b>Electronic assignments of a supervisory nature</b>	Identification of acquired knowledge, skills, competencies, competencies in valeology
5	<b>E-learning trainers that promote a healthy lifestyle</b>	Consolidation of topics that have a valleological character, aimed at promoting a healthy lifestyle, physical education, sports
6	<b>Fitness e-trainers</b>	Development of physical qualities based on demonstration models

As shown in Table 1, developing the valleological competence of future physical education teachers, the possibility of achieving the expected effectiveness based on the modernization of educational content and reliance on ICT tools will be expanded. Because the following tasks are solved in the educational process with the help of ICT:

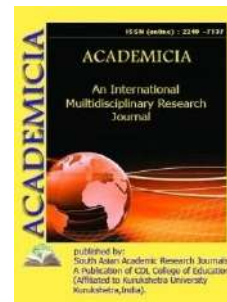
Assistance to future physical education teachers in the acquisition of knowledge, skills, competencies in valeology, the development of competencies, the opportunity to demonstrate their unique characteristics;

The solution of exhibition, demonstration, visual tasks for the development of physical qualities of future teachers of physical culture through the use of information and communication technologies;

Ensuring kinesthetic, divergent, cognitive processes and mental and emotional development through the use of ICT in the development of valleological competence of future physical education teachers.

#### **USED LITERATURE:**

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## **COUNSELLING FOR COVID-19 PATIENTS: IMPLICATIONS FOR SOCIAL WELL-BEING**

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**ABSTRACT**

*The stress of being diagnosed with corona virus can spring up unresolved conflicts for any human. Counselling is one of the professions that can contribute to the resolution of some problem faced by individual's diagnosed with corona virus. Counselling for corona virus patients include approaches such as emotional support, group counselling, counseling, counselling for self-care, sexual health counselling, family counselling, lifestyle counselling and counselling for the aged. One of the implications for social wellbeing is the stimulation of patients to fight actively, replacing passivity, helplessness and resignation with positivity. Isolation Centres around the world that manage Corona virus patients should set up counselling centres to assist patients in receiving help from trained counsellors to promote psychosocial wellbeing. Counsellors must further educate themselves and seek out opportunities for personal growth, as well as training and the best counselling practices for corona virus patients were recommended among others for effective counselling of corona virus patients.*

**KEYWORDS:** Corona Virus, Covid-19, Counselling, Social wellbeing

**INTRODUCTION**

Corona virus is an expanding global medical concern. It is a chronic illness that impacts upon every aspect of the life of people and families affected. Interferes with normal psychological and social well-being, and even complicates family functioning. To be diagnosed with corona virus is to enter a realm where everyday aspects of life are altered. Coronavirus Disease 2019 (COVID-19), caused by SARS-CoV-2, initially came to attention in a series of patients with pneumonia of unknown etiology in the Hubei province of China, and subsequently spread to many other regions of the world through global travel either business, conferences, tourism etc. According to [1] the outbreak of the world endemic of corona virus Covid-19 has unarguably taken the world unaware, unprepared thus, leaving the affected countries to suffer the devastating dead crises as well as economic breakdown etc. approximately 2,379,326 million people have been infected with corona virus in the world as at 19<sup>th</sup> April, 2020 <https://www.worldometers.info/coronavirus/>; by projection, it would have risen to 5 million in the last quarter of the year 2020. Unfortunately, all age groups are prone to covid-19-children, adolescents, adult. The virus can infect any persons irrespective of their age but the older people and those with existing health issues/challenges (such as diabetes, heart disease, cardiovascular disease, immune suppressed conditions e.t.c) are more vulnerable to contact the virus than any other group of individuals. Methods of transmission can be through droplet, contaminated materials, sneezing or cough. The symptoms includes but not limited to nausea, fever, dry cough, shortness of breath, pneumonia, fatigue, and other breathing difficulties.

Stress of being diagnosed with corona virus can bring up unresolved concerns for an individual, so counsellors are becoming a significant member of the interdisciplinary health team and are helping to make positive contribution to patients' quality of life. Counselling is one of the professions that can contribute to the resolution of some problem faces by individuals with infected corona virus. It give one a chance to identify and work through problem with a trained counsellor. Counsellors provide service in a variety of settings and to diverse individuals with many different challenges. Combining a counselling approach that involves emotional support, flexibility, recognizing of a patient's strengths, and listening to him review his life story helps

the individual come to a better acceptance of his health, and is able to positively lead a new and meaningful life despite the condition. A corona virus infected person that receives sufficient and ongoing counselling from a trained counsellor is more likely to adapt a healthy life style. Therefore, counsellors who care for, or may want to care for corona virus patients need to be constantly learning and investigating the most current counselling practices. This maintains the best counselling for their patients.

### **Understating the Spread and Symptoms of Corona Virus**

The origin and source of the COVID-19 is from the animal and recently the virus is spreading from human to human transmission. The fundamental symptoms of the COVID-19 is where the virus can cause mild, flu – like symptoms such as fever, cough, difficulty breathing, pain in the muscles and the tiredness Nuhu (2020).

More serious cases develop severe pneumonia, acute respiratory distress syndrome, sepsis and septic shock that can lead to the death of the patient. People with existing chronic conditions seem to be more vulnerable to severe illness. [2] the development of vaccines takes time. Several pharmaceutical companies are working on vaccine candidates. These will however, take months before vaccines can be widely used as it needs to undergo extensive testing to determine its safety and efficacy.

From the present fact that the virus is spread among human being, medical experts recommend wearing a mask for every day movement particularly the moment you move outside from your home place where your heading you will necessarily meet other people. Due to the fact that the virus is spread human to human particularly from the infected person to another, it is advisable to avoid the physical contact with the person with cough symptoms. Since the evidence shows that the origin of the virus is from the animals it is advisable to escapes where animals are kept avoiding physical contact with any kind of animal, their excretions or droppings.

In addition to that it is recommended to follow and obey the general rules regarding hand hygiene and food hygiene. That means wash your hand with soap and water to use an alcohol-based disinfectant solution before eating, after using the toilet and after any contact with animals.

### **The Conceptual Explanation of Counselling**

There is no single definition of counselling that is considered generally acceptable. Counselling can have different meanings based on theoretical orientation. Counselling, as a helping profession, has its many approaches and procedures by which help is made available to the client. Counselling is a process of helping the clients to understand and clarify his views and learn to reach his self-determine goals through meaningful, well-informed choices and through the resolution of problems that could be of emotional or interpersonal nature [3]. It is a relationship in which a trained and experienced person (counsellor) provides information to a counsellee (troubled person) which the latter uses to overcome his challenges. Through the counselling process, counsellee uses information provided him to make informed decisions. [4] Describes counselling as a professional help for clients to resolve their peculiar challenges. Concerns, problems and doubts in various aspects of their lives. The goal of counselling is to help the counsellee find solutions to whatever problems he finds around him.

According to the British Association for Counselling and Psychotherapy [5], counselling is defined as a service delivered by trained counsellors or practitioners who work with people over

a short or long term to help them bring about effective change or enhanced wellbeing. Again, counselling is said to be a professional relationship that empowers diverse individuals, families and groups to accomplish mental health, wellness, education and career goals. Counselling could also be said to be number of procedures used in assisting an individual in solving problems which arise in various aspects of his life or in assisting him to minimize his overall personal development so that he could be more effective, satisfied and useful to the society in which he lives [4]. Deductively, counselling is a professional services which aims at helping people adjust to their environment, acquire problem-solving skills, manage their lives effectively and live meaningfully to achieve potentialities. Therefore, modern counselling entails concerted efforts in achieving greater gains even in ugly situations. Patients often cope with diseases much like they cope with other struggles in life, so counsellors who become aware of their clients' coping skills can help them resolve their concerns and emotional pain using some of the coping tools. Counsellors may work with COVID-19 response or healthcare team in isolation centre for clinical supports services.

### **Counselling for COVID-19 Patients**

The main objective of counselling is to give support to clients with challenges. The establishment of a relationship between a counsellor and client (patient) is crucial before counselling is attempted. This promotes the client's trust in the counsellor and he or she (the client) will speak without reserve. Hence, this enables accurate assessment of the client's current condition. It is beneficial when setting goals with the patient.

**Emotional Support:** More often than not, people newly diagnosed with corona virus may have trouble accepting the diagnosis, especially in a situation where they feel physically healthy and are not experiencing any symptom of the disease. A Counselling Psychologist's role here is to help such people address emotional reactions such as disbelief, anxiety, denial, depression, anger, and learn to accept their condition.

Patients and family members often avoid conversations about terminal disease in order to protect each other from emotional pain and fear. Counsellors can help to bridge the gap between them and encourage communication about emotional, spiritual and cultural beliefs. The purpose of the counsellor working with the ill is to listen to the patients with empathy and understanding helping them to find psychological and emotional peace. Carl Rogers, an influential psychologist in America who founded Client-centered therapy believed that counsellors should show clients unconditional positive regard, which is an empathic understanding and total acceptance of where the client is on his or her journey [6]. Once a patient believes the counsellor is listening non-judgmentally, he feels encouraged and secure to openly talk about his fears and concerns.

**Counselling for Self-care:** Patients who benefit from counselling tend to be motivated for, and in self-care. Self-care includes a broad spectrum. According to World Health Organization [7], Self-Care in health refers to the activities individuals, families and communities undertake with the intention of enhancing health, preventing disease, limiting illness, and restoring health. Self-care encompasses several issues including hygiene, nutrition, lifestyle, environmental and socio-economic factor. Promotion of self-care is a means to empower individuals, families and communities for informed health decision making. These activities are derived from knowledge and skills from the pool of both professional and lay experience. They are undertaken by lay people on their own behalf, either separately or in participative collaboration with professionals.

**Sexual Health Counselling:** Sexual Health is a core part of a person's general well-being. Corona virus infection can affect aspect of human sexuality and as such, counselling should integrate sexual health as an integral part; and should address the physical, psychological, social and personal aspects of sexuality in a culturally sensitive issue and sexual health counselling must be approached with due consideration to client's privacy and confidentiality.

**Counselling the Aged:** In many countries the prevalence rate of corona virus cases increases significantly with age. As people age, their ability to cope with living, to learn new information and remain independent varies greatly. Older people with corona virus may have more disabilities, compared to younger people with the virus. Within the health care, physicians and other caregivers may be less likely to offer particular medical treatments to older patients because of a belief that certain ailments are the inevitable consequences of natural aging.

**Lifestyle Counselling:** A greater number of corona virus infected person may often find it challenging, if not outright depressing, to make the lifestyle change necessary to stay healthy. Lifestyle management involves weight reduction in the obese or overweight patient. This is usually difficult for most patients and imposes a psychological burden on them. A lack of understanding of the disease by their peers, colleagues, and family members also makes it difficult for them to adjust to their new situation. Through behavior modification, counsellors can help patients/clients change behaviours to gradually improve eating habits, activity levels and overall outlook.

### **Implication of Counselling on Social Well-being of Covid-19 Patients**

Corona virus makes many demands on lifestyle and poses debilitating and life-threatening complications which overall have a negative impact on a patient's well-being and social life. In a developing nation with poor healthcare and social support systems, the economic consequences of being infected with corona virus can be enormous for the patient, leading to inadequate care and the subsequent development of complications. The stresses and demands of living with corona virus affect interpersonal and social relationships. Hence, counselling should be made available for corona virus infected person to enhance social well-being and improve quality of life.

Counselling support helps a suffering patient free himself from all forms of tension and negative feelings, to express their fear, anxiety and sorrow and give rise to hope. It stimulates the patient to fight actively, replacing passivity, helplessness and resignation. It gives the suffering person the strength to fight for survival on grounds of building positivity. Counselling can improve the quality of life for corona virus patients and as such, the disease will in no way impede their social functioning and general well-being.

Helping patients to find purpose and meaning in their life is beneficial in reducing death anxiety in the patient and their relatives. Even when death is expected, the family can be assisted to adjust to the bad news and seek avenues to make the best use of available lifetime. Members in a support group can share similar experiences, learn from each other and teach each other how to handle situations that arise with family, pain, medical concerns, and other areas that concern their well-being.

## CONCLUSION

Corona virus is a lifelong disease that almost never goes away. Counsellors working with corona virus work in a multidisciplinary team to provide support and comfort, helping these individuals live normal and fulfilling lives.

## Recommendations

Isolation Centres around the world that manage corona virus patients should set up counselling centers to assist patients in receiving help from trained counsellors to promote psychosocial well-being. Thus we know, plays a key role in healing process.

Counsellors must further educate themselves and seek out opportunities for personal growth, as well as training and the best counselling practices for corona virus patients.

Religious institutions should be made to understand the role of counselling in managing clients. Hence, they should encourage corona virus members to seek counselling.

Government and organized private sector should invest reasonable resources in counselling of corona virus patients to enhance their well being.

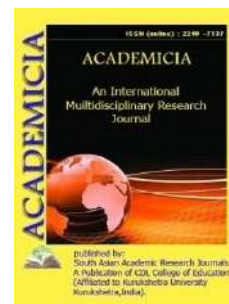
Due to the growing importance of counselling in the society. Educational institutions should include counselling in their learning and teaching curriculum.

Isolation centers should set up intercom to assist patients in isolation received emotional supports and from family and friends during this period.

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## INTERPRETATION OF FOLKLORE AND ETHNOGRAPHIC TRADITIONS IN MODERN UZBEK CINEMA

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### ABSTRACT

*This article describes the tendency in the modern Uzbek cinematography for creating feature films based on folklore and ethnographic traditions. Here is given a significant attention to thoughts on a combination of folklore and ethnography with the features of a fiction film, and the determining role of directors in it.*

**KEYWORDS:** *Folklore-Ethnography, Fiction Film, Visual Expression, Logical Sequence, Plot, Character.*

### INTRODUCTION

In times of the former Soviet Union, to reflect national values and customs, the folklore and ethnographic traditions of the Union countries, as well as to foster a sense of pride and to reflect the characteristics of each nation as a whole, were categorically not allowed. Although in the mid-1980s a little freedom was given to national issues, and in the cinema were made works of art where reflected self-identity of the people. But even then, the issue of complete freedom — the issue of creative freedom — was narrow, and the concept of censorship was in practice and still valid.

Independence has brought about a revival and active promotion of the forgotten values of the nation through the country. As a result, in the filmmaking a process of expressing artistic ideas through folk ethnography and traditions has also been started as well there has been formed a process of specific creative approaches by directors.

It is known that the values and traditions of each nation and the people foster kindness and promote virtue. The quality of goodness in people is seen as the central core of each of them. But the fact is how the director interprets these values and what ideas he conveys through them. That



is why the role of the director's creative approaches and objective standpoint on depicting the folk ethnography in feature films and his skills in the sphere has been repeatedly emphasized. Over the years of independence many feature films have been created with elements of folklore and ethnographic traditions. The fact that such films build up the image of national Uzbek films has become a peculiar phenomenon.

The tendency to use folk ethnography is more expressively traced in Yusuf Rozikov's film "Dilhiraj". It is noticed that the name of such films not only reflects their general content, but also show that they were created on the basis of folk customs and traditions.

In almost all frames, in all events Dilhiraj shows the customs and traditions, which have been an integral part of the people's daily lives. The success of the film lies in the fact that the film is not just cluttered with folklore elements or even these elements not occurred as an array of sequence, but they construct the plot of the film, which is actually formed on its own, and in some cases stimulates its development.

### **MATERIALS AND METHODS**

At first glance, it may seem that "Dilhiroj"(men's game), created in a purely national spirit, reflects the realities of one region in a narrow context.[1.11-12] But the film is based on human destiny, an analysis of human emotions, and the path to happiness. The film is a modern interpretation of the eternal idea of pure love.

The form of the film reflects the life, customs and nature of the nation, enriched by universal ideas that are relevant for all mankind. Therefore, the national traditions and folklore elements used in the film have two different functions. On the one hand, they are used as symbols to express an artistic idea. On the other hand, it is argued that these habits established for a reason. On the base of their existence as values lies the wisdom of people, their responsible attitude towards the entire life. The film cannot be judged solely on a superficial level and based on a sequence of events. It consists of subtexts and symbols from beginning to end. A little ahead of the analysis, we can say that the symbols and subtexts that appear in some episodes then do not disappear. It serves not only to convey an idea of a particular episode, but also has a dialectical character, that is, it never ends. As an integral part of the whole work, united in one chain they can form a great idea and an artistic impression.

The title of the film alone attracts viewers to it. Indeed, Dilhiraj is the popular and well-known music and dance of men. In fact, it emphasizes the theme and content of the entire film. Firstly, it should be appropriate to pay attention to its lexical meaning. The word "dilhiraj" has been derived from the Persian word "dilxarosh" and means "heart-wrenching". So, the film is a love story, a strong, intense, pure love story! The history of path of trials and tribulations, suffering, patience, endurance and struggle for uniting two sincere souls!

As at every ups and downs of life, elements of folklore appear on this long journey. Sometimes they are seen as solutions to life's challenges, and sometimes they are the trial itself. The authors ErkinAgzam and Yusuf Rozikov do not depict the difficulties, complexities, and rewards of life in a realistic way, which occurs as a chain of events. On the contrary, every trial of destiny is presented as the Almighty's blessing to the servant. This is reflected at the beginning of the film.

F. Jalalov – "Teacher Globe", who has just had a son and is happy about it, plants a sapling and begs the Creator for rain.

His request is accepted, and immediately it begins to rain. The little girl who hears that one day she will marry the newborn baby boy rips off the planted sapling and runs away. She neither turns around, nor does look back. The sapling gradually recovers and grows again. T.Yusupova, the storyteller, says, “the servant feels superior to her Creator” and this gives a hint that the film is about the love story of two beloved servants of the Almighty.

While the recovery of the sapling acquires a symbolic meaning, it also reflects the noble tradition of the Uzbek nation – to plant a tree for a newborn child, and thus to contribute to eternal life. As mentioned above, each ritual and custom in the film successfully combined on a solid basis with the development of certain plot events.

## DISCUSSION

The film explains how sincere love from childhood can grow and blossom purely for considerable time and turn into passionate love. The directors were able to use all expressive means cohesively and harmoniously in the development of the plot of the film. During the “Sunnat (Khatna) tuyi” (circumcision party) wedding the music, the images and the actor’s performances set a single atmosphere and affect the audience mood. Fear and excitement in the wedding boy’s heart are expressed in quick, sharp sounds of the doira. And here the wariness of the other participants is shown through their eye movements and actions. This, in turn, helps to convey the child’s mood to the picture and consequently from the picture to the viewer. The audience unwillingly experiences a feeling of sympathy with the boy at this moment.

The modernized and polished tunes of folk melody dilhiroj accompanied by events of the plot are running as a leitmotiv through the whole film.

Although the images of the film are the result of the collaboration among the artist, the cameraman and the director, in some places one will notice traits of the unique style of the artist. Here's one example, in “Sunnattuyi” (circumcision party) scene is shown a warm relationship that arose from early childhood between Toshtemir, who is circumcised, and Sanam. While no one is able to console Toshtemir, who is crying in fear of the strapping barber, who performs the circumcision, he says to those lying next to him: “Let Sanam come and lie with me.” Everyone is astounded. Sanam boldly comes to him. She lies down beside him and threatens with the following words: “if you make a sound”. By the way, there is logic behind the girl’s special control manner. When Tashtemir was born, Sanam was a three- or four-year-old girl, and she acts in this way as if her age gives the right. The fact they stay together during the wedding party offers the reason for everyone to call them the bride and groom. Simply stated intention turns into a thing with serious consequences. The picture shows the joyful dances of the parents and guests. Images of the dancing people are shown through the window. In the foreground are pomegranates placed on a windowsill. The general view of the dancers and pomegranates also has implicit meaning. After all, pomegranates here can be interpreted as a symbol of family. It is known that the fruit containing a mass of red seeds under one round skin is regarded as a symbol of love, family in the visual arts and especially in the East. That is why people who dance in one place are compared to this pomegranate. Maybe it gives a hint of creating a new family with strong and firm bases. If we return to the above-mentioned idea, it will become clear that these pomegranate paintings are very common in the work of the artist of the film BoburIsmailov. Of course, he largely uses a pomegranate in his paintings to convey symbolic messages. Perhaps, the director preferred to collaborate with him due to his original symbolic style. This symbol is

not drawn at random. Perhaps for the creators, this may carry a myriad of implicit meanings. However can all viewers grasp these symbolic images of the film? After all, not every spectator knows about the art, film theory, and eastern philosophy. This matter is the most complex and controversial aspect of art films. But the fact is that the symbols are given through simple life situations and at least makes the viewer think about it.

Viewers understand that the details and things are not just shown in vain, they will try to figure out their meaning. To prompt the viewer to think about life, the art and philosophy as well as to arouse such desires as a result of his works should be an important task of a creative person.

The skill of the cameraman KhotamFayziev is manifested in his ability to convey symbols, folk motifs and real images of life in a single shot. For example, the episode where Tashtemir grows of from child into adult – a dream, where a planted tree for his birth burns down. Of course, it is not easy to understand what this episode may mean. However, a dialog with his uncle clarifies the situation, Fayz – FarhodAbdullayev, advises the nephew who has just woke up from a nightmare to marry. Tashtemir –AlisherHamraev, says that it is too early and that he has a burning passion in his heart, but he is not going to marry Sanam until he wins her heart with a brave deed.

Toshtemir, who suddenly has to go to the army, with his uncle leaves his village on a motorcycle. Behind them is Sanam, SevinchMuminova, who is frantically running along the rooftops of small semi-detached rural houses, trying to reach them, to reach her lover. And this episode expresses not only the girl's feelings, but also shows the high intensity of the shot, captured with "one breath", and this raises the dynamics of the film to a certain level.

Tashtemir's intention to impress the girl with something, if directly expresses his courage and enthusiasm, then indirectly infers to folk traditions. It is worth mentioning this fight scene in the film. Sanam's announcement that she will marry the winner somehow resembles epics. In fact, other features of the film also remind of the epic type. Unexpectedly occurred events play a significant role in the film. These events move the heroes on their own course as if fate decreed. In fact, it is evident that the effects of the events are enhancing the film stronger than the actions of the characters. The process of wrestling is also given for some reason. And this, in turn, has a powerful effect on the emotions of the viewer. Since the famous wrestler Sobir "defeats" all wrestlers one by one, the contenders' number decreases, or rather, no one is left. The shot shows a brave man on one side, the disappointment of Sanam, who regrets her words, and Fayzibay, who is not indifferent to the fate of his beloved nephew but deeply sadden by not finding any solution to protect his nephew's love on the other side. Until the last moments, the announcer constantly reminds us that today's contest is almost over, and is there any willing contender. These words make the crowd more excited. Unexpectedly, or rather, the viewers long-awaited Toshtemir enters the arena. The fight lasts until late at night. The wedding is over, everyone goes home. Two wrestlers, not wanting to be overwhelmed, lean on each other and fight alone. Finally, Sobir leaves the arena, and Toshtemir wins. However, this is not what he expected, his victory will not become a poem among the people. The crowd has not seen this. When he is saddened that no one has witnessed his victory, on the bridge Sanam bitterly weeps with happiness, her tears mix with the tears from the sky and she angrily yells "I've seen... I've seen it!"

The end of this fight seems as if it is the end of all problems. Here we again see the unpredictability of the course of events of the film. Two sides of the engagement party, especially women, are trying to agree on rituals. This is where the main event of the film takes place.

In wedding preparations guests are talking about holding an outdated fiancé game “Qalliqo’yin”. Of course, some of the attendants, especially the fiancée’s mother, against this practice. She says that it is a tradition of reminiscence and she is not going to preserve it. However, the groom’s relatives want to let the groom in and attend the bride’s house before the wedding but in order to prevent malicious gossips about them they should enter into nikah (marriage). But for some reason the nikah does not take place. The fiancé begins frequently date with the fiancée. TutiYusupova, a blind woman who has been a “storyteller” from the very beginning of the film, is appointed as a guard of their meetings.

There are several cases when an old woman, even being awakened sometimes pretended to be asleep, and criticizes with irony the reaction of others to her current state. Even in a dispute over the “Qaliquyin”, the old woman speaks in favor of the tradition and ironically indicates to those who are against it with the words “As if they did not play in it.” The strange behavior of the old woman, who in the film acts as a wise woman, who can predict the future, leaves us to ponder.

The reason why so many people against the “qaliquyin” can be explained with the possible intimate relationships between the girl and the guy as well as unwanted pregnancy before the wedding as a consequence of this tradition. This is why the old woman is assigned to guard the youth. However, is it not strange that the old woman, knowing the close passionate affairs of youth, pretends to be asleep? Moreover, the old woman, T. Yusupova, informs early then others Sanam – S. Muminova, that she’ll become a mother. She announces news in so calm and tranquil manner. Her tone suggests that she has long known this news and it seems natural for her.

Shortly before the wedding, Toshtemir’s grandfather dies. In the film, this occurrence is reported by the old woman as “joined the vast majority”. Of course, this is the author’s emphasis on folk morality. Indeed, the dead are more than alive. In addition, each person has one final destination. All this is given in one word – “joined the vast majority!” Due to this happening, the wedding is postponed, and soon Tostemir receives a call for military service. Toshtemir has to do his military service before the wedding. The period in the film becomes clear at this point of the film and during the “Sunnattuyi”. It was the Soviet Union era. The first case, where people shower money, doesn’t carry any connotation. But the second case indicates to two year compulsory military service, which causes further severance of the two ardent lovers. A thorough analysis of the film reveals some points where the logical sequence of the time is distorted. If we talk about the image created by ZikirMuhammadjonov at the beginning of the film, we note a philosophical point of view that his whole life has been devoted to Soviet ideas and that his moral ideals are destroyed when the Soviet Union collapses. This means that the authors also tried to focus on the processes occurring in the worldview of people due to the collapse of one system. However, in some places it leaves feelings that the previous regime is still ruling.

The purpose of such analyses is that if the Soviet Union is still ongoing if a scene with changes in the ideals of one person does not work in the following episodes, then many wonderful episodes of the film become useless. In particular, what is the purpose of the episodes where the “Teacher globe” brings the globe, his father crashes the globe expressing his hatred of a

dishonest system, and the episode where the teacher uses the boy's head as the globe? Of course, the film director carries out responsibility for creating a correspondence between time and space as well as the balance between the described events and time.

When folklore elements are used throughout the film, their misinterpretation will be a cause for displaying folk customs negatively to the viewers. In the film, the young people in close relationships, during the "qalliqo'yin", give their feelings free rein and this leads to subsequent negative consequences. First of all, when fiancée's pregnancy becomes known, the marriage process is held with putting the duppi (skullcap) of the fiancé who is now in military service. It is true that there were similar incidences in the area. Maybe it was practiced in exceptional circumstances as mentioned above. In addition, the fact that the filmmakers' depiction of the consequences of the "qalliquyin" before the wedding gives a hint that such cases have occasionally occurred. But there is a moment in the film that seems to indicate that the end of such a ritual ends with almost the same consequences. Sanam, who is visibly pregnant, moves to her relatives in the mountains to avoid rumors, and then gives birth to a child, and then returns home. Sanama's mother represents the infant as her baby. A woman among the guests says hinting that: "your daughter has disappeared, and so suddenly you have a baby." Of course, these blunt words hints to "qalliquyin". But momentarily the "wise" old woman reminds this guest of the baby girl that her mother gave birth to at her home. A woman quickly gets the message and "bites her tongue". And an old woman's question, who else wants to express herself, shows that she knows the faults of everyone who is present in the room. This episode seems to show the viewer that the consequences of the "qalliquyin" always result in this way.

Everything, especially an artwork, becomes more understandable in comparison. In ErkinKhushvaktov's play "Qalliquyin" (the fiancé game), this tradition is shown from the positive aspect by the author. It can be admitted that this performance, shown on the stage, illustrates the purpose of this tradition. This play tells a straightforward story. A man who remains a bachelor despite his old age and is rumored to be lame wants to marry a spinster who is more than thirty, besides to whom the matchmakers no longer attend. A girl who is so proud of herself does not agree to marry the lame. But the poor man who has never spoken with girls and does not know how to behave. The girl's grandmother understands that in this situation the only way to bring two young people together is to play "qalliquyin". As a result, two kind souls who do not know each other learn about each other more closely, have fun and fall in love because of the game. Although there are situations similar to those depicted in the film, the essence of this tradition is based on kindness and virtue as well it is practically intended to create a close bond between a man and a woman. A slightly different interpretation of one customs in the film had a significant impact on the quality of the whole film. However, a tunnel vision, a one-sided attitude, in using folklore-ethnographic elements is unacceptable. After all, "folklore not only performs an artistic and aesthetic function, but, most importantly, preserves the historical memory, philosophy and enlightenment of a certain nation. In addition, another important aspect of folklore is to develop spirituality and to instill high morals.

The use of folklore and ethnography as a means of expression has become a peculiar tendency among the modern Uzbek directors of art films. In the case of the analyzed film, it can be said that although some of the films directly show the customs and traditions of people, for the promotion and large-scale demonstration of national values. In some films, it is not just a means of expression the peculiarities of the Uzbek nation, but rather a complex set of aesthetic and



spiritual views that have been embedded in the blood and conscience of the nation and people and have become a form of their everyday life, worldview and way of thinking.

## CONCLUSION

However, in modern Uzbek cinema three negative elements can be observed in portraying folklore-ethnography:

Firstly, the lack of the filmmaker's creative professionalism in films depicting beneficial, positive aspects of customs and traditions. There is a lack of full and effective use of elements of the means of cinematography;

Secondly, in films with high artistry can be traced to a one-sided interpretation of customs and traditions and an approach to national concepts based on the views of other traditions;

Thirdly, there are cases when national traditions, values are simply used as an external form of means of expression, for the sake of exotics. The essence of such films does not reveal the deep roots of these values. That is, the plot, elements of art and values do not form a complete unity.

It is desirable to note that the third of the three cases considered above contradicts the specifics of artistic creation and it would be better to refrain from such approaches completely and to combine the two previous cases in order to express in a high artistic way the positive aspects of folk wisdom emerged from the consciousness of the nation.

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## PROVERBIAL PHRASEOLOGICAL UNITS WITH ZOONYMIC COMPONENTS IN UZBEK AND ENGLISH LANGUAGES

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### ABSTRACT

*The paper reveals the linguistic comparative structural and semantic analysis of Uzbek and English proverbs with zoonymic components that reflects national and cultural identity and the specificity of thinking of the Uzbek and English people. The aim of the paper is to explore and show similarities and differences in mentality and perception of the world by Uzbek and English people. The aim was achieved due to the study of the structural and semantic components and expressiveness of the zoonymic proverbs.*

**KEYWORDS:** *Phraseology, Idiom, Linguoculture, Collocation, Zoonym, Mentality, Paremiology.*

### INTRODUCTION

Phraseology is a branch of linguistics which studies different types of set expressions, which like words name various objects and phenomena. They exist in the language as ready-made units. A phraseological unit (PU) can be defined as a non-motivated word-group that cannot be freely made up in speech, but is reproduced as a ready-made unit. Nowadays phraseological units have become the object of lots of linguists. And it can also be proven by the interest and attention to the linguoculturology issues. Sh.Balli, the Swiss scholar with French origin, was one of the first researchers who investigated the phraseological units[1]. For the very first time a Russian scholar V.V.Vinogradov identified the aim of the phraseological units and classified them into three categories and he considered that the essence of the PhUs was the stability of their structures.[2]The term “idiom”used by western scholars has comparatively recently found its way into Russian phraseology but is applied mostly to only a certain type of phraseological unit

as it will be clear from further explanations. There are some other terms: set-expressions, set-phrases, phrases, fixed word-groups, collocations. Phraseological units do not appear in the speech as an separate word, they remain in the human brain as a readymade and set units so they have at least two independent words which form phrases during the process of communication. There is not a unique and perfect theory of PhUs in the world linguistics. And there are different ideas about the main signs of PhUs and PPhUs. Particularly, according to B.A. Larin, the main sign is the invisibility of separate meanings of the words combining the word combination.[3] And according to A.A.Reformatskiy they cannot be translated into another language with word for word translation method.[4]A.V.Kunin points out that the existence of stability signs in PhUs can be explained by the use of phraseological units in lexical structures, semantic, morphological and syntactic components.[5]A.E.Mamatov says, «the main sign of phraseological units are complete and partial semantic reflection, the figurative meaning of their components». [6]

Many attempts have been made to define a proverb. There are many definitions of these phenomenal figures, but still scholars are not satisfied with them as more attempts to define a proverb are being made. A proverb (from Latin: proverbium) is a simple and concrete saying popularly known and repeated, which expresses a truth, based on common sense or the practical experience of humanity. They are often metaphorical. A proverb that describes a basic rule of conduct may also be known as a maxim. If a proverb is distinguished by particularly good phrasing, it may be known as an aphorism. According to the Oxford English Dictionary, a proverb is “a short saying in common and recognized use; a concise sentence, often metaphorical or alliterative in form, which is held to express some truth ascertained by experience or observation and familiar to all”. [7] The term «мақол» (proverb) in the Uzbek language was derived from Arabic «qavlun» (to say) and it means a word, a sentence or an expression which belonged to one of the genres of people’s wisdom

Proverbs are often borrowed from similar languages and cultures, and sometimes come down to the present through more than one language. Both the Bible (Book of Proverbs) and Medieval Latin have played a considerable role in distributing proverbs across Europe, although almost every culture has examples of its own. Bible is essential for British and American cultures. It is said that their cultures are not integrated without Bible. It is safe to say that Bible influences every aspect of its disciples' life. Consequently, many sayings and sentences in Bible have been popularly accepted. They have been deeply rooted among people and people frequently use them to cite a truth or express their ideas. The study of proverbs is called paremiology (from Greek παροιμία - paroimna, "proverb") and can be dated back as far as Aristotle. Paremiography, on the other hand, is the collection of proverbs. A prominent proverb scholar in the United States is Wolfgang Mieder. He has written or edited over 50 books on the subject, edits the journal Proverbium, has written innumerable articles on proverbs, and is very widely cited by other proverb scholars. In addition, Mieder suggests that the Latin language of the Middle Ages, which at that time performed the role of the lingua franca, can be regarded as a source of proverbs, because these proverbial expressions cannot be traced back to antiquity. In general, the scholar believes that the dissemination of Latin proverbs not only all over Europe, but also in other continents has been greatly affected by the English language, which in many countries is considered to be a second language. Admittedly, it is important to note that these English proverbs are adaptations from Latin and might appear in other languages as direct translations of the English variants. Every nation has its vast collections of proverbs. Many scholars state that

the process of collecting proverbs has a rather considerable tradition. Mieder presents “A proverb is a short, generally known sentence of the folk which contains wisdom, truth, and traditional views in a metaphorical, fixed and memorable form and which is handed down from generation to generation”[8]

Proverbial phraseological units (PPhUs) make up a certain part of phraseological fund of the nations all over the world. The main peculiarities of the PPhUs are their stability, figurative sense, ready-made forms in speech, semantic relativeness, expressive-emotiveness and expressiveness and they are considered to be the method of expressing the peculiarities of national vocabulary. Proverbial phraseological units are ready-made units used in complete or partial figurative sense. Their structure equals to a sentence. They can express independent meaning in a context and they are semantically solid. Besides, the PPhUs are considered to be set phrases which include various proverbs, sayings, aphorisms, legends, myths, and other phrases and idioms.

PPhUs have the following categorical signs: thoughts are the literary and logical shape; preservation of attributes of a certain ethnos; the smallest genre of a national folklore; special grammatical shape; existence of generalizing and didactic idea. It is too difficult to limit the phraseological units based on an expressive stylistic layer. While comparing them with other PPhUs in English dictionaries it turns out to be different to include them into a certain group of PPhUs. There are also differences between the signs used in «Phraseological Dictionary of the Uzbek language» by Sh.Rahmatullayev and M. Sodikova's phraseological dictionaries.[9]The Uzbek language possesses also long background. It is true that this language was given the name of “Uzbek language” recently, but this language has existed since approximately X-XI century. A huge number of proverbs, sayings and aphorisms are considered as a great wealth of the Uzbek culture. The main sources may be classified as followings: some characters from religious sources and the borrowed translations (mainly from the Arab, Tadjik, Persian and Russian languages). [10] Moreover, there are some proverbs that come from sayings created by the mass media (TV, radio or social nets), expressions of films and songs, and even advertising slogans in all languages including English and Uzbek. However, they need some time to become or to form new proverbs as well. Carrying out the frequency analysis of the animalistic components in Uzbek and English phraseological units, one cannot but pay attention to the similar nature of their use. The names of the pets match: dog (Itdek charchamoq-Dog tired ; It hurar carvon o'tar-The dogs bark but the caravan goes on ); cat (It mushuk bo'lib yashamoq-To live cat - and- dog life, ichini mushuk tatalamoq- curiosity killed cat); horse (Otdak soglom bo'lmoq-as strong as a horse, yuvosh o'tning tepkisi qattiq bo'ladi-quiet horses kick the hardest; tishini ko'rguncha ishini ko'r-never look a gift horse in the mouth,yaxshi otga bir qamchi-a good horse cannot be a bad colour); sheep (qo'y terisini yopingan bo'ri -a wolf in sheep's clothing); The names of wild animals are also repeated: hare (Quyov o'z ko'lankasidan ham qo'rqar ;Hold with the hare and run with the hounds); fox (Tulkidan sher chiqmas, Qo'rqoqdan er chiqmas ; The fox is not taken twice in the same snare ); wolf (Bo'rining o'g'zi esa ham , emasa ham- qon ; How many wolves do not feed, he looks into the forest).

Only in Uzbek animalisms most often camels are used from domestic animals (tuyaning ustida it qopmoq, tuya ko'rdingmi –yo'q, ignadek gapni tuyadek qilmoq), as well as the names of animals whose habitat was the areas of settlement of the ancient turkic tribes (donkey, goat, sheep, cow). Only English animalisms contain the words leopard (The leopard can not change his spots.

Leopard cannot change its spots) and the lion (Great lion. Popular man. To beard the lion in his den. Attack the lion in his own den).

The phraseological foundation of each nation reflects in its many images the history of life, the material and spiritual culture of the nation. Animalistic idioms talk about the animal world that has surrounded us since time immemorial. The main source for the formation of animalistic phraseology is a metaphor (Zeal without knowledge is a runaway horse. Knowledge without zeal is a horse that bit a bit. Zeal is unhealthy). A hidden comparison, laid down in a metaphor, observes the specific features of national life, spirit, living conditions, and labor skills of one or another people.

The marking of the national-cultural specificity of the figurative semantics of phraseological units is often created by the actual component of the phraseological unit. The national-cultural originality of phraseological units is especially evident when juxtaposing two languages, which shows that both Uzbek and English have more or less similar images and symbols. For both Uzbek and English, a horse is the embodiment of industriousness and endurance, a wolf is perceived as an image of an evil bloodthirsty predator, a fox is a symbol of cunning, a hare is cowardice, a sheep is a symbol of humility, unconditional obedience, helplessness. On the basis of these images, two phraseological units appeared in two languages that completely or partially coincided in structure and meaning. In terms of coincidence in two languages, we can distinguish groups:

1. Proverbs that completely coincide in two languages (calque translation):

Uzbek proverbs	English proverbs
Bir tirraqi buzoq butun podani bulgaydi	One scabbed sheep infects the whole flock
It mushuk bo'lib yashamoq	To live cat – and- dog.
Yaxshi otga bir qamchi	A good horse cannot be a bad colour
Vovullagan it tishlamas	Barking dogs seldom bite
Bir o'q bilan ikki quyinni o'ldirmoq.	. Kill two birds with one stone
Baliq boshidan sasiydi.	Fish begins to stink at the head
Qo'ynida ilon asramoq.	A snake in the grass
Dunyoni suv bossa o'rdakka ne g'am.	Like water off a duck's back
Yuvvosh it hurmay tishlar	Dumb dogs are dangerous
Baliq suvning chuqurini, mard ishning qiyinini izlar	In the deepest water is the best fishing.
Bir qaldirgoch bilan bahor kelmas	One sparrow doesn't make spring
Qarga bolasini oppogim deydi	Every bird likes its own nest
Jo'jani kuzda sanaymiz	Don't count one's chickens before they are hatched
O'zi yemas- itga bermas.	A dog in the manger
Ko'p gap eshakka yuk.	To talk the hind leg off a donkey
It ўз уйида ботир	Every dog is a valiant at his own door

2. The zoocomponent of the proverb is in one language, its equivalent in another is absent:

<b>Uzbek proverbs</b>	<b>English proverbs</b>
Podadan oldin chang chiqarmoq	Don't put the cart before the horse
Chumchuq pir etsa, yuragi shir etadi	Cowards die many times, before their deaths
Ikki qo'chqorning boshi bir qozonda qaynamas	Too many cooks spoil the broth
To'ngizni botqoqda bos	When in Rome, do as the Romans do
Toy otga ergashar, qo'y - serkaga	A good Jack makes a good Jill
<b>English proverbs</b>	<b>Uzbek proverbs</b>
Early bird catches the worm	Erta turgan kishini xudo o'nglar ishini
Every dog has his day	Oyning o'n beshi yo'rug, o'n beshi qorongi
If wishes were horses, beggars would ride	Orzuga ayb yoq
You can lead a horse to water, but you can't make it drink	Birov uchun birov qozon osmas.

3. Proverbs are present in two languages, but the zoocomponents differ from each other:

<b>Uzbek proverbs</b>	<b>English proverbs</b>
Tuyaning dumi yerga tekkanda	Pigs might fly if they had wings.
Yotgan ilonning dumini bosma	Let sleeping dogs lie
Pashshadan fil yasamoq	kill a fly with an elephant gun
Otning o'limi itning bayrami	When cat's away, mice will play
Qarga qarganing ko'zini cho'qiydi	Dog eat dog
Qo'y ogzidan cho'p olmagan	Can't say bo to a goose
Bo'rining ogzi esayam, emasayam qon	Give a dog a bad name
It uyasida o'zini yo'lbars sanaydi	Every dog is a lion at home
Ikki qo'chqorning boshi bir qozonda qaynamas	Two dogs over one bone seldom agree

## CONCLUSION

The Turkic peoples ensured the diversity of species of animal names expressed in the proverbs of animal husbandry and hunting, which were the subsistence activities that determined the way of life of the Uzbek people. The degree of use of zoonyms in proverbs varies. Fish, pig and elephant zoonyms are rare in Uzbek proverbs. Wolf, sheep, dog, horse, camel zoonyms are often observed. This situation is explained by the animal world, living environment, mental characteristics of the people. An analysis of proverbs and sayings as a source of information about the relationship of people in society allows us to argue that the characteristic features of English society are forethought, non-interference in someone else's life, hard work, tolerance towards others. The British are not inherent in curiosity, they are quite conservative in their beliefs and do not like to take risks. As a result of the research, it was observed that articles with a zoonymic component are relatively numerous in the Uzbek folklore. This amount is determined

by the fact that the Turkic peoples, including the Uzbek people, were mainly engaged in animal husbandry, hunting, careful observation of natural phenomena, animal movements, characteristics. While the occurrence of the name of a domestic animal in proverbs depends on the requirements and conditions of animal husbandry, the observation of the name of a wild animal is related to hunting activities.

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## STRATEGIES AND PROBLEMS OF LITERARY TRANSLATION

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### ABSTRACT

*Works of literary art are considered to be the most acceptable means of studying the culture of other nations and understanding it more deeply. But the goal can only be achieved through a highly qualified translation product. In the process of translating a fictional work, it is important that the translator correctly interprets the culture and laws of the source language, as well as preserves the aesthetics, emotional expressiveness and mood of the author.*

**KEYWORDS:** *Literary Translation, Interlingual And Intercultural Inequality, Objective And Subjective Literary Information, Observer-Strategy, Adherent-Strategy, Facilitator-Strategy, Enlightener Strategy.*

### INTRODUCTION

The translation of a literary work is an abstract process controlled by internal hidden laws that are closely related to a number of problems. It cannot be modeled, for example, into a template, such as the translation of legal documents or medical instructions, and is not regulated by generally established fixed rules. Therefore, the translation of documents is a skill with a mark of precision, and the translation of a literary work is considered at the level of free and unrestricted art. In the translation of a work of literary art, there are other hidden issues, such as the specific nature of the text at our disposal, the unknown as well as unlimited readership, inter-linguistic and intercultural imbalances, and so on.

The absence of common uniform patterns or the systematic criteria, leads to the application of certain strategies that are inherently realized and intuitively applied by the people of artistic creation in literary translation. T. A. Kazakova distinguishes three such strategies: observer-interpreter, adherent-interpreter, facilitator-interpreter and enlightener-interpreter strategies. (Tamara A. Kazakova, Strategies of Literary Translation, 2015)

In evaluating a literary text translated into another language, there is often a debate about stylistic adequacy, artistic sensitivity, aesthetic and cultural acceptability, authenticity, and other aspects.

However, due to the abstract nature of these aspects and their different manifestations in the minds of different people, a single work of art can be perceived and interpreted differently by two people. This leads to different conclusions and has an impact on the quality of translation. In general, although it has some shortcomings, the principle of enlightenment should be preferred, in order not to completely deviate from the author's purpose. (Razumovskaya, 2014; Kazakova, 2011, 2015)

It is inherent in the nature of a fictional work to disturb, tickle, or irritate the reader's emotions (i.e., catharsis), and thus to make them understand those. The more the author seeks to disturb the reader's inner world, the higher the informational potential of the text of the work of literary art. But this is achieved through many artistic expressive means — the rhythm and melody of the literary creation, artistic hints and wordplays. Also, the enlightening strategy requires restrictions in translation.

When it comes to the informative nature of a fictional work, there is a need for us to discuss the types of literary information. Kazakova A. T. distinguishes between objective and subjective literary information.

Objective information is reflected in the influence of the text on the reader, conditioned by linguistic information and knowledge, and it consists of elements such as textual stylistics, lexicology, grammar, socio-historical background of the text, as well as its informative nature of a certain field of specialization. In the process of understanding the text, a part of this information is usually lost. Indeed, the level of the style, vocabulary scope, and grammatical structure of the text may be higher than the reader's linguistic competence. As a result, the literary text is considered to be overloaded with information, and the plan to create the desired effect on the reader fails. We can see this in the example of high-level complex historical novels, examples of poetry (e.g., gazelles), and so on. This reduces the likelihood that the process of translating the work can also be performed by an arbitrary average translator.

## **MATERIALS AND METHODS**

Subjective literary information arises as a result of the author's personal conclusion and the cumulative influence of the reader's personal experience and imagination. The author may advocate or oppose certain items, names, and events. But this hidden information is not embodied in the play through direct words. On the contrary, the hints, artistic imagery, and figurative situations created by the author perform this function. Thus, through subjective information, "text within text", i.e. subtext, is realized.

The main problem in the perception of subjective information is that the views of the author and the reader may happen to be disproportionate and even contradictory. Suppose that a certain event in the composition of a historical work is considered to be a "historical error" by the author; however, in the mind of the reader it can be embodied as a necessary element of evolution required by that period. As a result, it is clear that the writer will not achieve the intended artistic goal.

The fact that the process of reading a work alone is so complex allows us to imagine the overwhelming task involved in translating it.

When working with a variety of literary texts and complex information structures, it is important that the translator be armed with effective strategies for processing interlingual information.

Such strategies are largely intuitive in nature and sometimes have one-sidedness and limitations. It should be noted that the translation of a work into another language is not only a matter of language, but also a matter of adaptation to other cultures, that is to say, a matter of cultural transformation.

When faced with structural and semantic complexities that do not obey general laws, it is clear that the translator chooses one of two ways: he either creates a simplified translation product to make the process of familiarization with the fiction easier, or he present thorough and comprehensive description and specific details to fully embody the overall message of the literary work and requires the reader to have a high level of comprehension and critical analysis.

Expressing a verbal description of the text of a work of literary art constitutes the goal of the observer-translator strategy that is neutral to the reader and, in particular, is advocated with a spirit of indifference to the author's personal views and preferences, is free from so much emotional and stylistic nuances, and often requires reference to linguistic equivalents in dictionaries. But even this method is not simple and less laborious. The question of equivalents alone deserves deep observation. Indeed, the lexical alternatives provided by dictionaries provide formal equality and are inaccurate in the expression of contextual-functional equality.

The adherent -translator strategy is a more conservative method, in which grammatical structures such as verb forms, word order in a sentence are translated on the basis of source-language rules, and the laws of the translated language are ignored. Transliteration of socio-cultural and historical concepts is performed (i.e. the external phonetic image of the word is encrypted according to the alphabetical system of the translated language).

The main tragedy in choosing both of the above strategies is the loss of subjective information in the work of literary art. This means that the work's artistic value, descriptive expressiveness, creative as well as emotional influence, and the author's hidden position are bypassed. Many literary experts know that these elements are the main criteria of a fictional work, and in turn recognize that it is impossible to preserve them fully, even in the most detailed, professional translation.

The facilitator-interpreter and enlightener-interpreter strategies contradict the above principles of unbiased translation, and their main task is to facilitate the reader in the process of the literary text comprehension or increase his knowledge and awareness.

In the facilitator-translator strategy, culturally and historically conditioned concepts with obvious national coloring are not transliterated; they are replaced by analogues or interpreted through more descriptive information. Complex syntactic structures in the source language are conveyed in the translated language using a reader-friendly syntax. Some parts or expressions that are considered confusing or too specific are completely cut off from the text. But here, too, psychological-emotional influence as well as artistic expressiveness of the fictional work is given up.

## **DISCUSSION**

The enlightener-translator method provides a very comprehensive translation, revealing every more complex element of the text of by means of detailed descriptions and explanatory information, numerous notes and annotations. The content of the necessary vocabulary units is given in the references and the translation is equipped with all the necessary tools for the reader

to understand the essence of the work. This is especially applicable in the translation of historical novels, defined by the conditions of that period, interspersed with archaisms and national features. This can be seen in the work of Abdulla Kadyri, the founder of Uzbek novelism, "Scorpion from the Altar." The novel depicts the socio-political life of Uzbekistan in the early twentieth century, the oppression of the khanate, the ill treatment of ordinary people through the sincere and pure love of two young people. The novel is illuminating and provides the reader with valuable information about the historical events of that period, allowing them to make an objective assessment of the historical circumstances. Although portrayed from the beginning to the end in a realistic manner and written in a serious style, the fact that the emotional-expressiveness and psychological sensitivity is created with great skill makes the reader involuntarily turn to the side of the two lovers and sympathize for the common citizen.

There are subtle shades of meaning in the novel, and translating it with a sharp narrative language requires a very high level of talent from the translator. Undoubtedly, since the author's main goal was to criticize the oppression of the period, it would be appropriate for the translator to choose an enlightening strategy. But it is a sincere and beautiful love story that makes it readable to the reader. The emotional expressiveness in the novel has arisen around it and it is important not to lose it in the translation process.

One of the linguistic features of the novel "Scorpion from the Altar" is that it is enriched with concepts expressed in the Old Turkic language. Kadyri explains them throughout the novel, making references on each page. Creating an image of such lexical units requires the translator to create a detailed extended text. Also, words in the novel that belong mainly to the verb category have a historical phonetic appearance, a feature that is inevitably lost in the process of translation.

Kadiri is a man with a keen language of presentation who created wordplays, unique phrases in many places in the text, and time by time used folk proverbs and phrases fitting well in the literary text. Translating them requires the translator a high level of knowledge, as well as awareness of the Uzbek language and culture.

In order to get a clearer impression of the historical spirit of the novel "Scorpion from the Altar", we refer to the following passage and choose the necessary translation strategy based on its textual nature:

“Кези келганда махдумнинг ёзлик кийимларини ҳам бир сидра айтиб кетайлик: йўллуқ, қизил қалами бўздан яхтак, оқ бўздан жиҳақ ёқалиқ кенг кўйлак (чунки тор бўлса йиртиладир) ва лозим (яъни иштон) ҳамда сарпойчан кийишка енгилча сағри кафш, аммо салла қишин-ёзин битта.”

“When the time comes, let us mention the summer clothes of Mahdum in short: a red striped sleeveless cardigan made of red cotton fabric, a loose shirt with a collar made of white cotton fabric (because it is torn if it is tight) and pants and light casual shoes, but the same turban for wearing in winter and summer. . ”

In a single short piece of the literary text extracted from Kadyri's novel, a number of historisms (words representing the historical concept: *қалами*, *жиҳақ ёқалиқ*, *сағри кафш*, *салла*) were used to create the image of one of the antagonists of the work "Scorpion from the Altar" - Mahdum. Since they are not even familiar to Uzbek culture, the content of the novel cannot be

fully understood without Kadyri's explanation and commentary. The translator has no choice but to choose the enlightener-interpreter strategy. Since the words that express historical concepts are important for the essence of the work (for example, the image of Mahdum's clothes plays an important role in revealing his personality), it is necessary to cover them with a wide range of details where necessary. The transliteration method alone would have facilitated the work of the translator, but would have lowered the literary potential as well as the quality of translation.

When thinking about the translation of a work of literary art, we consider the discussion and translation of another novel, written in a completely different language of presentation and with a different central theme.

As for the details of the novel "The Great Gatsby" by Francis Scott Fitzgerald, this is a story about a young man who became a young entrepreneur with a huge income in a relatively short period of time, who was driven by the desire to achieve the love of his youth and to be worthy of it. This is a beautifully narrated work about a hero whose life has turned into tragedy because of his dream. Although literary critics say that the novel hides topics such as "the American dream," "realization of dreams in the Land of Opportunities," and "how the American dream turns out to be utopic," its real force and artistic impact lies within the love of two people. The novel is enriched with flirtations, whispers, "smart" observations of noble people, secret love affairs and expressions, and therefore from beginning to end in its text there are mysteries, ungrounded rumors (use of a low and mysterious voice, speech verbs related to unintelligible speech serve for this purpose) about the protagonist. They have a strong emotional impact on the reader. This is the main power of the novel.

But it is worth noting that both novels have one thing in common: the unique examples of both works illuminate the tragedy of the fate of the whole nation in the example of the love of one hero, the shortcomings of a certain historical period, the play of socio-political conditions on the lives of ordinary people. The most important of the commonalities in the language of presentation is that in most scenes the protagonists refrain from speaking openly by whispering, mumbling, muttering, and the author chooses appropriate speech verbs accordingly. We can be assured of this by analyzing the following passages:

“Сиздан яна бир талаб: эртадан бошлаб мени ўз ҳузурингизга олинг, токи муфтилар эртадан кечгача ғийбат сўзлаб, маймун бўлиб вақт кечирмасинлар.” (“Меҳробдан чаён”, 179-б.)

"There is another request to you: I would like you to join me to your company, so that the muftis do not gossip from morning till night and deal with nonsense like monkeys." (*The Scorpion from the Altar*, p. 179)

“Қора бармоғи билан хослар ичидаги Абдурауф тунқотарни ўз тарафига *имлаб*, орқасига қайтди.” (“Меҳробдан чаён”, 233-б.)

"With his dark-skinned finger, he *gestured* Abdurauf (a nightguard) among the security guards to his side and stepped back." (*The Scorpion from the Altar*, p. 233)

“Боя менга яна учрашди; *ғўлдир-ғўлдир қилади*, мақсадиға ҳеч бир тушуналмадим.” (“Меҳробдан чаён”, 169-б.)



“He came to me again; *mumbled* something, but I didn` t understand his intention.” (*The Scorpion from the Altar*, p. 169)

“Анвар ўз хонасиға келиб кирғанда, четдаги танчада Шаҳодат муфти бошлиқ мулла Абдурахмон ва Калоншоҳ мирзолар нима тўғрусидадир, *оҳиста-оҳиста сўзлашиб* ўлтурар эдилар.” (“Меҳробдан чаён”, 168-б.)

"When Anwar came into his room, Mullah Abdurahman and Kalonshah Mirza, with Shahodat mufti in charge, were sitting in the courtyard *talking quietly* with each other." (*The Scorpion from the Altar*, p. 168)

‘She *hinted in a murmur* that the surname of the balancing girl was Baker.’ (*The Great Gatsby*, p.11)

“I’ll tell you a family secret,” she *whispered* enthusiastically. (*The Great Gatsby*, p.15)

“Gratulate me,” she muttered. “Never had a drink before, but oh how I do enjoy it.” (*The Great Gatsby*, p.72)

The verbs used in the above passages from the novels express the characters` attitude to the interlocutor, reveal their mood and personality. The use of the helper-interpreter strategy would require those verbs to be replaced by more general alternatives. But this, of course, undermines the author's purpose and confuses the essence of the work or lowers its level. In this process, unfortunately, subjective information is lost.

An observer-interpreter strategy can be useful when speech verbs have absolute or at least close equivalents in the source language and the target language. Most speech verbs have alternatives in Uzbek and English. But the issue is not only their translation, but also the full interpretation of the context around them into the language of translation, so the observer-translator strategy cannot be relied on alone.

## CONCLUSION

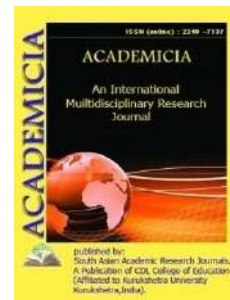
It should also be noted that a work may have different translation options, implemented with different strategies. This is a decision that is made in accordance with the target readership of the literary book. For example, Mikhail Bulgakov's novel “The Master and Margarita” is considered to have gone through this process, and it has a variety of translation options that differ in terms of complexity and artistic potential.

In short, the translator must fully understand the nature of the work of literary art at hand, study each part of it, and, consequently, apply the most appropriate method of translation, and perhaps a combination of several methods. Of course, if a reader with a lower level of specialty knowledge or of the age category has a desire to get acquainted with the work, it is also possible to use an assistant-translator strategy aimed at simplifying the work to please them, i.e. the translation process is a multi-factorial event.



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## **HISTORICITY AND SCIENTIFIC OBJECTIVITY IN THE COVERAGE OF PHILOSOPHICAL HERITAGE**

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### **ABSTRACT**

*The article describes the development of historical and philosophical heritage as an important spiritual factor of national consciousness and restoration of historical memory. The article reveals the importance of the philosophical heritage on the basis of the principle of scientific objectivity in the understanding of the national identity of our people.*

**KEYWORDS:** *Historical And Philosophical Heritage, Philosophical Thinking, Historical Truth, Dogmatism, National Identity, Scientific Objectivity.*

### **INTRODUCTION**

Rich philosophical views of thinkers of the past can not be restored historical-philosophical truth and historical memory, without a truthful analysis of their thoughts.

The development of historical and philosophical heritage is an important spiritual factor of national self-realization and restoration of historical memory, and the coverage of philosophical heritage on the basis of the principle of scientific impartiality is of great importance in the realization of the national identity of our people. Therefore, in the coverage of the philosophical heritage, it is necessary to pay attention to the study of its heritage, which historically became the values of the contemplation of the periods when it was created, taking into account the inalienable connection with that period, after all, history is the philosophy of time and space, it is considered a teacher-teacher for the product of already, for the prospect of an independent state, high-spiritedness and harmonious people are needed. To do this, first of all, the most urgent problem is the real study of our people's past and history. The Uzbek people are experiencing the processes of their rich culture, historical and spiritual traditions, a deeper understanding and perception of themselves. The work of studying our cultural heritage, spiritual values, serving them today and for our future is rising to a new level.

Historical and philosophical values inherent in eternity are a source of strong ideas in the minds of representatives of all nationalities, nationalities, religions, in the education of loyalty to the ideas of justice and truth in the heart, historical and social basis in guaranteeing our continuity. "... we rely on our national traditions, which have been formed for centuries, on the rich spiritual heritage of our ancestors"[1]. "...First of all, it is about creating the necessary environment and conditions for the wide promotion of the rich history of our country, its unique culture and national values, the achievements of world science and literature among the youth and the population. After all, the more morally harmonious the youth, the stronger the immunity against various alien vices" [2].

"In Uzbekistan, the spiritual and historical foundations of the construction of a democratic and social just society, the restoration of high spirituality and morality characteristic of our people from ancient times, the study of its centuries-old cultural heritage on a modern scientific basis, the preservation and restoration of its unique historical monuments, the realization of ancient and modern spiritual riches in terms of, formed social justice has become the most dominant direction of state policy"[3].

The coverage of philosophical heritage relies on historical truth. In carrying out this, it is important to base itself on the principles of historicity and scientific impartiality theoretically and methodologically. Therefore, it is worthwhile to look at the role of the approach to the philosophical heritage from the point of view of historicity and scientific impartiality in determining the historical truth and the significance of its peculiarities in the quality of the constituent part of the spiritual heritage of the people.

Research of the near and long history of Uzbekistan on the basis of objective, scientific-historical methodology plays an important socio-political and scientific-practical role today, which is steadily entering the world community, becoming a full-fledged subject of international relations. The essence of the issue is that today the need of Uzbekistan to preserve and strengthen its independence requires representatives of all social-humanitarian Sciences, first of all philosophers, historians to apply their scientific-theoretical thinking to scientific research based on a truly historical truth, which is impartial of dogmatic beliefs, dry rhetoric and blind praise. However, any scientific and historical research, which is extremely ideological, inevitably leads to fanaticism, to the suppression of historical truth, to the formation of an unusual historical consciousness in people.

## **MATERIALS AND METHODS**

The study of socio-historical processes on the basis of historicity is primarily based on the principle of unity, unity of theory and practice. In the perception of the attitude of historical knowledge towards historical reality, the correctness or authenticity of this or that historical knowledge is the main issue. In general, the study of methods of restoring reality is a prime problem in the theory of cognition. In the current modern conditions, this problem relies on a number of theories that have appropriate methods of generating and verifying real knowledge. In this connection A.I.Rakitov emphasizes certain conditions that complicate the capture of historical reality. These are an expression of the inadequacy of information about the past, the complexity and impossibility of establishing a mutually experimental-practical live communication with the past, the interrelationships of historical consciousness with ideologies[4].

The genesis and formation of historical cognition, its embodiment in the structure of historical consciousness, are inextricably linked with all spheres of life of society, especially with a certain ideological direction, goals and tasks of social consciousness. Therefore, the question of the relationship between theory and practice and the ratio, as well as the criterion of truth, which is inextricably linked with them, has attracted the attention of thinker scientists at all times. Political scientist N.Jurayev "history is the fruit of human thinking with its entire scope and integrity," raev wrote... and the truth of life can be called the product of human spiritual and spiritual livelihood. Already, history is a complex of human and human life, its expression and essence"[5].

The study of historical-philosophical heritage also requires, first of all, an approach from the point of view of historical justice, after all, "universal history, in a word, is a set of ideas and goals that have been fighting for superiority over each other, proving the contradictions of each other"[6].

In encyclopedic works on the history of philosophy, the process of philosophical thought of mankind is classified differently. In most of them, the history of philosophical thought is explained unilaterally, only in the form of a process consisting of the history of the struggle between materialism and idealism. However, the development of philosophical thought is due to the great research and creative activity of mankind, which has been associated with thousands of years. From this point of view, we think that the development of philosophical thought can make up a specific system, and consider it on the one hand, historical-philosophical heritage, on the other hand, in connection with the philosophy of history, logically justify itself. Consequently, the word "philosophical thought", which is formed scientifically and objectively in the minds of the modern person, is worth noting that in order for philosophical thought to understand and understand its history, it is necessary to go through certain stages of its development, to be logically scientifically grounded in this process.

Of course, in this place there is an opinion about universal considerations. For the historiography and scientific-theoretical analysis of the historical-philosophical heritage of our people, this thing is of universal - methodological importance. Therefore, we should emphasize the following aspects of the problem:

- first of all, strictly pay attention to the fact that the historical-philosophical heritage arose and became rich directly in connection with the stages of the historical development of mankind, on this basis, the development of historical thought presupposes the beginning of the processes of formation, development and degradation of periods, civilizations, cultures;
- to pay attention to the analysis of historical lessons and their enrichment, which characterize the past, present and future of the development of society from the point of view of historical philosophy;
- basic omillarni study that determines the historical evolutionary (evolutionary) process;
- research on the essence of history in scientific terms, its main directions and objectives;
- the question of the formation of a scientific picture of the future of mankind, relying on the conclusions of historical thought. Here it is necessary to give specific reasoning, the reason for this is that philosophy can basically only hypothesize about the future of mankind, and in fact life makes specific adjustments to these processes;

- philosophical thought and the core of the inheritance rely on humanity, so that in this direction the logical landscape of world history is formed, striving to express it.

Summarizing the above points, it is necessary to base all the manifestations of the historical-spiritual heritage, including in the understanding of the essence of the philosophical heritage, on the people of thought “the philosophy of history is dry without history, the science of history is blind without history philosophy”. K.Yaspers points out about history, “in order to understand ourselves, we will try to understand history as some kind of integrity. History is not only a memory that we need to know, but at the same time it is the roots of our lives. And the historical view is an area that encourages us to know the nature of man”[7], -he says.

As the Russian professor Leonid Levitin confessed in his work: “the great jadid Mahmudkhuja Behbudiy is ”The Muse is the scales of the future.” 50 years later, George Orwell, an English writer and publicist, came to the conclusion that a person with his past will also have a future, repeating Behbudiy's opinion”[8].

The genesis and formation of historical cognition, its embodiment in the structure of historical consciousness, are inextricably linked with all spheres of life of society, especially with a certain ideological direction, goals and tasks of social consciousness. Therefore, the question of the relationship between theory and practice and the ratio, as well as the criterion of truth, which is inextricably linked with them, has attracted the attention of thinker scientists at all times. Political scientist N.Jurayev wrote: “history is the fruit of human thinking with its entire scope and integrity...and the truth of life can be called the product of human spiritual and spiritual livelihood. Already, history is a complex of human and human life, its expression and essence”[9].

The study of historical-philosophical heritage also requires, first of all, an approach from the point of view of historical justice, after all, “universal history, in a word, is a set of ideas and goals that have been fighting for superiority over each other, proving the contradictions of each other”[10].

All wise men approached with great responsibility the issue of explaining the history of philosophical thought and the causes and consequences of the development of philosophical heritage in the context of scientific impartiality. This is a very large philosophical topic. At the same time, the need for a consistent and scientifically objective approach to the philosophical heritage of the Uzbek people stems from the essence of spiritual strengthening of national independence. Consequently, “history and cultural heritage is the main wealth of the nation,- writes A.Askarov, - knowledge of history on the principles of equity, equity is extremely necessary for the people who are restoring a new national state”[11]. Therefore, logic makes it possible to distinguish lies in anything from reality.

Hence, philosophical heritage is a legitimate product of the frantic struggle between the ideas of historical sets, views, creativity and destruction. Or it is correctly said that the history of mankind is the history of cultures, the history of civilizations. It is impossible to fully and comprehensively understand the history of mankind through special concepts. Culture and civilization reflect the way of life of the people in general terms.

Therefore, the historical stages of the formation of the philosophical heritage, which is the golden chain of the history of our people, their unity and invaluable essence, in short, it is permissible to dwell.

## DISCUSSION

Problems of the history of philosophical heritage in Uzbekistan and studying them in dialectical relation with historical periods I.M.Muminov, M.M.Kheyrollaev, A.Fayzullaev, H.Vahidav, M.Baltaev, M.Baratov, Y.Jumabaev, H.Alikulov, R.Nasirov, R.Bahodirov, A.Sharipov, B.Ergashev, M.Usmanov, M.Qodirov and others expression in the works and studies.

All the research and conclusions in this regard unanimously state that the place where the ancient Sogdians lived in Uzbekistan – Movarounnahr is now also the country where civilization took place as a special monand. Therefore, we think about the most important periods of the philosophical heritage of our people. Our philosophical heritage naturally begins with such sacred historical monuments as “Avesto”. One can see from the honors of the philosophers of the ancient world that “Avesto” had a great influence on the development of world civilization, spirituality and culture with its content and ideas. As the Orientalist scientist Fazila Suleymonova noted in his work “East and West”, both Geraklit and the materialist-atomist Democritus knew about the ideas of Avesto and the sacred fire in it, and used them in the creation of their own ideas.

In this regard, we are amazed at the fact that some answers to very complex controversial discussions on the subject of factual history, historical truth, religion and science, the emergence of mankind, history and Progress, put forward by philosophers, historians, literary critics and other scientists, can be found from Avesto, recognizing that the above issues have an eternal feature. As the great German philosopher Gegel wrote, “Any truth, originality, kindness, justice, any living being, a spirit of generosity and support, happiness, compassion, etc. will be recognized by Zardusht as a trite of light and divinity... The whole life of mankind is endowed with the realization of this unique goal. The task of each individual is nothing more than self-spiritual and physical purification in the sense of the spread of these blessings as well as the struggle with Ahriman through human, natural situations and activities”[12].

Academician for the work of factual and objective study of the cultural and spiritual, as well as philosophical heritage of the Uzbek people I.M.Muminov made a huge contribution. Although the policy of communist ideology and totalitarianism, which ruled at that time, drove away any free thought, the scientist created dozens of rare works on the history of our philosophical heritage, which now serve as important scientific and historical sources.

Analysis of scientific-ideological courage demonstrated by Uzbek philosophers in 30-80 years together with works written contrary to communist ideas in 20-30 years of XX century as a separate and specific normative stage is the same term. In these years, on the history of philosophy, social thought T.A.Qori-Niyoziy, I.M.Muminov, V.Y.Zahidov, M.M.Kheyrollaev, A.F.Fayzullaev, M.B. Everyone knows that valuable works of Baratov and others have arisen. To give them a worthy assessment, to determine their contribution to the development of our philosophical thinking, naturally contributes to the restoration of philosophical truth.



## CONCLUSION

In conclusion, the following can be noted:

the principle of historicism is the most important dialectical Talab of philosophy, which dictates the coverage of historical processes in holistic, continuous change and development;

- the study of historical events, philosophical heritage on the basis of the principle of historicity provides a scientific impartial approach to the issue;

- our philosophical heritage was regularly formed, despite contradictory historical sets, not taking into account some interruptions (especially the period of the Mongol invasion). Our philosophical heritage, which is part of our spiritual values, is the Arab invasion from “Avesto”;

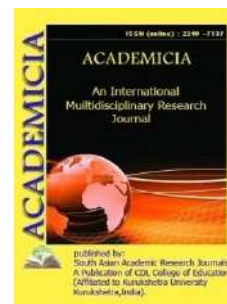
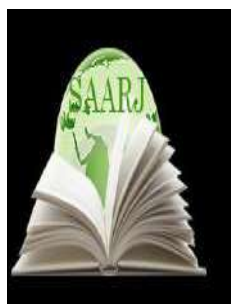
- The Mongol invasion from the penetration of Arab philosophy;

- From the era of Sheikhan to the middle of the XIX century;

- it was created and enriched in complex historical stages from the reign of the Bolsheviks' communist ideology to the independence of Uzbekistan, actively participated in each historical stage has enriched our philosophical heritage with a new meaning in its time. A common feature of all of them is that in the center of philosophical teachings there is an idea of glorifying a common person, a person and respecting his dignity.

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## AXIOLOGICAL EVALUATION AND ITS EXPRESSION IN AN ORGANIZED SENTENCE

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### ABSTRACT

*In the article, the pragmatic and semantic features of the axiological assessment studied in the field of linguistics are highlighted by the example of organized sentences. The evaluation category, which is also given in relation to value-concepts, has been studied on the basis of artistic texts, its active use in both speech-based and speech-based activities.*

**KEYWORDS:** *Subject And Axiological Evaluation, Value, Object, Organized Sentences, Linguistic Cognitive Activity, Author, Receptor, Addressant, Addresant, Comparison, Conversational Communication, Speech ICT, Text Frame.*

### INTRODUCTION

As in all areas of linguistics, there are new directions, theoretical and practical views on the study of linguistic units in different aspects. As part of this kind of research, we can include the category of evaluation expressed by the individual (subject). Opinions about the subject are expressed in the research works in Uzbek linguistics[1]. In addition, the features of language units expressing different additional meanings in speech, their sub-evaluation meaning are also studied to a certain extent in Uzbek linguistics[2]. The availability of sub-price research indicates that in this regard, it has been studied at an adequate and significant level in the field of linguistics. Even so, the type of subequatorial evaluation-the fact that axiological evaluation was not studied by concrete linguistic units, in particular, by the example of organized-sectional sentences, determines the relevance of the topic. In this small observation, we tried to investigate the reflection of the axiological evaluation in organized fragmented sentences using examples from artistic texts.

## MATERIALS AND METHODS

Axiological evaluation-as an integral type of assessment “value” in itself-reflect concepts and these concepts are reflected in the individual's attitude to the object being or his speech. After all, an axiological assessment is given precisely in relation to “the subject in reality, events in relation to their dignity, importance, significance”[3]. Personal opinion and worldly knowledge of the subject occupy an important place in determining the value and significance of subjects and phenomena. Events that seem significant to someone are not at all for whom. And this is characterized by a different manifestation of the category of axiological evaluation. Axiological evaluation structures in the text sometimes occur even by comparing one person or phenomenon to another. Sh. Safarov noted that the comparison also takes a different view and is accompanied by evaluation, normalization efforts[4]: - *Мавлоно Фазлиддин сиздек хиёнатчи бекдан минг ҳисса софдил, минг ҳисса олижаноб!- деди Хонзода бегим (П.Қодиоров “Юлдузли тунлар”)*.

Linguist scientist S.Boymirzaeva notes that when assessing events in reality with respect to their value, there is a sharp retreat from the norm (even if this is on the positive side), a sharp increase in quality and quantity. This type of evaluation in artistic texts serves to increase sensitivity[5]. The author prefers to use lexemes that express feelings and appreciation in relation to the object being evaluated (even if the object does not have this property) in order to increase the sensitivity of the sentence or sentence: -*Менга ёрдам берган ошпаз ҳам, Аҳмад чошнагир ҳам, каниз ҳам ботир қасоскорлар эди. Ҳаммаси мардларча жон берди (П. Қодиоров “Юлдузли тунлар”)*. In the quoted text, the addressant (Malika Bayda) gives a general assessment of the persons who served him as the tashaabbuskor of speech communication and transmits this assessment information to the addressee. This kind of “evaluation information, in turn, serves for the purpose of influencing the listener and motivating him to conduct an action, activity”[6]. We can see in the following text that even if the committed action gives a negative result, the axial evaluation structures are in place of the text frame structure:- *Ё алҳазар! Ахир сиз ҳам Муҳаммад умматисиз, муслимасиз-ку!.. Агар сизда инсофу иймон бўлса, қўлида қиличи билан очикчасига жанг қилган саркардага яшириқча заҳар бермас эдингиз! (П. Қодиоров “Юлдузли тунлар”)*. The muslima lexeme, which is an assessment of the positive content given by the addressant in relation to the addressee, will have only a sub-meaning within the text as well. “.. when viewed out of context, the neural becomes expensive” [7].

In the presented textual structure, the proverb, which as a universal value, expresses the meaning of “not responding to good with evil”, emerges through the reprimand act of the speaker. In the above text, taking into account the fact that a number of aspects such as the spiritual state of the speaker and the listener, family closeness, age play an important role in the realization of the tanbeh speech act[8], the speaker's mental state (irritability) is leading.

We noted that the axiological evaluation is given in relation to lexemes and concepts that have a high quality of value. In the science of philosophy, values are defined as a philosophical category that serves to determine the value of certain phenomena in reality, and it is stated that this phenomenon arises as a result of reflection by the subject[9]. Therefore, the universal value-concepts such as kindness, goodness, kindness, friendship, beauty, happiness, which have been appreciated and cherished since the appearance of mankind, constitute the basis of an axiological evaluation: *Салтанатлар оиласи билан Энахонлар оиласи орасида ота-бободан қолиб кетган дўстлик, қадрдонлик ҳукм сурадди (Чўлпон “Кеча ва кундуз”)*. The author or the

addressant does not ignore the important aspects for himself in the first place when assessing reality. This significance is manifested differently for each addressant. After all, the price of values is relative, it is tied to man[10]. We considered that the process of evaluation of a person as a product of linguistic activity is reflected in concepts that reflect universal values. And in the artistic texts, where our national values are reflected, the manifestation of an axiological assessment serves to feel the feeling of pride in ourselves, along with increasing influence: *Ўзбек хонадонидан нон ва райҳон иси келади (Ў. Ҳошимов “Дафтар ҳошиясидаги битиклар”)*.

It should be noted that the person is the main participant in the assessment activity, and this process requires its activity. Psychologist A.N.Leontev said that the activity of man is an “internal motivation, the basis, which ensures that any activity comes into action and manifests itself”[11]. Sometimes human activity also seems to be related to emotion (emosiya). Emotionality is a known phenomenon that all the time has the property of expressiveness, evaluation, attitude in speech[12]. That being said, emosiya (emotion) is also manifested in the content of an axial evaluation and sometimes takes the main place:...*Андижону Самарқандни, мени ўстириб шоир қилган ўлкаларни қанчалик соғинганимни билсангиз эди, мавлоно! (П. Қодиров “Юлдузли тунлар”)* In this text, in which organized fragments are involved, the addressant prefers to express with *қанчалик* the excess of a sense of longing. An axiological evaluation is a subset of[13], which is given in relation to phenomena of the same type, not having exact boundaries and dimensions.

Sometimes the author's axiological evaluation (in the form of information) with a significant aspect of the object is equally relevant to its "hidden" side. Only this hidden aspect does not manifest itself in the text: it requires the reader or listener to notice it on the basis of linguistic knowledge:– *Амирзодам! Адолат қилинг! Мен отангизнинг содиқ раиятлариданмен. Сиз ёшсиз, беғуборсиз! (П. Қодиров “Юлдузли тунлар”)* In the quoted text structure, the speaker's assessment of the listener (without Age, without blemish) is in the pronoun *сиз ҳали бу бекларни ва уларнинг қабих ниятларини билмайсиз, уларнинг гапига кирманг* the hidden expression in the content is reflected. In order for the expression to be reflected and understood in the hidden content, it is required that the thinking activities of the participants in the communication, their imagination about the scientist are inextricably linked. This inconsistency is manifested in any text in which the axiological evaluation is embodied – whether in a transparent, hidden way. A transparent and latent assessment of the subject-events is sometimes carried out in a public domain with the image of nature: *Атрофдаги табиатнинг гўзаллиги, баҳор ва тоғлар айвонга ишланган нақшларни, гумбаздаги қошинлар рангини алланечук жуда очиб кўрсатар эди (П. Қодиров “Юлдузли тунлар”)*. The author emphasizes the state of the heroes of the work in a certain situation (uplifting or depressing) even when the reader intends to reflect more brightly before the eyes. Negaki, nature tablets, most of them, harmoniously come to the mood and state of the heroes[14]. The above text describes the evaluation given to the image of nature *гўзаллиги, алланечук жуда очиб кўрсатар эди* through the units of expression, it is not difficult for us to find out that the heroes of the work are in an elevated mood. In the text below, we can also see that the mental and physical state of a person is brought in harmony with the image of nature: *Агранинг кеч кузи худди Андижоннинг баҳор пайтларидек салқин ва майин туюлар эди. Қоп-қора осмонда юлдузлар чарақлаб турибди.Бобур кўзини юмди:*

-Баданимда қон уюшиб қолаётгандай...-деди Тоҳирга (П. Қодиров “Юлдузли тунлар”). In the above texts, we can see that the author makes fruitful use of organized slang phrases in assessing the person and his activities. The participation of organized sections in sentences, which are part of the text and its components, helps in conveying the author's goal to the reader in an effective way. After all, “organized pieces are used in artistic works as a stylistic tool that ensures its expressiveness. They are used in the artistic image to represent the details of the landscape, the growth rate of the movement”[15].

## DISCUSSION

A person, a subject, a phenomenon in the text can sometimes be judged even on the basis of logical dependence. This process is carried out with two different assessments at the same time in relation to the object or person: *Абдулла Қодирийдек бахтсиз, шўрпешана ёзувчи йўқ. Мустабид тузум жаллодлари уни ҳибсга олдилар. Минг бир азобга дучор қилдилар... Охири ўлдириб тинчидилар.*

*Абдулла Қодирийдек бахтли, пешанаси ярақлаган ёзувчи йўқ! Одамлар қамоққа тушиб, минг бир азобга йўлиқиб, сургун бўлиб хавфидан қўрқмай, унинг китобларини ўқийвердилар. Ўқийвердилар. Ўқийвердилар! (Ў. Ҳошимов “Дафтар ҳошиясидаги битиклар”)* The author of the text uses two different phraseological units, contrasting meaning, when assessing the writer Abdulla Qadiriyy. Initially, the application of lexeme and phraseological units with negative (unhappy, shurpeshana), and then with positive (happy, forehead wound) content served to increase the value of the assessment given to Abdulla Qadiriyy, through which specific lines of antithesis were formed in the text. It should be noted that the progress of the assessment from negative to positive reveals the specific, repetitive aspects of the assessed object. S.Boymirzaeva believes that the application of the axiological unit of evaluation in positive or negative content is mainly related to the qualities of the evaluation object, and the reaction of the subject to these qualities of the evaluation object occurs on the basis of presupposition knowledge[16]. But the author, in most cases, can purposefully express the units of positive meaning in the composition of the text even in a negative context: *Ҳатто “энг замонавий”, “энг ақлли” қурол ҳам оқил билан болалар боғчасининг, аэродром билан туғруқхонанинг фарқида бормайди! (Ў. Ҳошимов “Дафтар ҳошиясидаги битиклар”)*

Axiological evaluation structures are also manifested in speech activity, more precisely, speech act. In this regard, it is worth mentioning that the Speech Act is a “linguistic attitude of the speaker to the listener in a certain environment, for a specific purpose”[17]. In the colloquial Act, the addressant relies on previously known knowledge in assessing the object, and on this basis he chooses the necessary linguistic units and uses them. These units also have the ability to express clearly or secretly the purpose of the persons entering into communication. The units used in connection with the psyche of the speakers in the process of speech communication serve to reflect the intent of both parties:

-... *Раҳматли сиз айтган истеъдодсиз, лаёқатсиз тождорлардан эди... Ҳийла бахиллиги бор эди...Маҳмудхон охири Шайбонийхоннинг оёғи тагида қандоқ топталганлиги маълумингиздир.*

- *Наҳотки ўша ҳодисалар Ҳиротда яна такрорланса, амирзодам? (П. Қодиров “Юлдузли тунлар”).*



Russian linguist V.I.Kodukhov notes that speech acts as a mental-physical process interacting with the speaker (addressant), listener (addressee), intended three activities – speech (writing), speech perception, concepts[18]. The scientist also admits his connection with the psyche in describing the theory of speech-based ICT. So, it is natural for the speaker to realize his purpose in the statement depending on the psyche of the listener. This is especially true in cases where the social position of the listener is higher than that of the speaker. In linguistics, such a situation is called an asymmetrical speech process, in which the "subjectivity" or "superiority" of one of the participants in speech is felt in the process of mutual speech communication from the sociological point of view" [19].: *Ҳасса таянган кекса Соҳиб Доро Бобур билан кўришаётиб: Амирзодам,- деди.- Ҳазрат Мирнинг вафотларидан бери Унсия руҳсиз танадек эди. Сиз келганингиздан сўнг бу танада янги жон, янги руҳ пайдо бўлди! (П. Қодиров “Юлдузли тунлар”)*. The fact that the addressant is older than the addressee in a young way, but since his position is small, he appeals to him as an *amirzadam*, expressing his opinion in an exaggeration in order to show himself somewhat better does not have a reflection on speech communication. The peculiarity of the process of speech communication is that it requires knowledge and intelligence from the listener in order to respond to the speaker's opinion without restriction from the content (even higher in meaning).: *Қалби эзгу ва маънос туйғуларга тўлиб турган Бобур шоирона ўхшатишлар қилиб ўтиргиси келмай жўн жавоб берди:*

- *Мавлоно, ҳазрат Алишернинг маконлари менинг ўзимда янги руҳ пайдо қилди. Бу ерда мен санъату маърифатнинг ҳали умримда кўрмаган камолотини кўрмоқдамен! (П. Қодиров “Юлдузли тунлар”)*. The above text structure is a phrase from the units of axiological evaluation of the scan: *эзгу ва маънос туйғулар* if the evaluation given by the combination is expressed in relation to the psyche of the hero of the work, *ҳали умримда кўрмаган камолот* by combination, the speaker's attitude to the space reflects a high assessment of the person (Alisher Navoi) in the tense.

It is known to us that any text manifests in our speech as the product of linguistic thought activity and occupies an important place in the activity of information exchange. Sh.Safarov believes that information activity is a field of thought and intersection of language. Through reflection, a person begins to interact with the environment, through which images and concepts in reality are distinguished. Any lingvocognitive activity is the process of information's activity in the human mind[20], and sometimes in this process, the inner experiences of the individual are expressed in a contradictory manner in the text: *Хотира ёзганда унга ўз ҳаёти аввалгидан илиқроқ ва маънолироқ туюлган эди. Бекор ўтирганда эса яна ўша оғир ўйлар, совуқ пушаймонлар босиб кела бошлади(П. Қодиров “Юлдузли тунлар”)*. In assessing the action of the protagonist of the work in connection with certain activities, the author prefers to refer to the type of transfer of meaning called a metaphor (*ҳаёти илиқроқ, оғир ўйлар, совуқ пушаймонлар*). So, as a kind of metaphor – tropes - a form of active figurative thinking[21], serves to give the reader a clearer and brighter reflection of the characteristics, behavior, spiritual senses of the object, a wonderful charm to the text.

## CONCLUSION

The conclusion is that the subordinate clause is a phenomenon of evaluation - communicative content, it is connected with the nature of the text that arises directly in the process of

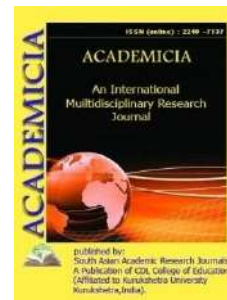


communication. Axiological evaluation as a kind of sub-evaluation is given in relation to the most valuable, most important qualities of the object, reflected by expressing emotionality, comparison, evaluation, attitude. In organized fragmented sentences, an axiological evaluation occurs as a result of the author's and recipient's relationship to reality and his image in the text, as well as the work manifests itself as a semantic and pragmatic layer that expresses the content of the idea of the head.

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## **PEDAGOGICAL TENDENCIES OF THE DEVELOPMENT OF SOCIAL ACTIVITY SKILLS OF PRIMARY SCHOOL PUPILS THROUGH THE USE OF FOLKLORE**

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### **ABSTRACT**

*An analysis of research on social activism of primary school pupils is formed as a result of using Uzbek folklore targeted in pedagogical activities. The samples of folklore intended for study in the primary grades should be appropriate to the age characteristics of pupils and the level of development of consciousness and understanding and should be inextricably linked with the essence of the moral qualities. In this article, I will discuss pedagogical mechanism of developing social activity skills of primary school pupils through the use of Uzbek folklore.*

**KEYWORDS:** *Social Activism, Pedagogical Mechanisms, Primary School Pupils, Uzbek Folklore.*

### **INTRODUCTION**

Today in our country, special attention is paid to the problem of raising a harmoniously developed generation by raising the level of work with young people. Because in our national mentality and on the basis of universal values, the school requires further improvement of spiritual and enlightenment work - the formation of the basic ideas of national ideology, such as the development of the Motherland, peace, well-being, perfection, social cooperation, interethnic harmony, and interreligious tolerance. Therefore, the main task of the spiritual and educational work carried out at the school should be to ensure that every pupil deeply understands and actively participates in the strengthening of a free and prosperous homeland, free and prosperous life - the main idea of the people of Uzbekistan. Therefore, the problem of imparting spiritual and enlightenment knowledge to pupils, the formation of skills to activate the activity through folklore is one of the problems that need to be addressed in this area.

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## MATERIALS AND METHODS

Over the centuries, the basic concepts of Uzbek folklore have been formed: care, education, improvement, self-education, re-education, counseling, teaching, education and teaching. According to Farobi, beautiful qualities in a person are created in two ways - through education and upbringing: "Education combines theoretical qualities, and upbringing combines innate qualities - theoretical knowledge and practical skills, moral qualities, education through words and learning, and education practical work is done by experience, and when both are combined, maturity is manifested. "Thus, in addition to advancing the idea of conducting education in an organic unity, Farobi emphasizes that each of them has its own place and character in the development of man.

In order to fostering social activism of primary school pupils, folklore uses many factors of education (nature, labor, life, habit, art, religion, mother tongue), with a great wealth of methods (persuasion, example, demand, command, explanation, narration, study and exercise, desire and well-being, magic, swear, please, advice, gesture, approval, anger, persuasion, prohibition, threat, etc.) and strong with educational tools (games, numbers, riddles, proverbs, songs, fairy tales and legends, narrations). The use of folklore plays an important role in strengthening the ideological connection of education with the life of the people. These treasures have been very effective in educating the younger generation when approached creatively. Various means of folklore have undergone great changes. These changes also had a negative impact on upbringing. Today, during the period of independence, in the spirit of the ideas of independence, the time has come to restore the ancient traditions of the people, to ensure the use of rich folklore in education. Genres such as epic, fairy tale, lapar, proverb, rhetoric, riddle as the ideological treasure and great achievements of folklore, which have not lost their essence in modern educational work, play a key role in the development of folklore of the independence period. Folklore has a very different approach to the subject of labor.

Praise for influencing children verbally, glorifying labor, diligence, results of work, giving a pleasant description of labor, appealing to the conscience (until revealing the spiritual content of labor), preparation for work, advice on self-education, criticism (laziness, dislike of work) ) and other methods are used. A creative comprehensive (global) approach to pedagogical problems is the key to good results. The perfection of the people's life, the gathering of new customs, traditions, ceremonies turn the whole life of our people into a pedagogical educational process. Just as a child who learns the mother tongue in the family does not need to be taught the correct pronunciation of words, educators do not need to spend time and energy to form spiritual and moral qualities in a person who grew up in an environment where honesty, diligence and patriotism are unconditionally practiced from the first day of life. The educator focuses his or her ability on solving an incomparably complex parenting problem - developing the individual abilities and talents of their pupils. The role of folk customs and traditions in solving this problem is great. There are different forms of tradition - humanism, fraternity, labor, morality, and each of these forms has a great impact on the educational process, forming the basis of "folklore."

The basic principles of folklore are formed and popularized.

-Formation of new pedagogical thinking on the basis of modern ideas about the methodological basis of pedagogical education;

- The formation of a system of subject knowledge that reflects the person, his professional characteristics;
- Creative use of the rich pedagogical heritage in pedagogical experiments, introduction of the pedagogical possibilities;

The oral art of the Uzbek people is formed and developed on the basis of the laws of revival and development of spiritual culture, the historical development of the people, social relations, the peculiarities of national psychology and character.

## RESULTS AND DISCUSSIONS

Social activism is a normal and strong activity. Yusuf Khos Hajib, a classic representative of our ancient Turkic pedagogy, wrote in his book "Kutadgu Bilig" about the involvement of children in social education and activism from an early age: Uquli-idrokli bo'lsa qay odam,

Kishi deb atagin, maqtagin har dam.

Yovuzni ezgu tut, kichikni ulug',

Uquv-idrok, bilim bo'lsa unda jam.

*Meaning:*

What kind of person is intelligent?

Call him a man, praise him all the time.

Honor the wicked, honor the little one,

If there is knowledge, then there is knowledge.

He adheres to the adage, "The mind is not in the age, but in the beginning," and if it has knowledge, it is advisable to honor the little one and raise him to the top. The educated, knowledgeable, who are the golden fund of any society. He calls people to appreciate and to educate and develop from an early age.

Samples of folklore intended for study in the primary grades should be appropriate to the age characteristics of pupils, the level of development of consciousness and understanding, and should be inextricably linked with the essence of the moral qualities. It is important to note that the child feels the concepts and expressions and change their behavior by following the content. Proverbs, fairy tales and legends, wise sayings, passages from epics and songs can be included in the types of folklore that can have a strong educational impact on pupils in the primary grades. Riddles are considered to be more of a means of mental education and learning. In search of the answer to the riddle, the child develops such qualities as broadening his worldview, willpower, self-confidence, responsiveness and make socially active. Examples of Uzbek folklore include high human ideals in the masterpieces of folk wisdom, which cover various aspects of life, calling people to be become socially active, morality, patience, honesty and generosity, honesty and truthfulness. Proverbs contribute to the spiritual development of pupils. Pupils should be taught more ethical proverbs and their content should be explained. In Uzbek folk proverbs, materials on social activism and methods of social activity education occupy a central place. For instance: "Do not be a child of your father, be a child of man!", "Labor brings happiness", "Motherland is your golden cradle". The positive spiritual qualities of young people - fiery

patriotism, kindness, national pride, deep humanity, love of work, cooperation, friendship, solidarity, unity, etc. includes methods and means of adapting to qualities. These proverbs reinforce the general upbringing of the youth as they cover all aspects of human nature.

A Grade 3 textbook contains an excerpt from the epic Alpomish. The passages provide pupils with information on mental education, moral education, patriotism, humanity, hard work, physical education and social activism. If the content of the story were thoroughly studied, all the qualities of a perfect person would be explained to the pupils. Therefore, it's important to expand the teaching of epics to primary school pupils. In epics, the youth of the heroes is described in detail. How he became a mature person is consistently described. The epics provide an in-depth analysis of children's lives. Pupils find role models and try to apply them in their lives, not just knowing them. In folk epics, positive and negative relationships between people are reflected in bright colors. At the same time, there is a strong focus on nature, the environment and ecology. Human relationships to animals, plants and trees, water and air are at their highest. In the epics "Alpomish" and "Gorugli" the attitude of the heroes to the horse is exemplary. Young people feel an example of true friendship and mutual support. We have said that folklore has a strong influence on the development of young people in all respects. All types of oral materials can help pupils grow physically, be healthy, strong, agile, and strong. The physical development of boys and girls is expressed in subtle terms. Elementary education is also given special attention in the primary grades. First of all, we try to cultivate good manners, high taste and intelligence. Proverbs, sayings, and wise sayings evoke beautiful emotions. The following articles, included in elementary school textbooks, will help to develop pupils' sense of humor. "Beauty is not in beauty, it is in labor", "Speak a little", "If you serve, you will be respected" and others. The use of folklore in primary school schools will guide them to be socially active and helpful at all times and help make great educational effects in the future.

## CONCLUSION

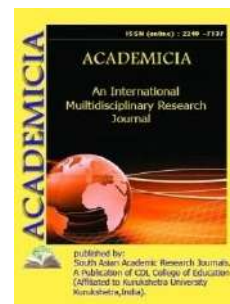
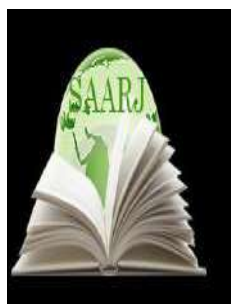
To conclude briefly, folklore plays an important role in the mental, moral, physical, and spiritual development of primary school pupils. Folklore uses many factors in education (nature, labor, life, habit, art, religion, mother tongue), with a great wealth of methods (persuasion, example, demand, command, explanation, narration, study and exercise, desire and well-being, magic, swear, please, advice, gesture, approval, anger, persuasion, prohibition, threat, etc.) and strong with educational tools (games, numbers, riddles, proverbs, songs, fairy tales and legends, narrations).

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## DEVELOPING THE SPEECH OF PRIMARY SCHOOL PUPILS THROUGH THE FOLKLORE

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### ABSTRACT

*It is known that the main part of the important tasks of education of primary school pupils is carried out in reading lessons. The textbook "Reading book" for primary school is also based on the concept that the program "Reading and speech development" meets the requirements of the State Education Standard in our country. The reading textbooks also contain a wide range of folklore works that pupils love to read. In this article, we will discuss the crucial role of the use of folklore in developing the speech of primary school pupils.*

**KEYWORDS:** *Speech Development, Primary School Pupils, Folklore, Fairy Tales, Proverbs, Epics, Stories, Reading Textbooks*

### INTRODUCTION

Let us begin to define the phenomenon "folklore", an English word, derived from the words "Folk" - peoples, "Lore" - wisdom, meaning "folk wisdom". Uzbek folklore is an oral art of various genres, reflecting the worldview, artistic pleasure, creative potential, dreams and aspirations of the Uzbek people. Folklore includes fairy tales, epics, legends, songs, parables, proverbs, riddles, anecdotes and stories. Materials of folklore reflect social events, struggles, defense of the homeland from the enemy, dreams, customs, rituals, ceremonies and other life events of the people.

Primary school curricula place a complex challenge on reading lessons, such as helping pupils acquire good reading skills. The materials of folklore play an important role in the full

implementation of such tasks. Pupils are naturally fond of proverbs, riddles and fairy tales; they read them with great interest. In addition, folklore has long been a source of education.

## MATERIALS AND METHODS

First of all, primary school pupils get acquainted with fairy tales. It is known that fairy tales are one of the oldest popular and widespread genres of folklore. The term "fairy tale" occurs in the 11th century in Mahmud Kashgari's "Devonu lug'atit turk" in the form of "mature" and tells a story orally [1]. Although the word "fairy tale" is now accepted as a folkloric term, it is called a parable in Surkhandarya, Samarkand and Fergana regions of our country. Fairy tales are an epic type of folklore. Its peculiarity is that it tells a story in the form of a perfect story. Fairy tales reflect the realities of life in a wonderful, strange and attractive way. Therefore, they are a product of the oral tradition, told and spread by many people. At different times, fairy tales have undergone different changes. The ideological direction, composition and the tasks of the protagonists of fairy tales changed, and new versions appeared. In addition, each fairy tale was reborn depending on the creative ability, worldview, ability to reflect the realities of life, the level of knowledge of fairy tale traditions, upbringing, psychological state, so that a fairy tale itself lives among the people in several variants.

The artistic form and poetics of fairy tales are unique. Fantastic fiction is associated with the realities of life and reflects the ancient notions, customs and rituals themselves. One of the characteristic features of the performance of a fairy tale is that the events and happenings are realized by the narrator and the listener not as an "event" but as "unavoidable events". Thus, in fairy tales the place and time of events and happenings are vaguely expressed in general terms. And the role of fairy tales in terms of time and space varies. Their language and style are different. In order to determine to which type this or that fairy tale belongs, it is necessary to carefully determine its content and main function. For example, the formation of romantic-adventure or comic tales as an independent genre with fairy tales and fairy tales about animals also occurs at different times. The plot structure, character, images of such fairy tales as "Kenja Botir", "Ur toqmoq" (hitting stick), "Chol bilan kampir" (old man and a old woman) "Bori bilan tulki" (A wolf and a fox) were created in different periods and containing different social strata. There are similarities and differences in the system, variety and method of narration. In the course of its development, a fairy tale may lose some motif images, adopt new characters, and sometimes the traditional elements are reinterpreted. So, the structure of each fairy tale, its ideological content, artistic means show its own character. The famous Uzbek fairy tales "Zumrad and Kimmat" or "Golden Watermelon" are mostly magical tales.

However, the appearance of the main characters, their actions are reminiscent of the main characters of comic tales. In comic tales, intelligence, not for entrepreneurship, but on the contrary, fantastic fiction, plays a decisive role in the solution of the work. Fairy tales are distinguished by their unique composition. In particular, the introductory part, the initial completion is noteworthy. The introductory part first of all demonstrates the skill of the storyteller, and prepares the audience to listen to the story. The beginning describes the first part of the story. In fairy tales, the traditional beginning does not indicate the time of the event, but rather vaguely, in a general way. For instance, "Once upon a time, a shepherd lived near the forest...". Apparently, the introductory statement reveals the identity of the characters, their profession, occupation, nicknames. This means that oral stories, which are connected with the

realities of life and are based on fiction and life fiction, carrying didactic ideas, are called fairy tales. [2]

Fairy tales are conditionally divided into fairy tales about animals, fairy tales, life tales according to the interpretation of images, ideological content and conflict, plot and composition, the role and function of fiction, and language and style. In the repertoire of Uzbek folk storytellers, fairy tales about animals occupy a significant place. Tales about animals originated in ancient times and express the concepts of human life, labor, worldview, nature in the primitive system. Magical fairy tales also play an important role in the repertoire of Uzbek folk tales. This type of fairy tale is distinguished by the fact that it is based on magical, fantastic fiction. The origin of magical tales has an ancient history, the roots of which go back to primitive society. The actions of fairy tales - magic, sorcery, miracles - are associated with fantastic images. On the basis of such fairy tales as "Semurg", "Kenja batir" the deification of the primitive worldview-forces of nature, the sanctity of animals and their worship play a key role. The dream of flying in the sky gave rise to "Flying Carpet", "Wooden Horses", and the desire to see far gave rise to "Mirror World". [3]

There are a number of fairy tales that stand out among the fairy tales. These are heroic tales, tales of stepfathers and humiliated people, and tales of dwarf wrestlers. Fairy tales do not give a clear description of the protagonist. Only traditional characters are displayed. "The girl is full like a fourteen-day moon", she is extremely beautiful, imaginative, timid, hard-working, intelligent, enterprising, intelligent girl with high traditions. Every day she chops wood, cooks soup, washes pots, and cleans the house. These qualities become even clearer during the adventure. On the other hand, the stepmother, brother, cousin, and the naughty old woman are the symbols of oppression and violence. The magic contained in the fairy tale exposes the vices of injustice, endorses justice, diligence, and spiritual beauty. In the image of heroes, such qualities as high manners and manners, humanity, diligence, wisdom, courage and sensitivity shine, while in the image of tyrants and free people do not turn away from any dirty deeds in the way of property. It seems that fairy tales differ from other genres of folklore with their peculiarities. Traveling to the world of fairy tales as a child, one first hears fairy tales about animals and gets acquainted with the world of intelligent and stupid, generous and jealous, cruel and just people of all kinds.

Fairy tales depict the life of the people, their hopes for justice, truth, anger against evil forces and love for the good. After reading folk tales, pupils tell them to their friends, brothers and sisters, and most importantly, to imitate the positive heroes they love, to tell them honestly, truthfully, diligently and try to be similar to heroes. The pupils hate negative heroes and try to be different.

## RESULTS AND DISCUSSIONS

The use of folk tales has a positive effect on both increasing the interest of pupils in knowledge and educating them to become perfect people. And the proverbs are one of the genres of folklore studied in primary school. Proverbs are the most common genre of folklore. The proverbs are created as an artistic expression of the people's life, intellect, life experience, struggle, labor, the proverbs are written in a light, fluent and lively language, in which the deep meanings confirmed in the people's life experience are concisely represented. That is why the proverb is memorable. Proverbs increase pupils' oral speech, increase vocabulary. Proverbs are one of the tools that help the teacher to convey to the children the verdict of the people on this or that issue. Introducing

pupils to the meaning, structure and form of folk proverbs increases the effectiveness of education.

Reading lessons provide the ability to read the text of the proverb correctly and consciously. In these lessons, pupils become accustomed to consistently grasping the meaning of each word in a proverb and the full, perfect meaning of the proverb. Methods of oral narration, conversation, oral and written exercises are effectively used in the study of proverbs. Reading essays focus on a particular topic or topic, as well as the content of poems and stories. Analyzing the content and structure of proverbs, it is stated in the method of conversation that proverbs are broad in structure, short in structure, and generally wise. In this way, pupils are not only equipped with scientific knowledge, but also have spiritual qualities based on this knowledge about proverb which is mastered by pupils. This is a great contribution to the further development of intellectual development and abilities of pupils.

The role of folklore is enormous at a time when the genre of epics, which has existed for centuries as a rare monument of genius of the people, has not had the means to fulfill its role of enlightening the spiritual world of our people since its formation. If we look at the Uzbek epics in detail, we can see that in this regard, the epics are mainly divided into internal networks. The first is heroic and the second is romantic epics. Epics, the largest and most complex genre of folklore, are also included in the curriculum of primary school reading and speech.

In particular, in the "Reading Book" of the 3rd grade, "Rustamkhan" Without knowing the main idea of the epic, the problem in the passage can be a personal, vague idea in the readers. [4] At present, the main focus of the teaching process is on new educational technologies. In the new pedagogical technology, the pupil becomes a subject of the educational process, familiar with the teacher, with equal rights. The subject is studied jointly by the teacher and the student. The importance of teaching and learning for the child's personality increases. Based on this principle, before studying the passages, the teacher should remind pupils of the genres of fairy tales and stories that are already familiar. This short introductory interview will be as follows:

1. What genres do you know that tell the story of kings, princes, princesses? Children will definitely answer this question in the genre of fairy tales, because in the "Reading Book" of the 3rd grade there are a number of fairy tales in this period, which include the image of the king. Once the question is answered, move on to the second question. [4]

2. How would the end of the fairy tale end? The children, in turn, respond by giving brief and clear information about the epics. Epics are like fairy tales in terms of their images and methods of depiction. Epics, like fairy tales, often depict the lives of kings, ministers, princesses and princes. However, in epics, the story is told not only in prose, but also in poetic passages. In addition, fairy tales can be told not only by a storyteller, but also by someone who can tell the story. After describing this information, it is necessary to proceed to the reading of the text of the epic. In this process, the pupil gets acquainted with the content of the passage, as well as the poetic passage. After this process, the children ask about the bakhshi who performed these epics. For this reason, we have already mentioned that the teacher should be familiar with the full text of the epic. In the process of giving information about epics, the teacher should also say that the performer must know the music, be able to play one of the musical instruments. This is the reason why we have mentioned above that this genre is very complex. When talking about epics, we come across a number of terms, such as epic, bakhshi, drum, dutar, doira, bolamon, music. In

turn, the teacher must know the interpretation of these terms. Well, isn't it enough to know the terms bakhshi, drum, music; Why do so many other terms appear before our eyes? The whole point is; the tradition of singing in Khorezm is radically different from other parts of the country. It is difficult to describe the passages taken from them without explaining the organic connection of the epic with prose, poetry, and music. The process of explaining these passages is also very complicated, because they have a lot of lexical units related to the Bakhshi language. For example, in Rustamkhan's epic there are a number of words, such as "dragon", "stubborn", "violent", which the modern reader cannot digest in terms of meaning. In the same passage there are two forms of the same word, such as "dragon". This situation should be explained to pupils as elements of dialect. Also, the word "stubborn" means "brave", "brave"; It should be noted that the word "violent" does not mean "violent", but "strong", "powerful". [5]. Otherwise, the modern student may understand these words in completely different meanings. At the same time, in the lessons of reading passages from epics, it is important for the teacher to inculcate in pupils the qualities of perfection by instilling them as heroes.

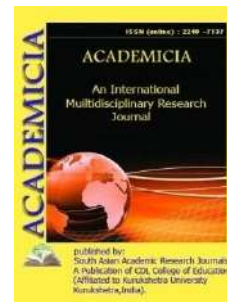
## CONCLUSION

The role of folklore in educating our youth as spiritually mature and perfect people is invaluable. Only if the teacher is well aware of the peculiarities of the materials of folklore, and increases his theoretical and scientific knowledge, he/she will be able to connect the examples of folklore with education. The goals and objectives of primary education determine the content and structure of the material to be studied. Ideological-aesthetic, seasonal, progressive bases are taken into account in the development of the curriculum. Learning materials include knowledge about beings and human relationships that are important in educating children. The essence of the curriculum is to create a culture of reading by acquainting pupils with works of art and literature.

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## THE CONTINUITY OF THE STUDY ON THE TOPIC "COMPLEX NUMBERS" IN SECONDARY SCHOOLS AND IN PEDAGOGICAL UNIVERSITIES OF THE REPUBLIC OF UZBEKISTAN

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### ABSTRACT

*This article discusses the issue of continuity of the study of the topic "Complex numbers" in schools and pedagogical universities in connection with the reforms carried out in the field of education in the Republic of Uzbekistan, and changes in the content of secondary education, in particular mathematical education. It is necessary to develop methods for studying newly introduced sections of mathematics, especially some recurring topics, and to improve methods of teaching academic disciplines based on new educational technologies, taking into account modern requirements and international experience. In the course of the research, various research methods were applied, namely, the study and analysis of scientific and pedagogical, methodological, mathematical literature and school textbooks in mathematics; analysis of the continuity of the section "Complex numbers"; pedagogical experiment to test the residual knowledge of students on the topic "Complex numbers"; discussion of research materials.*

**KEYWORDS:** *Continuity, Complex Numbers, Algebra And Number Theory, Mathematical Analysis, Theory Of Analytical Functions, Level Of Learning, Degree Of Abstraction, Educational Element*

### INTRODUCTION

The development of the information society puts its demands on the education system. These requirements apply both to educational content and to learning outcomes. The development of information technologies, pedagogical ideas, the results of international studies on education (TIIMS, PISA, etc.), the importance of the development of STEAM technologies determine the

change in the content of school mathematical education. In this regard, new sections have been introduced in the school mathematics program of the Republic of Uzbekistan, such as combinatorics, elements of mathematical logic, complex numbers, elements of probability theories, elements of mathematical statistics, and financial mathematics. As a result, some topics or their contents, in particular the topic “Complex numbers,” are repeated. The question arises: “Do I need to re-study at the university?” University teachers answer “yes,” because the knowledge and skills of yesterday’s students in complex numbers do not meet the requirements of the university program. Naturally, questions arise of developing a methodology for studying the topic “Complex Numbers” at school and university. Therefore, ensuring the continuity of teaching mathematics in the school-university system is again becoming relevant.

Scientific sources that examined the issues of continuity of teaching mathematics in the “school-university”, “lyceum-university” systems [2, 3, 4] mainly examined the study of the foundations of mathematical analysis. In [9], to ensure the continuity of the study of basic concepts Analysis is offered through the intuitive introduction of the basic concepts of algebra and the principles of analysis in schools and pedagogical universities. And since complex numbers have recently been introduced into the practice of a comprehensive school, the continuity of studying this topic in the school-university system has not been considered.

To achieve the goal of our study, the works of R.M. Turgunbaev and I. Allambergenov [2, 3, 12, 13] were considered. In these studies, in order to ensure the continuity of the study of the basic concepts of mathematical analysis, repeating topics in the mathematics programs of academic lyceums and mathematical analysis of universities are analyzed, the topics are described in the educational literature and they compiled tables of learning elements that characterize the level of learning elements ( $\alpha$ ) and the levels of abstraction that characterize the language of presentation of educational information ( $\beta$ ) proposed by VP Bepalko [5]. Thus, they proposed their own option of ensuring the continuity of the study of recurring topics at the academic lyceum and university.

In this article, we consider the issue of continuity of teaching and the content of the topic “Complex Numbers”, which is studied in the 10th grade of secondary schools in higher educational institutions, in particular pedagogical universities of the Republic.

## MATERIALS AND METHODS

It should be noted that in the new school programs in mathematics, the quality of learning elements of instruction is not indicated. For example, in the section “Complex numbers” of a program in mathematics it is indicated that “... can calculate the values of simple expressions with complex numbers” [6]. But there is no information about the complexity of these expressions.

According to the approved new program in the course of mathematics, it is planned to teach the topic “Complex numbers”. The same topics are studied in higher education, in particular in the course “Algebra and Number Theory” undergraduate course “5110100-methodology of teaching mathematics.” And also complex numbers are used in mathematical analysis (analytical functions). If we analyze the textbooks recommended for pedagogical universities [1, 7, 10, 11], we see that the concepts of complex numbers, arithmetic of complex numbers, and geometric interpretation are repeated. The question naturally arises, should a re-study of these materials be

followed, if so, why and how. To answer this question, it is necessary to answer questions about what is the knowledge of first-year students on the topic "Complex numbers". In order to answer these questions, it is necessary to analyze the theoretical material and questions related to complex numbers. Also, to carry out the test work with first-year students who have entered the mathematical field, to analyze the results. It is also important to clarify the degree of students mastering material related to complex numbers by clarifying the teaching contexts of the disciplines "Mathematical Analysis", "Algebra and Number Theory".

First, consider the presentation of the topic "Complex numbers" in the schoolbook [8].

The 4th chapter of the school textbook is called "Complex Numbers" and 6 lessons are given for learning at the end of the fourth quarter of the 10th grade.

1-2 lessons are devoted to the topics "Complex numbers and actions on them" and "Images of a complex number." In these topics, the concept of a complex number is introduced, and related concepts: imaginary unit, real part, imaginary part of complex numbers, equality of complex numbers, arithmetic operations on complex numbers, opposite complex numbers, conjugate complex numbers, mutually inverse complex numbers; designations are introduced for complex numbers, the set of complex numbers, the imaginary unit, the real and imaginary parts, the conjugate complex number, the concept of the image of complex numbers in the coordinate plane, the complex number is the point of the plane, the complex number is the radius vector, the concepts of the imaginary and real axis, geometric interpretation addition of complex numbers - the parallelogram rule.

These topics cover the following types of exercises and tasks: what are the real and imaginary parts of complex numbers; write complex numbers in algebraic form when the real and imaginary parts are given; indicate equal complex numbers; find the conjugate number in the given complex number; find the sum, difference, product and (go) quotient of complex numbers; plot complex numbers in a plane.

The 3-lesson provides information on complex numbers in trigonometric and exponential forms, in particular, the module of a complex number, the argument of a complex number, the area of the value of the module and argument; the recording form of the trigonometric and exponential forms of the complex number, it should be noted that the Euler formula is not introduced.

The following types of exercises and tasks are offered: find the module of a complex number; find the argument of a complex number; write down the complex number in trigonometric and exponential forms.

The next two lessons are devoted to the subject of the product and the quotient of complex numbers given in trigonometric form. In this topic, without proof, the formulas for the product and division of complex numbers given in the trigonometric form, raising to the natural degree of the complex number, and the Moire formula are given. Exercises and tasks on multiplication, division, raising to the power of complex numbers given in trigonometric form are considered; to perform an action where the use of trigonometric forms of complex numbers is required.

The next lesson is about extracting the square root of a complex number. We prove the formula for extracting the root of a complex number given in trigonometric form. A formula for extracting roots in degrees 3 and 4 is given without proof. The exercises and tasks of extracting the square root of a complex number are given.

Chapter 4 contains 8 types of exercises, a total of 55 exercises. All of them can be used to organize the mathematical activities of students.

4-module of the curriculum of the discipline "Algebra and Number Theory" direction 5110100-methodology of teaching mathematics [15] is called "Algebraic systems". His 11th and 12th topics are devoted to the study of the field of complex numbers, the modulus and argument of complex numbers, and their properties; the geometric meaning of a complex number, the trigonometric form of complex numbers, the Moiré formula, extracting the root of the nth degree from unity and an arbitrary complex number, axiomatic theory of complex numbers. To study these topics, 8 hours of lecture, 8 hours of practical training and 12 hours of independent work are allotted.

The 16-module of the curriculum of the discipline "Mathematical Analysis" of the direction 5110100-methodology of teaching mathematics [14] is called "Theory of analytic functions." In its topic "Complex plane", it is planned to study the concepts of the set of complex numbers and the isomorphism of this set with the Euclidean plane, as well as the concepts of a flat line and areas in the complex plane.

An analysis of the textbooks used to study complex numbers at school and university shows that complex numbers are taught in school mathematics from the point of view of expanding the concept of numbers, the presentation of topics and task material are aimed at forming the procedural knowledge of students. And in the course "Algebra and Number Theory" complex numbers are studied as a numerical system - the mathematical basis of the future theory of polynomials and the theory of analytic functions. The set of complex numbers is a field, further studied polynomials over the field of complex numbers. The course of mathematical analysis considers complex numbers as numerical systems, their geometric interpretation, introduces the concept of a complex plane, continuous curves and domains in a complex domain, studies its topological properties, analytical functions and their properties. Note that in this course we prove the basic theorem of algebra, Euler's formula, and also give a final solution to the question of the degree of a complex number - an arbitrary degree of an arbitrary non-zero complex (in particular real) number is determined.

## RESULTS AND DISCUSSIONS

Obviously, the study of complex numbers as an object of an algebraic system should be based on students' knowledge of complex numbers studied in the school course of mathematics. And the knowledge gained in the course "Algebra and Number Theory" will be used and supplemented in the analytical functions section of the course of mathematical analysis.

An experimental study was conducted to assess the residual knowledge of freshmen students on the topic of complex numbers, studied at school, in vocational colleges or schools. It was held in October 2019 at the Ferghana State University. The experiment was attended by first-year students. Students were offered tasks similar to those at the school level of mathematics. Below is one of the options for writing.

№1. Show equal complex numbers: 1)  $2 - 4i$ ; 2)  $2 + 3i$ ; 3)  $\frac{2}{3} + i$  4)  $\sqrt{121} - 7i$ ; 5)  $33 + 44i$ ; 6)  $\sqrt[3]{8} + \sqrt[3]{27}i$ ;

№2. Find the conjugate complex number  $z$  to a given number:  $z = 5 - 3i$ ;

№3. Find the amount:  $(-5 + 3i) + (2 - i)$ ;

№4. Find the difference:  $(3 + 4i) - (4 + 2i)$ ;

№5. Find a product:  $(4 + 6i) \cdot (3 + 4i)$ ;

№6. Find private:  $\frac{2+2i}{1-2i}$ ;

№7. Follow the steps:  $\frac{(3-4i)(4-3i)}{2+i}$ ;

№8. Draw a complex number on a plane.  $z = 3 + 4i$ ;

№9. Find the modulus of a complex number:  $z = 1 + \sqrt{3}i$ ;

№10. Find the argument of a complex number:  $z = \frac{\sqrt{3}}{2} + \frac{1}{2}i$ ;

№11. Write a complex number in trigonometric and exponential forms:  $z = \sqrt{2} - \sqrt{2}i$ ;

№12. Find a work:  $z_1 = -\frac{\sqrt{3}}{2} \left( \cos \frac{\pi}{4} + i \sin \frac{\pi}{4} \right)$  и  $z_2 = \frac{1}{2} \left( \cos \frac{\pi}{6} + i \sin \frac{\pi}{6} \right)$ ;

№13. Найти частное:  $z_1 = \sqrt{2} \left( \cos \frac{\pi}{8} + i \sin \frac{\pi}{8} \right)$  и  $z_2 = 2 \left( \cos \frac{\pi}{12} + i \sin \frac{\pi}{12} \right)$ ;

№14. Exponentiate:  $\left( 3 \cdot \left( \cos \frac{\pi}{15} + i \sin \frac{\pi}{15} \right) \right)^5$ ;

№15. Extract square root from complex number:  $25 \left( \cos \frac{\pi}{3} + i \sin \frac{\pi}{3} \right)$ ;

№16. Write in algebraic form:  $z = \left( \frac{1-\sqrt{3}i}{3i} \right)^2$ ;

№17. Find private:  $5(\cos 100^\circ + i \sin 100^\circ) : \left( \frac{\sqrt{3}}{2} + \frac{1}{2}i \right)$ ;

№18. Exponentiate:  $\left( \frac{1}{\sqrt{3}} + \frac{1}{\sqrt{3}}i \right)^{10}$ ;

№19. Extract square root from complex number:  $\sqrt{-27i}$ ;

№20. Extract cubic root from complex number:  $\sqrt[3]{1+i}$ ;

№21. Extract the fourth root of the complex number:  $\sqrt[4]{16}$ .

The results of the written work are shown in table 1. Here, the first line contains the numbers of the tasks, in the next lines the students graduated from the academic lyceum (AL), school (S), and professional college (PC). And also in separate lines shows the results of students who completed their studies in 2019. The number of students is indicated in parentheses

№ задач	1	2	3	4	5	6	7	8	9	10
AL (20) %	70	50	75	80	85	60	50	45	50	5,0
S (26) %	73,1	53,9	92,3	92,3	84,6	65,4	57,7	46,2	61,5	7,7
PC (43) %	72,1	46,5	93	95,4	81,4	62,8	48,8	48,8	37,2	7
2019(S 26) %	73,1	53,9	92,3	92,3	84,6	65,4	57,7	46,2	61,5	7,7
2019	66,7	55,6	92,6	92,6	77,8	59,3	51,9	48,2	33,3	3,7

(PC 27)%										
2019(AL 19) %	68,4	52,6	73,7	79	84,2	63,2	52,6	47,4	52,6	5,3
2019 (72) %	69,4	54,2	87,5	88,9	81,9	62,5	54,2	47,2	48,6	5,6
Total (89) %	71,9	89	91	91	83	62,9	51,7	47,2	47,2	6,7

Continuation

№	11	12	13	14	15	16	17	18	19	20	21
AL (20) %	25	25	40	40	5,0	15,0	10,0	5,0	5,0	0,0	0,0
S (26) %	26,9	38,5	34,6	42,3	15,4	34,6	3,9	34,6	7,7	3,9	0,0
PC (43) %	9,3	27,9	25,6	27,9	9,3	23,3	0,0	7	4,7	7	0,0
2019(S 26) %	26,9	38,5	34,6	42,3	15,4	34,6	3,9	34,6	7,7	3,9	0,0
2019 (PC 27) %	7,4	25,9	22,2	25,9	7,4	29,6	0,0	7,4	7,4	3,7	0,0
2019 (AL19) %	26,3	26,3	42,1	42,1	5,4	10,5	10,5	5,3	5,3	0,0	0
2019 (72) %	19,4	30,6	31,9	36,1	9,7	26,4	4,2	16,7	6,9	2,8	0
Total (89) B %	18	30,3	31,5	35	10,1	25	3	14,6	5,6	4,5	0

From the results obtained, it was found that most students correctly solved the 3rd, 4th, 5th examples. And more than 50% of students decided correctly examples 1, 2, 6, 7. But most of the remaining examples were not properly considered by students. These examples are the geometric representation of a complex number, trigonometric form, the execution of actions on complex numbers in trigonometric form.

It should also be noted that the results are practically independent of whether the students graduated from school or an academic lyceum.

To study the disciplines of algebra and number theory, analytic functions, it is important that they know the geometric interpretation of a complex number, the trigonometric, exponential forms of a complex number, the implementation of actions on them and their application.

The analysis of programs, educational literature [1,3,12] shows that the majority of educational elements on a subject are repeated. But, as we indicated above, there is no identical repetition, the context of learning is different. In the theory of algebra and number theory, the properties of the set of complex numbers are studied, and the level of abstraction increases. The number of concepts associated with complex numbers is increasing, complex numbers are considered as a numerical system. The same can be observed during the analysis of topics devoted to complex numbers of the course of mathematical analysis.

Based on the analysis of the results of the experiment and the analysis of textbooks, teaching aids dedicated to the study of complex numbers, we proposed the following levels of learning elements ( $\alpha$ ) and stages of abstraction that characterize the language of presentation of educational information (table 1).



**TABLE 1 LEVELS OF LEARNING ELEMENTS AND THE LEVEL OF ABSTRACTION OF THE PRESENTATION OF THE THEME “COMPLEX NUMBERS”**

№	Educational elements	Secondary school				Bachelor (direction of methodology of teaching mathematics)			
		$\alpha_H$	$\alpha_K$	$\beta_H$	$\beta_K$	$\alpha_H$	$\alpha_K$	$\beta_H$	$\beta_K$
1	Complex number in algebraic form	0	1	0	1	1	3	1	4
2	EqualComplexNumbers	0	2	0	1	2	3	1	4
3	Conjugatecomplexnumbers	0	2	0	1	2	3	1	4
4	Complexnumbersoperations	0	1	0	1	1	3	1	4
5	Oppositecomplexnumbers	0	2	0	1	2	3	1	4
6	Mutuallyinversecomplexnumbers	0	2	0	1	2	3	1	4
7	Image of complex numbers on a plane	0	1	0	1	1	3	1	4
8	Realaxis, imaginaryaxis	0	1	0	1	1	3	1	3
9	Complex number images as a vector	0	1	0	1	1	2	1	3
10	Rule parallelogram of addition of complex numbers	0	1	0	1	1	2	1	3
11	Trigonometriccomplexnumberform	0	1	0	1	1	2	1	3
12	Complex numbers in exponential form	0	1	0	1	1	2	1	2
13	Complexnumbermodule	0	1	0	1	1	2	1	4
14	Complexnumberargument	0	1	0	1	1	2	1	2
15	Transition from trigonometric to algebraic form	0	1	0	1	1	3	1	2
16	Multiplication and division of complex numbers given in trigonometric form	0	1	0	1	1	3	1	3
17	MoorFormula	0	1	0	1	1	3	1	3
18	The square roots of complex numbers	0	1	0	1	1	3	1	3

The results of the study, in particular this table, were discussed at a seminar of the department "Mathematics" and were approved by teachers of the disciplines "Mathematical analysis", "Algebra and number theory".

These results can be used by school teachers to develop knowledge and competence of students on the topic of complex numbers, as well as mathematics teachers in higher educational institutions when choosing a method of teaching topics of complex numbers.

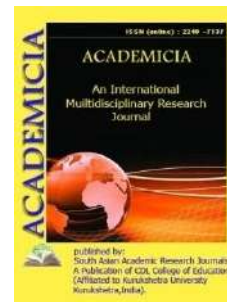
## CONCLUSION

In the study of complex numbers in a pedagogical university, it is also necessary to establish continuity between the courses "Mathematical Analysis" (theory of analytic functions) and "Algebra and Number Theory". It is important to familiarize students (future teachers of mathematics) with the applications of complex numbers for solving problems of trigonometry, planimetry in circle classes or in disciplines of choice, when writing term papers, graduate works. In addition, in the course of geometry, students can recommend a comprehensive

interpretation of Lobachevsky geometry, in the course of mathematical analysis, to study in detail linear-fractional functions in conjunction with mappings on the plane. As a result, students enrich their knowledge and skills on the topic "Complex numbers", students get the opportunity in the future to organize extracurricular activities of school students on this topic.

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## TURA SULAYMON'S MASTERY OF THE ARTISTIC USE OF SYNONYMS

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### ABSTRACT

*This article focuses on one of Tura Sulaymon's main tools for ensuring the diversity of artistic discourse, the ability to use synonyms as an important means of expression in language.*

**KEYWORDS:** *Emotional Coloring, Tone, Stylistics, Neutral, Art, Support, Cousin, Brother's Wife, Salt, Black, Lonely, Beloved, Honor, Conscience, If, But.*

### INTRODUCTION

The most important of the linguistic features of a literary text is that it includes emotionally colored words, dialect words, historical and archaic words, slang and slang words, figurative words, synonyms, forms, words with similar pronunciations and opposite meanings, as well as units such as phrases, proverbs and sayings are wide given.

Synonyms are also one of the factors that indicate the richness and diversity of a language. Synonyms help to express an idea clearly and effectively. For this reason, word artists try to use them skillfully. The artist's artistic skill and vocabulary can be seen in the synonyms he uses appropriately and purposefully.

One of such creators, the poet Tura Sulaymon, also skillfully used synonyms. He used colorful synonyms in the vocabulary of the Uzbek language to discover new aesthetic concepts.

*Sengaqolgankunim, kunmas – qabohat,*

*Koshkisendankutsamimdod, inoyat!*

*Meniqo'llayolur, qilurhimoyat*

*Uzilmastorlarim,*

*Sinmassozlarim! ("Sozim")*

*Mag'ribnotinchbo'lsabezovtamashriq*

*Do'stdo'stdanimdodintutgaymidarig'?*

*Qayerzulmatichra, qayerdiryorug'*

*Magaryeryuzida tinchlikbo'lmasa("Bo'lmasa")*

The word "help" is synonymous with the words "help, support, help" and "means of material or spiritual support." In the word help, the strength of the shade is stronger than the word support, and is likely to be used in an artistic style. The poet perfects art using the words help, support, help, a synonym for help, which means grace instead of caring.

Tura Sulaymon also skillfully used dialectal words and contributed to their approval in the literary language.

*Holimdankuladinecha-nechalar...*

*Biryilchatuyularo'tgankechalar.*

*Harkunixunobdayanga-chechalar...*

*Jumboqniboshidano'tganyecholar!*

*Do'stlaro, shutaqlidrozgayo'liqdim ("Yo'liqdim").*

In this paragraph, the creator refers to the word checha used in the dialect. Checha is known to be used in the sense of a bride of brother.

*Xeshlarimningbemavrid*

*ko'zlaridayoshko'rsam,*

*Birmardbilannopokning*

*Taqdirintutashko'rsam ("Armon").*

The word klesh belongs to the dialect and means relative, kin-clan, tribe-relative, close person. The poet ensured the universality and fluency of his poem through the element of dialect.

*Qo'riqchisibo'lardimbog'imdaunarbo'lsa,*

*Kuzimkelmaybahorimqaytaboshlanarbo'lsa,*

*Solnomachisibo'laymagaruQamarbo'lsa,*

*Qasamichibaytaman: namakbiryon, nonbiryon("Gulbiryon, chaman biryon").*

The poet uses the word salt, a synonym of the word salt used in dialect. Through this he put the poetic weight in its place.

Sound is a dialectal word from the synonymous series sound, sound, flour, echo, sas, outcry, sazo, and is used in fiction, especially in poetry.

*To'plarsasibo'lmasin*

*Deymiz, sayyoramizda,*

*Biz – jahonbolalari ("Biz – jahonbolalari").*

*Tutdimahalla-ko 'yniqo 'shkarnay, surnaysasi,*

*Sayoqsozandalarining ortiqchadahmazasi.*

*Badmastlarorasidaguzaron – tarafbozlik,*

*Isrofustigaisrofto 'yxonaga "jonbozlik" ("Senso'rama, menaytmay").*

Tura Sulaymon always paid great attention to the fact that synonymous words are not absolutely equal to each other, each of them has its own characteristics and subtle differences in their meanings, and was able to use them in their place.

In the "Explanatory dictionary of synonyms of the Uzbek language" as a synonymous line of the word friend is given comrade, ulfat, agayni, oshna, jora, brother, hamdam, dugona, vascular, chopkat[1]. But their level of use and style are different. The words jora, brother, ulfat are less used than the words comrade, oshna, agayni. The lexical meaning of the word ulfat is consent, alliance, solidarity, and it means love, affection, and love. A conversation is a gathering of people who are always together at a banquet, a gathering of such people. In the poet's book of satirical poems, "I threw it away," he says that after giving up drinking, his friends left. The poet does not use the word friend in this context. Because in this word the intimacy in a friendly relationship is even stronger. No one can be a good friend.

*Bora-boraulfatlartashlabqocharhambo 'ldi,*

*Kaminangizbedavodardgaduchorhambo 'ldi.*

*To 'yxatlardantamominomio 'charhambo 'ldi,*

*Qirqqayetmayqomatlol-xiyolnochorhambo 'ldi,*

*Tashlagandantashladimichib, cheqmoqlaringni ("Tashladim")*

In another verse of the same poem he now uses the word friend.

*Rangi ro 'yimga, do 'stlar, yugurdi qon, oqibat.*

*Tashlagandan tashladim ichib, cheqmoqlaringni ("Tashladim")*

In another poem on the same subject, he mentions the difference between a friend and a partner, quoting the word friend as well as the word partner.

*Do 'st, sheriklarimalkashlar*

*Yurgandayo 'lichalkashlar*

*"Kimbilankimtopishadi!"*

*Debkulisharhazilkashlar ("Ichdim, armonimqolmadi").*

It is very important for the poet to take into account that "synonyms are not for the differentiation of semantic shades, but for the nature of the stylistic shades and emotional colors they express"[2], which are always in touch with our emotions and emotional life. Tura Sulaymon did not ignore this aspect either.

The words darling, mahbuba, yor, nigor, dildor are used as synonyms for yor. But the lyrical protagonist uses the word sarvinozim, whose art is stronger than these words.

*Ro 'zg'orimdanto 'zimketdi,*

*Qo 'radanqo 'y-qo 'zimketdi.*

*Bukulfatgachidayolmay*

*Tashlabsarvinozimketdi*("Ichdim, armonimqolmadi").

The word beloved is a gender-specific lexeme. It applies equally to men and women. At this point, the poet uses the word boy in the girl's language with her friend. It is known that this word is peculiar to the oral style, and by this the creator showed the vitality of the theme, the idea of the poem.

*"O'zsevganyigitim, sevganyorimbor,*

*Dunyogabergusiznomus, orimbor* ("Alhazar").

These synonyms, which have an emotional and stylistic character, served to distinguish the subtleties of different meanings and to give color to the poem.

Poetic speech is speech that requires a concrete, artistic-figurative expression of the concept being expressed. In this process, the word plays an important role as a speech medium. Indeed, the fact that poetic speech is based on measurement and melody, solemnity, in many cases, prevents the replacement of a word used in the text with a synonym or equivalent of that word[3]. The poet Tura Sulaymon uses the word in such a way that the thought becomes clear, the essence is fully revealed. Grass is a synonym for the word greens, and is often used in dialects. Suman, on the other hand, is a white-flowered, fragrant plant that is used in an artistic style. The poet contrasts these two plants with each other, and for artistic purposes quotes one as a synonym for speech, one for artistic style.

*Birdanaf, foydadebkechamizjondin,*

*Jondaydo 'st, e 'tiqod, insof, imondin.*

*Farqqilmasdinbirdarostniyolg 'ondin,*

*Alafbo 'labilmas*

*Sumandinortiq* ("Ortiq")

Clearly, black is a color quality that is also used in a figurative sense. The poet uses this quality in the form of "black" to express the unevenness of the way of life.

*Ayroediasliyo 'limiz,*

*Alholqoldiayroligicha.*

*Haqligichaqoldiyo 'lioq*

*Yo 'liqaroqaroligicha.*

In another verse of the same poem, the poet avoids repetition and uses the term ink, which is synonymous with black, to express the grief of the heart.

*Enditamomayrilarbo 'ldik,*

*Ko 'ngilqoldisiyoligicha.*



*Oytutilib, Quyoshqoraymay,*

*Dunyoqoldidunyoigicha.*

In these verses, the words "black" and "ink" are used in a figurative sense, synonymous with the word darkness. In another poem, he quotes the word "darkness" in the black sense:

*Mag'ribnotinchbo'lsabezovtamashriq*

*Do'stdo'stdanimdodintutgaymidarig'?*

*Qayerzulmatichra, qayerdiryorug'*

*Magaryeryuzida tinchlikbo'lmasa ("Bo'lmasa").*

In some cases, the poet uses the same word over and over again. This serves a poetic purpose.

*BuolamdaOytanho, muborakQuyoshtanho.*

*Bo'yqizlarningichindashubiregmaqoshtanho.*

*Uningdek hechkimmengabo'lmasasirdoshtanho*

*Go'ro'g'lisultonbiryon, To'raSulaymonbiryon ("Gulbiryon, chamanbiryon").*

In this verse, the word "alone" is used four times to express fluency and sensitivity. Although there are synonymous variants of the word tanho, such as solitary, solitary, the poet does not use them. The word tanho is more of an artistic style than a conversation. It means the same thing in isolation, without others, and in quantity. In his solitary, solitary words, without others, what is free from others can be more than one. But this more than one person or thing is seen as a whole, a unit[4].

The poet quotes synonymous words over and over again, increasing empathy, artistry, and emphasizing the idea he wants to express.

*Xohirozibo'lgin, xohinorizo,*

*Xohimotamtutib, xohiochaza,*

*Dovrug'laribo'libelgaovoza,*

*Uzilmastorlarim,*

*Sinmastorlarim ("Sozim")*

The meanings of mourning and mourning are closely related verbs, and the poet has used them consistently to reinforce the meaning.

*Menuchunbudunyoningko'rkamligisenbilan,*

*Bearmonubeafg'on, bekamligisenbilan.*

*O'nsakkizmingolamningolamligisenbilan,*

*Bujahondako'rmasinshahloko'zinghechyosh, qiz ("Seningsiz").*

The words *bearmon*, *beafghon*, and *bekam* in these verses are meaningful, expressing the signs of a happy person and coming together to increase expressiveness. The word *Beafghan* is used in the bibliography style to mean no, no cry.

*Bedovottuyog'idantayrilarmi?*

*Mardyigitto'g'riyo'ldanqayrilarmi?*

*Nomusi, oriyatiboryigitlar*

*Yoridebtuqqanidanayrilarmi? ("Oqpadar")*

In these verses, the words honor and dignity are combined, and it is emphasized that this blessing is very important for young men.

Indeed, lexical units cannot be said to be neutral to the language of poetry. Because poetic vocabulary, first, does not arise spontaneously. Language itself allows it to be stratified for poetic speech. In this sense, synonymy is a source of poetic word formation. Tura Sulaymon was able to make effective use of this rich source.

The poet also used the synonymy of auxiliary words in a way consistent with poetic discourse. Unless the conditioner connects, the opposition connector, however, has managed to reinforce the meaning of the condition in the poem by using the if form, which is characteristic of the artistic style:

*Sayyoralarnotinch, ummonlarnotinch*

*Magaryeryuzidatinchlikbo'lmasa.*

*Naslunasabnotinch, zamonlarnotinch*

*Magaryeryuzidatinchlikbo'lmasa ("Bo'lmasa").*

The verse "Unless there is peace on earth" is repeated from beginning to end in this poem, emphasizing the importance of peace.

The poet skillfully used the *pianista* and *alkash* variants of his expression, which was given to alcohol with a negative color:

*Yuzketidankaminaning*

*O'rnipoygak – pastdabo'ldi.*

*Nomimpiyanistabo'ldi.*

*Bo'ldi, armonimqolmadi ("Ichdimarmonimqolmadi").*

*Do'st, sheriklarimalkashlar*

*Yurgandayo'lichalkashlar.*

*"Kimbilankimtopishadi!"*

*Debkulisharhazilkashlar ("Ichdimarmonimqolmadi").*

The lines of meaning that make up the lexical units (lexemes) of a language are always open. That is, the lines of meaning can be filled, first of all, on the basis of the demands of the time, speech, the demands of society. Second, semantic strings expand their range by means of verbal semantics (contextual synonymy) by connecting them with the nominative units of speech, phraseological expressions, types of independent lexeme semantics, artificial words, phrases, verbal portable meanings of words[5].

*Oyningo 'nbeshimasbariqorong'u*

*Ko 'lankasiz, tiniqkunlarimkamdir.*

*Xunbo 'lmishjigarim, qonbo 'lmishbag'rim*

*Og'zimdaqoraqon—oldimdajomdir ("Qismat").*

The word shadow is an expression of an inner state of mind (eg, anxiety, grief, suffering). The poet enriched the word by adding the word no sign -you, adding the word shadowless to the series of synonyms without sorrow, worry, pain. In these verses, the shadowless, clear words formed a series of contextual synonyms. Because shadowless and clear words are not synonymous outside of the speech situation. But these formed a synonymous nest of speech in the sense of painless and well-to-do days.

*Mustajobbo 'lmadiyolvorishlarim*

*Ko 'nglimo 'ksik, xasta, ko 'zlarimdayosh.*

*Neqorakunlardabirontazotham*

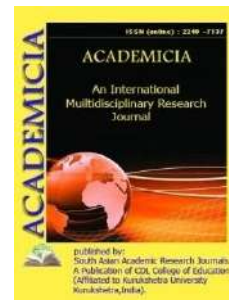
*Bo 'labilmadilarmengaqayg'udosh ("Qismat").*

In these verses, the words ox, sick, form a contextual synonym for the heart.

The poet was able to create a unique art and style, using synonyms appropriately and purposefully, one of the lexical units, which demonstrates the skill of language use, the emotional-expressive expressions of which are realized in a bubble.

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## **A STUDY ON WOMEN, EMPLOYMENT AND FAMILY BALANCE IN SRI LANKA**

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### **ABSTRACT**

*There was a great cordial interrelationship between women role and family in past traditional society. But Women contribution to the economy of the family is a major component in today. Women are not marginalized to the domestic works because of the access of higher education in Sri lanker. Main objective of this study is to understand how women balance family and employment in sociological aspect. As the specific objectives of this study were to understand educational and economic achievement gained by women, to understand all responsibilities of women towards family, to recognition negative results balancing both fields, to understand alternatives and fair management to avoid role conflict of the women of these two fields and understanding satisfaction or non satisfaction by doing a job by women also been considered from this study in a sociological point of view. This study used purposive sampling method and selected only 60 women from several institutions related to dual career families for the sample. Both primary and secondary data were used by this study. This study found majority of women were with low stress when they manage the family. The study identified there was a positive contribution of the employed mother to their children's education. Good relationship of both wife and husband to the domestic works and making social relations was a significant of this study. According to this study it found that majority of women were satisfied with both employment and domestic works not only doing single domestic task. There is a good and proper savings maintained by women. Economical issue was the main cause for family troubles of the dual career family and mostly women taken assists from husband, children and parents to manage their day today works.*

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**KEYWORDS:** *Employment, Family Balance, Women, Dual Career Family*

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## INTRODUCTION

Empirical scrutiny of the dual- career family is a relatively new research area, having its genesis the late 1960s. Rapoport and Rapoport originated the term “dual career family” describing the family in which both marital partners were engaged in work having a developmental sequence and requiring a high degree of commitment (Thomas, Albrecht, White 1984). Dual career family is distinguished from the dual -work family by the wife’s academic preparation, motivation for working and level of career commitment.

Wives in dual- work families usually enter the labor force due to financial necessity; wives in dual-career families are more intrinsically motivated and invest more of their identities in their work. Marital satisfaction may increase when lower class wives go to work, since the family’s standard of living is noticeably improved (Thomas, Albrecht, White 1984). Dual career families are increasing rapidly in the world than the single career family. Mostly open economy, job market, social changes, changing attitudes of the women, competitions, modernization are the few significant causes directly influenced to create this type of family pattern. One of the most dramatic recent changes in the American workforce is the preponderance of dual earner couples. It is estimated 78% of workers are married to employed spouses, and in 75% of these dual earner couples, both spouses are employed - full time (Brennan, Barnett, Gareis, 2001). And also the 1991 Canadian census indicated that 68% of all women with children at home were in the labour force. (Higgins, Duxbury, Lee, 1994)

Until the late 1970s, women remained virtually invisible as employees and their absence were generally considered as non -issue in Sri Lanka. Mostly women became as employees in Asia toward the mid- 1980s. Woman has to play several roles as wife, mother, daughter, sister, community member and employee....etc in the society. One character has to play multiple roles; she has to face different type of problem due to the role conflict. Therefore increasing of competition and financial requirements of people at present, women also employed and they have to balance both work and family.

## Main Objective

To understand how do employed women balance family and employment?

## Specific objectives

To examine how women employees maintains the work and family balance

To understand educational and economic achievement gained by women

To understand all responsibilities of women towards family

To recognition negative results balancing both fields

To understand management to overcome role conflict of the women

Understanding satisfaction or non satisfaction by doing a job by women

## LITERATURE REVIEW

Work Family conflict which is focused by many fields such as psychology, sociology, gender studies, education, management, human resources management and organizational behaviour

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(Bragger et al, 2005) is a main field regarding dual career couples. In all societies with a paid labour force, men have done the bulk of paid labour while women have done most of the unpaid household labour. The one of the book “women role in economic Development 1970” written by Estor Boserup was the main significant point for the start the discourse about the role of the women for the development.

However in modern society women also attempted to provide support for the family income to survive their life. According to the feminist they have described for work as Reproduction and maintenance of the labour force. In contemporary Sri Lankan women are increasingly getting involved in non-domestic roles and combine with domestic responsibilities as the additional task. In traditionally, Sri Lankan married women have combined with traditional role of mother, wife, home maker and daughter (Kiribamune 1992:102). In this view women mostly play roles based on domestic productions. Sri Lankan family is generally not family in which the husband is the “sole” breadwinner and the wife essentially a home maker (national Science Foundation in Sri Lanka 1998:83) The reason was generally in the Sri Lankan family the wife is compelled to be economically inactive. When the employed women are balancing family and employment, especially they have to face number of work and family related problems because of the high work pressure. As married women usually she has to play more than one roles within the family institute. According to this situation work family conflict is separated into three sub categories as job spouse conflict, job parent conflict and job home maker conflict. This study mainly analyse how do employed women balance both family and employment in sociological aspect. Spill over theory is an important theory of work and family relations. Two main types of spill over were found in literature as negative spill over between work and family and positive spill over between work and family (work-family balance). These two types could be classified further as family to work spill over and work to family spill over (Grzywacz et al, 2002).

Related to the work pressure have been found to be the most powerful source of work –to family conflict, and family pressures are more strongly related to family to work conflict, whereas work influences family more than vice versa (frone et al., 1992a). that work to family conflict is more strongly related to job satisfaction and life satisfaction than is family work conflict (kossek and Ozeki, 1998) Theory of marital quality of Robert, A. Lewis and Graham B. spanier had been shown several dimensions as socioeconomic adequacy, satisfaction with wife’s working, optimal household composition, community embedded ness, positive regard for spouse, emotional gratification, effectiveness of communication, role- fit, amount of interaction. Satisfaction with life style and rewards from spousal interaction are joined with early measurement is marital quality (Thomas, Albrecht, white, 1984). Marital quality, work family spill over and work family conflict are some interrelated components dealing with dual career families. According to Bokemeier, marital stress, disruptive competition, role conflict, and instability may occur if both husband and wife are career-oriented. “If a status competition model holds true, then couples with dual workers or one worker with multiple jobs will report different levels of marital quality in terms of tension, communication, and sociability than single-worker, single-job couples (Bokemeier and Maurer, 1987, pp.418).”Status of enhancement approach has positive approach on dual working and states that, "Similarity of roles builds marital solidarity “or “the wife's ability to enhance family status by labor force participation improves marital stability and personal satisfaction (Bokemeier and Maurer, 1987, pp.419). Duncan and Goddard’s (1993)



study on Stressors and Enhancers in the Marital/Family Life of Family professionals and Their Spouses found that professional work has spill over into marriage and family life.

Family life course theory is another important theory provides a valuable framework for analysing work-family spill over among working adults (Grzywacz et al, 2002). "Family life course theory also emphasizes the importance of an individual's location (within the context of the family) in socially structured status hierarchies and corresponding social inequalities (Bengtson & Allen, 1993). For example, women are frequently found to shoulder a disproportionate amount of family and household responsibilities in contrast to men ( Mikula, 1998), and they are more likely to be employed in "bad jobs" (Kalleberg, Reskin, & Hudson, 2000) that may not provide work-family benefits (Christensen, 1998". Mostly married men and woman are engaging with employments, can be understood number of negative inconveniences raised through the dual career families. One of the consequences of the inability to balance work and family demand is the increasing level of work. Family conflict experienced by employed parents. Work family conflict occurred when an individual has to perform multiple roles that require time, energy, and commitment. The cumulative demands of these multiple roles can result in two types of strain: overload and interference (Higgins, Duxbury and Lee, 1994) There are number of research and theories link with this topic and mainly role theory can be used for this research because this theory which reveals that multiple roles lead to role stress, which in turn results in strain ( Kahn et al., 1964) Social exchange theory, conflict theory and functionalist theory can be applicable for further studies.

### **Sample, field setting and Methodology**

This study was used both Primary and secondary data for data collection based on purposive sample taking 60 women in government, semi government and private institutions in Sri Lanka. Formal and informal interviews, questionnaire, and observation are the major research techniques were used for this study and census, reports, research papers, research articles, journals, books and internet were used as the secondary data makes enlighten this study.

### **Data analysing**

According to this sample, women's age, ethnicity, religion, residence and educational background were analysed as the demographic information of this study.

**TABLE 01: DEMOGRAPHIC INFORMATION OF THE SAMPLE**

Age	Quantity
25-30	16.6%
31-35	18.3%
36-40	25%
41-45	15%
46-50	10%
51-55	11.6%
55>	3.3%
Total	100

Source- field Data

According to this study majority of the women belong to the age group 36-40 representing as 25% and second age group 31-35 representing as 18%. Consideration of the civil status 97% was

married women and only 3% was unmarried. All women are belonging to ethnicity as Sinhalese and they belong to Buddhism.

**TABLE 02: RESIDENCE OF THE WOMEN IN SAMPLE**

Residence	Amount
Rural	61.6%
Urban	33.3%
Not mentioned	5%
Total	100

Source- field Data

This study found that majority of women belongs to rural sector representing 61.6%. Consideration of the living arrangements of the women, 55% were who living with husband and her children, 32% women were living with husband, children and their parents, and 5% were with only with husband and 7% lived with her own parents.

**TABLE 03: HIGHEST EDUCATIONAL QUALIFICATIONS OF EMPLOYED WOMEN**

Qualification	Amount	%
O/L	8.3	
<b>A/L</b>	<b>58.3</b>	
Degree	28.3	
Post graduate Degree	5	
Total	100	

Source- field Data

Majority of the women have passed A/L examinations representing 58.3%, 28.3% got the Degrees and 5% women got the Post Graduate degrees. Still 3 women are following post graduate degrees and According to their post graduate degrees five got from their degrees from foreign countries and one from local university.

### **Balance work and Employments by women**

Woman has to play number of roles as a wife, mother, daughter and a female employee. One part is employment and other is a family. Through the above table can be identified women are engaging with different types of employments at today. Majority of the women were belonging to the field management Assistants because of the existing government provided number of jobs as that. According to above total of the employments 98.3% are permanent and 2% is engaging with temporary job.

**TABLE 04: NATURE OF THE EMPLOYMENTS OF THE WOMEN**

Job Title	Amount
Doctor	01
Nurse	03
Aurwedic Assistant	03
Assistant manager	01
Teacher	06
Programme Assistant	02
Development Assistant	03

Planning Assistant	02
Receptionist	01
Clerk	05
Typist	01
Computer Feeding Assistant	02
Data operating assistant	03
Managers	01
Management Assistant	18
Sri Lanka Administration service	01
Office Assistant	03
Child Development Officer	03
Post Master	01
Total	60

Source- field Data

With reference to the employment type of the women they have got their promotions to the real time representing 58.3% and others were could not be gain due to more reasons as institutional problems, political matters, getting over maternity leaves, leave without payment and do not prepared suitable path to the employees by the Government.

According to the nature of the work load of the employment, majority of the women's jobs were general without high burden representing 67% and representing 33. % women's jobs were with more work load. This study found less amount representing 22% women were felling with mental stress through their jobs than the high amount representing 78.3% women. When balancing both domestic and employment side less pressure of the work was a significant factor of this study and it is easy to manage both sides fairly. Not only that majority of the women as 77% were not doing over time but 23.3% women had to cover over time due to special duties and extra duties of their employments. This situation is a fair for women because she has to play vital roles and responsibilities towards their family unit. As the additional work and additional earnings 12% women were involving some works as cultivation, self employments, growing flowers, conducting A/L classes and following external degree but majority of the women representing 88.3% were not engage with extra works and earnings.

Considering how do women balance family and employment, financial requirement is coming as a dominant factor of the family. While the majority of the women were doing employments, their husband also engage with jobs and it is easy to manage their domestics' responsibilities. 93 % husbands were with jobs 2% was not and other 5% were not mentioned. Employments of the husband can be categorized as follow.

**TABLE 05: JOB SECTOR OF THE HUSBAND**

Job Sector	Amount	%
<b>Government</b>		<b>50</b>
Semi government		12
Private		25
Self Employment		07
Not mentioned		07
total		100

## Source- Field Data

Gender role is an imperative part for direct the domestic's works. After completion of the duty of husband come back home is very obliging to wife to stability all the family responsibilities. According to this study 88% husbands came after duties and 12% were not coming and they stayed in a boarding, relation' home and quarters.

Education of the children is a major factor and it must be guided by parents. This study identified what is the capacity of the mother for their children's education. According to this sample, 52% women said that their children are attending to school but 48% answered children were not going school because they are not belong to the real age for schooling.

**TABLE 06: THE SCHOOL TYPE OF THE CHILDREN**

School	Amount %
Rural School	3.2
Urban School	90.3
International School	6.3
Total	100

## Source- Field Data

The children who carrying on to school by public bus 35.%, school service 25%, by father 23%, mother 6.%, grandparents 6%, and through the private vehicle 3% in respectively. The study identified majority proportions of mothers were involving with the education of the children representing 24 women. In additionally five fathers, two grandparents and other person were the main characters who giving assistant to the children's education. Mothers' involvement for the education is a high demand to the children is identified by this study. Especially mothers are giving different types of assistant to the children to carry on their education. Mostly representing 84% mothers gave assistance to their children for daily exercises and teaching lessons representing 55%. A main contribution of the mother is mentioned as below.

**TABLE 07: CONTRIBUTION OF THE MOTHER FOR THE CHILD'S EDUCATION**

Contribution	Amount %
Giving assistant for exercises	84
Teaching lessons	55
Everyday exploring books	52
Carrying on to extra class	10
others	6

## Source- Field data

This study found that the time allocation for the above educational activities done by mothers as daily representing 42%, weekends as 8% and rarely 2%. In additionally most of the mothers were spending more time with children in every day night representing 42%, evening and every week ends as 30% respectively. Two mothers were spending more time with the children in every day morning. Because of the employment, women employed have to spend more time with their children at the night. After school children spent the time with the mother representing 25%, with father as 12%, with servant 58% with grandparents 5% and 1 stay at day care centre.

As the mother She is concerning about the enjoyment and happiness of the children. She performed number of ways to establish the happiness of the children. Total sample was involved

to different activities as playing with children at the weekends representing 51%, going trip representing 25%, carry on children for the parks representing 17% and join for the educational trip representing 15%.

Leisure time of the female employed is an important characteristic which was balancing work and family. According to this study, 60% women were with sufficient leisure than the 40% women. Majority of the women were spending their leisure time as reading news papers, sleeping, going temple at the weekends, going trips, engaging with sports activities and spending time with children. In additionally the time which they allocate for watching T.V as the daily activity, 53% women were watching T.V taking two hours per a day 17% women were taking three hours per a day and others were taking more than four hours. Most women had taken time to listen to daily news representing as 72% while rarely representing as 30%. According to the nature of spending leisure time as reading news papers, majority of the women are reading news papers at the weekends representing 50%, rarely 30% and every day 20%. And also related to extra reading as novels, and classical art books women were given priority for that purpose representing 53%, rarely 32%, not never 10% and others were not replied. Doing responsibilities to the parents is a one of the main role when balancing family and work by the women employee. More women representing 83%, they are going to see their parents at weekends as 35%, per a month as 27%, rarely as 8%, every poya days as 7% and per two months as 3%.

As the women she has to play number of roles. Especially women are involving with domestic works than the males. Mainly preparing break first, lunch and dinner, washing clothes of the all family members, making extra meals for all and cleaning house are the main roles of the employed women found by this study. Consideration of the concept of gender above all tasks were categorised as women works. In additionally, working in the garden, visiting their parents and relatives, participating for ceremonies, going hospitals after family members hospitalized were identified as minimum contribution of the employed women. Following table shows the contribution of employed women, men and others to the domestic works.

**TABLE 08: DOMESTIC WORKS DONE BY THE FAMILY MEMBERS**

Task	wife	Husband	Both	parents	servants
Preparing main three meals	38	01	05	05	00
Washing clothes	23	02	20	03	00
Preparing extra meals	36	03	10	05	00
Cleaning house	26	00	20	06	00
Working in the garden	04	16	25	07	04
Visit parents and relatives	02	06	30	01	00
Caring needs of children	02	02	30	02	00
Going hospitals after hospitalized family members	06	05	30	02	00

Source- field data

This study found mostly man as the single character was involving with gardening works. Both men and women were involving with garden works, visit parents and relatives, participating parties, caring needs of children, going hospitals after hospitalized family members. In additionally, parents involved with garden works and cleaning house activities and servants participation for garden activities. Social relation is a significant factor in the society. Every type

of people in the society must be making different kind of relations. According to this study, majority of employed women mostly participated parents meetings at the school while men were participated for community level meetings like maranadara samithi, praja samithi etc. Both wife and husband made social relations like wedding parties, funerals, alms giving; charity works at the temple, birthday parties and New Year festivals. This study found that majority of women was not doing all the social relations by themselves. Both husband and wife are managing more works when they are employed at the present society.

**TABLE 09: CONTRIBUTION GIVEN BY THE FAMILY MEMBERS FOR SOCIAL RELATIONS**

<b>Social Relations</b>	<b>Quantity</b>			
	wife	Husband	Both	Parents
wedding	02	05	51	03
Funeral	03	07	49	03
Alms giving	06	04	49	05
Charity works	08	01	49	07
Birthday Parties	07	04	45	02
Meetings at the school	14	11	16	00
Community Meeting	10	15	09	04
New year	03	08	30	05

Source- field Data

Within the small family unit, saving money for future is an important task. According to this sample 92% women were saving money while 7% were not. Majority of women saved money as monthly from their salary. In additionally, some were saved money per the several months and two were never. Those women saved money expecting number of purposes. 31 women were saving money for emergency matters like illness situation, 24 women for her child, 22 were for the educational purposes of the children, 16 were for their parents and 13 were saving accidents or the other future family needs. Not only that they have some future expectations and they given a priority for their expectations. Majority of women have needed to build a house representing 35%, buy a land, build a separate part for the same house, and start a business and buy a car the other priorities of the women.

When balance the work and family, expenditure of the family is a huge task for both. More women spend money for food was a high proportion than the others but more men spend the money for transport activities.

**TABLE 10: THE FAMILY CONTRIBUTORS FOR FAMILY EXPENDITURE**

<b>Type of expenditure</b>		<b>Quantity</b>		
	Husband	Wife	Both	Parents
Food	19	<b>12</b>	38	<b>02</b>
Clothing	05	02	<b>42</b>	01
Educational activities of the children	04	05	<b>42</b>	00
Other things of the children	07	09	<b>40</b>	01
Telephone Bills	<b>25</b>	08	29	01
Electricity Bills	<b>28</b>	06	20	<b>02</b>
Water Bills	<b>22</b>	08	20	<b>02</b>



For Health	19	01	35	01
For Transport (fuel)	35	03	20	00
Alms giving, wedding, funeral	11	03	40	04
Others	04	00	31	02

Source- Field Data

Good health condition of the women is helped to manage the work and family fairly. This study found about the illness situation of the women. Few women were with headache representing 12%, mental stress felling with women 10%. According to total sample, 3.3% were with chronic diseases but majority of the women were not with any illness. Big burden of the domestic works and the work load of the employment sector were the main reasons felling illness of employed women was found by this study. In additionally Children's works and family problems also caused to make some illness situation of the women. When employed women balance both sides they ignore some essential day today events. Following table shows neglected events by women.

**TABLE 11: NEGLECTED EVENTS OF THE DAY BY WOMEN**

Event	Quantity
Exercising	42
Meditation	41
Worshiping	09
Break first	07
Discuss the schedule of the day with husband and children	06
Preparing lunch and dinner	03
Forgotten having daily medicine	03

Source- field data

Majority of women neglected exercising representing 42 while second was meditation representing as 41. Employed women have given poor time allocation for religious activities, having meals and medicine because of the busy life pattern. This study found women being employed women they were with satisfaction representing 83%. 7% were most satisfied and 8% were with disgusted and 2% were dissatisfied and work under pressure. The study identified that balance of job and domestic works by woman within a day, 82% were satisfied while 13.3% were with little bit of satisfaction.

The study found that employed women have got different types of assistance from her family to balance work and family.

**TABLE 12: THE FAMILY CONTRIBUTION FOR DOMESTIC WORKS**

Family contribution	Quantity %
Husband, children and Parents' assistance	63.3
Only husband's assistance	25
Only parents' assistance	05
Only children's assistance	3.3
Only servants' assistance	02
Without getting any assistance	02

Source- Field data

Majority of women have got the assistance from the husband, children and their parents representing 63.3% while only husband's assistance 25%. Most women used any type of assistance to make their work easy. This study found the majority of the women were getting most satisfaction through only the job and domestic works representing 60% but they were not getting the satisfaction only doing a job. Following table indicates the satisfaction of the women work type that they involve.

**TABLE 13: SATISFIED WORK TYPE OF THE EMPLOYED WOMEN**

Satisfied work type of the women	Quantity %
Only job and domestic works	60
Only children's works	22
Only domestic works	7
Only doing a job	3.3
Others (trip/spend time with children/ charity works)	8.3

Source- Field data

According to above table, the study identified the women at the present are not interested on only domestic works, they are willing to do a job too. Consideration of the satisfied work type of the women 60% women satisfied with only job and domestic works while 22% for only children's works. 7% women liked only for domestic works and 3% were like only for employments. Finally this study found the causes which directly affected to the family problems. An economical difficulty was the first reason representing 23%. More works covered by women itself, children's problems, parental matters, drunkenness of the husband, Busy life patterns, living with parents, high tempered were caused to make problems of the family.

There are some techniques followed by employed women to avoid role conflict and to maintain a fair management related to work and family. Giving priorities for essential duties on the duty list, time management, complete the works on time, limit the office works only to office, sharing works, planning next day before sleeping at the night, involving with domestic works both husband and wife, discuss all matters by couple, giving priority for other's works, getting help from others, patient and devoting, use modern technology, monthly savings and use some short ways and means for domestic works were several techniques followed by women to maintain a balance life.

## CONCLUSION

This research used only married working women related to government, semi government and private institutions in Sri Lanka. How do women balance both employment and family was main objective of this study. According to main objective and other specific objectives the study identified there is a positive impact to the employment and family, although women being an employed women. Mostly women were with good health and under minimum stress and pressure when balancing work and family responsibilities. The study identified there was a positive contribution of the employed mother to their children's education. Good relationship both wife and husband to the domestic works and making social relations was a significant of this study. According to this study it found that majority of women were satisfied with both employment and domestic works not only doing single task.

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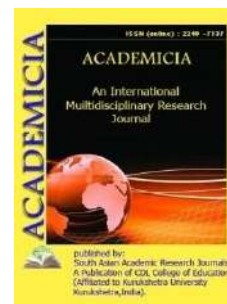
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## **DROUGHT AND HEAT TOLERANCE OF DURUM WHEAT VARIETIES FOR RAINFED CONDITIONS OF UZBEKISTAN**

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### **ABSTRACT**

*The article presents morphophysiological assessments of drought and heat tolerance of durum wheat varieties dry land areas conditions. Four grades of observation nursery of durum wheat with high drought and heat tolerance for dry land areas were selected.*

**KEYWORDS:** Variety, Durum Wheat, Drought Tolerance, Heat Tolerance, Plant Height, Upper Internode, Total Water, Protein Coagulation Temperature.

### **INTRODUCTION**

In the conditions of rain fed, crops annually undergo significant effects of soil and atmospheric drought, high temperature, which reduces the productivity of plants [1]. Therefore, the study of plant tolerance to adverse environmental conditions is an urgent problem today.

There is a number of characteristics that determine the tolerance of plants to drought during the summer vegetation. In this case, heat tolerance is of particular importance, as well as a number of ontogenesis moments that determine the overall drought tolerance [8] emphasize the

importance of such characteristics as plant height, flowering time, the role of leaf transpiration, harvesting index, etc.

Drought tolerance is a critical breeding task. During the period of grain filling under the influence of elevated temperatures, accompanied by dry winds, even with a significant amount of available moisture in the soil, the yield of winter wheat may decrease by 30-50% or more [4].

During drought during the critical period from going out of the tube to the head of flowering, durum wheat is more inclined towards the intergranum and hollow-spike [6].

For selection for durum wheat adaptability, drought tolerant genotypes are of great importance, which are characterized by a wide reaction rate and form a high yield under more favorable conditions [2].

Wheat plants, like any living organism, can be damaged by high temperatures. For higher plants, a temperature of 58 °C is considered a lethal limit. Due to the evolutionary features of the formation, wheat is considered more resistant to heat, therefore, high temperatures rarely cause a lethal effect [5].

According to [10] the heat resistance of wheat is closely related to the coagulation temperature of water-soluble proteins in the cellular juice of leaves.

One of the protective adaptive reactions of plants to high temperatures is to increase the temperature point of protein coagulation [3].

For wheat in the beginning period of development to the tillering phase, the temperature optimum below 20 °C, during tillering - flowering - about 25 °C, after flowering - about 30 °C [9].

The objective of our research was to study the drought and heat tolerance of durum wheat in rain fed conditions and to select high resistant varieties for drought and heat.

## **MATERIALS AND METHODS**

Durum wheat varieties studied durum wheat on the dry land of the Gallaaral Scientific and Experimental Station of Research Institute of Grain and Legume Crops served as the material of our research.

The drought and heat tolerance of durum wheat on the dry land was studied according to the methods of the Research institute of Plant industry.

The study of the accumulation of total crude biomass of durum wheat was carried out according to the Guidelines for the accounting and control of the most important indicators of the processes of photosynthetic activity of plants in crops [7].

The studies were carried out in the Gallaaral scientific-experimental station, which is located in the flat-hilly zone of dry land, the climate of this area is more continental. The amount of precipitation for the growing season 2017-2019. varied from 241.4 mm to 483.4 mm, the average annual air temperature - from 8.9 °C to 10.3 °C, humidity – from 45% to 72%.

## **RESEARCH RESULTS**

In a observation nursery of durum wheat for three years of study, a low variation was observed in the coagulation temperature of water-soluble proteins in leaves ( $V = 0.82\% - 1.87\%$ ) and in the total water content in leaves ( $V = 4.39\% - 8.33\%$ ); high variation - along the length of the upper

internode ( $V = 20.47\% - 25.99\%$ ) and the angle of inclination of the flag leaf in 2017 ( $V = 33.01\%$ ) (Table 1).

**TABLE 1.VARIABILITY OF MORPHOPHYSIOLOGICAL PARAMETERS OF DURUM WHEAT ON THE DRYLAND DEPENDING ON THE YEAR, ON AVERAGE BY VARIETY(GALLYAARAL, 2017 - 2019)**

year	lim	x	V
The angle of inclination of the flag sheet, degrees			
2017	5,2 - 21,4	9,1	33,01
2018	8,2 - 16,6	12,2	17,90
2019	8,2 - 15,6	12,1	14,52
Plant height, cm			
2017	73,4 - 102,8	83,9	10,25
2018	57,6 - 84,4	73,3	8,98
2019	87,2 - 133,8	111,4	9,67
The length of the upper internode, cm			
2017	24,6 - 48,2	30,9	20,47
2018	19,4 - 35,6	26,1	22,40
2019	21,2 - 52,6	38,9	25,99
The total water content, %			
2017	61,5 - 71,8	66,5	4,39
2018	50,3 - 69,8	67,9	8,33
2019	58,1 - 74,0	68,3	5,88
Coagulation temperature of water-soluble proteins in leaves, °C			
2017	58,0 - 62,5	60,0	1,87
2018	58,0 - 60,0	59,1	0,82
2019	59,0 - 63,0	61,8	1,55

Thus, the data in the table show that the height of durum wheat plants varied over the years from 73.3 cm ( $V = 8.98\%$ ) to 111.4 cm ( $V = 9.67\%$ ); the length of the upper internode is from 26.1 cm ( $V = 22.40\%$ ) to 38.9 cm ( $V = 25.99\%$ ).

As a result of the drought and heat tolerance study of durum wheat varieties on the observation nursery varieties with high resistance indices (Table 2.).



**TABLE 2.MORPHOPHYSIOLOGICAL PARAMETERS OF DROUGHT AND HEAT TOLERANCE OF DURUM WHEAT ON THE OBSERVATION NURSERY IN THE HEADING PHASE ON THE DRYLAND (GALLYAARAL, 2019)**

D	Variety	The angle of inclination of the flag sheet, (degree)	Plant height, (cm)	The length of the upper internode, (cm)	The total water content in the leaves, (%)	The coagulation of water-soluble proteins in the leaves, (°C)
1	Leukurum-3(st)	12,2	87,2	22,2	72,57	59,0
2	Javohir	12,0	116,2	43,0	72,99	59,5
4	454612	15,2	100,0	45,0	72,81	61,0
14	DNS-2016/25	14,6	97,8	28,4	72,80	61,5
15	NP-2016/45	12,0	109,8	22,0	73,45	62,0
17	NP-2016/55	14,0	119,6	50,0	69,70	63,0

This table shows that the total water content in the leaves of durum wheat ranged from 69.70% (NP-2016/55) to 73.45% (NP-2016/45), the standard 72.57% (Leukurum-3)

On the dry land, the accumulation of total biomass varied for durum wheat varieties from 197.12 (Javohir) to 257.42 g (NP-2016/55), for the standard 158.34 g (Leukurum-3) (Table 3)

**TABLE 3.VARIABILITY IN THE ACCUMULATION OF TOTAL BIOMASS OF DURUM WHEAT ON THE OBSERVATION NURSERY IN THE HEADING PHASE, DEPENDING ON VARIETIES ON THE DRY LAND (GALLYAARAL, 2019)**

D	Variety	Weight of total biomass 10 plants (g)	Weight of spikes with 10 plants		Root weight with 10 plants	
			(g)	The proportion of spikes, (%)	(g)	The proportion of roots, (%)
1	Leukurum-3(st)	158,34	19,60	12,37	19,70	12,44
2	Javohir	197,12	20,70	10,50	22,54	11,43
4	454612	223,30	26,14	11,71	19,02	8,51
14	DNS-2016/25	210,22	20,76	9,87	20,50	9,75
15	NP-2016/45	215,16	18,90	8,78	25,62	11,90
17	NP-2016/55	257,42	27,68	10,75	30,16	11,71

According to the table, it can be seen that the percentage of spikes of durum wheat varieties varied from 18.90% (NP-2016/45) to 27.68% (NP-2016/55), the standard 12.37% (Leukurum-3).

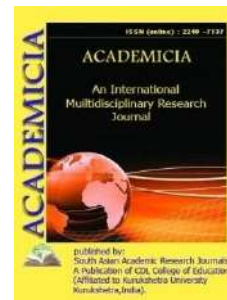
On the dry land for the accumulation of total biomass, varieties of a competitive variety of durum wheat testing were highlighted - NP-2016/45, 454612, NP - 2016/55.

## CONCLUSIONS

According to the results of the study, durum wheat on the dry land showed a low variation in the coagulation temperature of water-soluble proteins in the leaves and in the content of total water in the leaves; high variation - along the length of the upper internode and the angle of inclination of the flag sheet. Durum wheat varieties were studied on the observation nursery and Javohir, 454612, DNS-2016/25, NP-2016/45 selected with high drought and heat tolerance for dry land.

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## BOX CURVE (CURL) OF FAN CASING

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### ABSTRACT

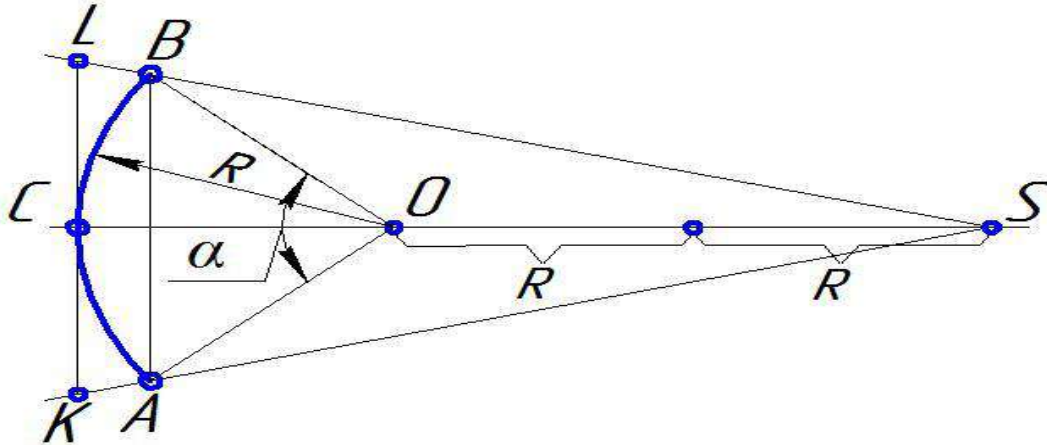
*The article deals with the straightening of the Duct Curve (curl) of the fan casing. The authors of the article believe that the existing measurements (flattening) curves of the line apply the approximate method of small chords, to accurately measure and determine the actual dimensions of the arc of the circle use the existing formulas. The authors concluded that straightening the Duct curve of the fan casing is an acceptable method of measurement by the formula. The main purpose of spreading the actual fan casing size in the plane is to design and manufacture it.*

**KEYWORDS:** *Approximate, Curves, Arcs, Chord, Line, Flattening, Unbend, Method, Radius, Curl, Square, Bottoms, and Point Circle.*

### INTRODUCTION

Approximate methods of flattening line curves. For measurement (straightening) of Corobus curves (more precisely - circles) the approximate method is used, which consists in that length of the arc of ACB of the circle is measured by section of TC tangent (Fig. 1), cut on it by beams SA and SB. The S point lies on the extension of the CO straight at  $CS = 3R$ .

Accuracy of such construction (at  $\leq 60^\circ$ ) is quite sufficient for practical purposes.

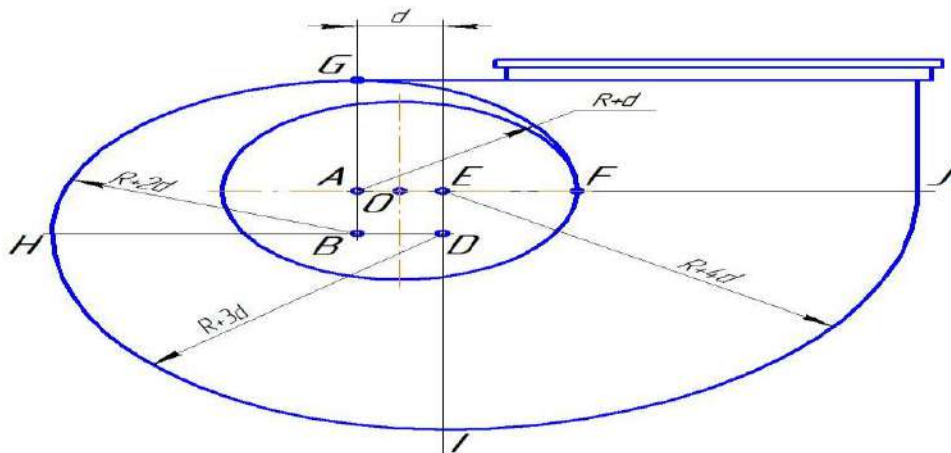


**Fig. 1.**

In deployment graphics, you always have to straighten or unbend line curves that lie on a plane. For this purpose method of small chords is used. As the name itself shows, the method is that a broken line is inscribed into a flattened or extensible curve (flat or spatial), the links of which represent small chords of the curve.[1.2.3] If a curve is to be flattened, its chords are sequentially placed on a certain line and the entire resulting segment is taken as the arc length of the curve.

If the curve is unbended, its chords are placed with their ends on the curve into which the curve is to be unbended.[4.5.6] The whole arc, which is obtained, is taken as an unbent given curve.

The curl is a flat curve, shaped like a spiral and consisting of several arcs of different radii drawn from several centers.



**Fig. 2.**

Consider building a Box curve (four centre curl) of the fan casing. Four centres (A, B, D and E) are specified, which are vertices of a square with side  $d = 10 \text{ mm}$  and radius  $R = 20 \text{ mm}$ .

When you draw a curl, you do not always start drawing from the vertex of the square. In the drawing of fan casing (Fig. 2)[7.8.9] the curl is built from point F with radius  $R + d$  from centre

A, Where the radius R is given by the constructor, up to the intersection with the extended side of the VA square at point G. An arc of radius  $R + 2d$  is drawn from centre B from point G to the intersection with the extension of the DB square side at point H. An arc of radius  $R + 3d$  is drawn from centre D from point H to the intersection with the extension of the ED square side at the point I. An + the Arc

Consider straightening the Duct Curve (curl) of the fan casing. For this purpose, it is necessary to determine the actual length of each arc sector FG, GH, HI and IJ separately using known formulas.

$FG = 2.2r/n$ , where - FG arc length, [pi] - constant number, r - arc radius, n - number of circular arc sectors.

1.  $FG = \frac{2\pi r + d}{n} = \frac{2 \times 3,14 \times 20 + 10}{4} = \frac{135,6}{4} = 33,9\text{mm.}$
2.  $GH = \frac{2\pi r + 2d}{n} = \frac{2 \times 3,14 \times 20 + 20}{4} = \frac{145,6}{4} = 36,4\text{mm.}$
3.  $HI = \frac{2\pi r + 3d}{n} = \frac{2 \times 3,14 \times 20 + 30}{4} = \frac{155,6}{4} = 38,9\text{mm.}$
4.  $IJ = \frac{2\pi r + 4d}{n} = \frac{2 \times 3,14 \times 20 + 40}{4} = \frac{165,6}{4} = 41,4\text{mm.}$

If we sum each arc length  $FG + GH + HI + IJ = 33.9 + 36.4 + 38.9 + 41.4 = 150.6\text{mm}$ , this result is equal to the length of the Box curve (curl) outline of the fan casing with sufficient accuracy.[10.11.12] The main purpose of propagation of the Duct curve (curl) of the fan casing in its plane is its design and manufacture.

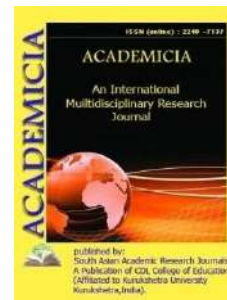
Thus, it can be concluded that the flattening of the Duct Curve (curl) of the fan casing is shown with dimensions sufficient to create a pattern.

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## METHODS OF USING ORAL FOLK CREATIVITY TO SHAPE THE THINKING OF PRESCHOOL CHILDREN

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### ABSTRACT

*This article presents samples of oral folk art in the formation of imaginative thinking of preschool children, in particular, the analysis of the significance and ways of using fairy tales and riddles, research on the topic, as well as means of development of children's imaginative thinking.*

**KEYWORDS:** *Contemplation, Imaginative Thinking, Folk Oral Art, Fairy Tales, Magic Images, Riddles, Creativity, Abilities.*

### INTRODUCTION

The development of thought forms in pre-school children is a process that is accompanied by intensity. Complicating its features, moving from one species to another, that is, if its development is considered a psychological state, its proper formation and enrichment is a process carried out in a pedagogical environment. At the age of 3-3.5, the child experiences the same condition, that is, the transition from visual-like thinking to visual-like thinking. The effective passage of this period is the correct organization of the pedagogical environment and the proper use of its capabilities.

### MATERIALS AND METHODS

First of all, we will focus on the analysis of available opportunities to form children's imaginative thinking. A peculiar pedagogical interpretation of this issue is initially embodied in the samples of folk pedagogy, which are represented in riddles, proverbs, fairy tales, fairy tales, songs, and others.

For example, with the example of myths and fairytales alone, we can see how skillfully described this problem. Figurative contemplation of such tales as "Ochil dasturxon", "Uchar

gilam", "Ur to'qmoq", "O'zi yurar etiklar", "Oynaijahon". Tales are an important source of figurative thinking in preschool children, especially involving animals, and magic tales serve to enrich their imaginary world. The fairy tale comes from the ancient Turkish word "Etuk", which means telling the story orally.[1] It is called "Ertak" in Surhandarya, Kashkadarya oases and Fergana Valley, "Matal" in Samarkand, "Varsaki" in Khorezma, "Chopchak" around Tashkent.

In fairy tales, a miracle or an adventure links certain events to life and promotes the ideas of truth, freedom, righteousness, humanity and nobility. Thus, they will resort to it as a last resort. Tales have both didactic and educational significance.

These include such fairy tales as "Chol bilan kampir", "Bulbuligo'yo", "Ur to'qmoq", "Uch og'agini botirlar", "Bo'ri bilan qo'zichoq", "Baxtli kal". Ethno-pedagogy that criticizes negative educational qualities through one or two episodes of satirical expression, types of fairy tales about animals, birds, types of dwarf wrestlers ("No'xatvoy", "Quloqvoy", "Handalak polvon", "Yapaloqpolvon" ...) type.

These stories tell about magic beings, magic objects and people of the extraordinary nature and also about their strange adventures which can be involuntarily struck with these skillfully thought over events. It has to do with people's creativity, their rich imagination and creativity. It is safe to say that all these tales are the product of figurative thinking.

In pre-school students, fairy tales can be used as an effective tool to shape their visual thinking. Here's how to put one together for use with fairy tales. We propose to implement the methods in two stages.

**First stage:** the stage of "getting to know unusual images":

- In this the teacher introduces children to a fairy tale, in which there is an animal, a person or an object, having an amazing character or an unusual appearance. For example, a Flying winged horse, a three-headed dragon, a winged monkey, a Pahlavan who can drink seawater on one breath, or a strange man who can turn everything off with His breath, open dishes, a flying carpet, telling tales featuring;
- During the fairy tale explain to the hero that these unusual character features and magical images are always needed to come to the hero's aid in a difficult moment. This stage will help the child to further form ingenuity, or find a solution to any problem. For example, get an opponent to dance and thus defeat him, train him to take an example from a hero who emerged from an unpleasant situation using a magic carpet, a flying carpet, a magic cap, a magic wand, and many other items;
- What else would he do if he were in the place of the main character, for example, he would ask the aist for an open table, or what other magical thing would he do instead of knocking on the door? Ask children questions such as and study the answers to each.
- The next stage, "Creation and Discovery," teaches children to invent new characters and characters in various ways . with
- Offer to create your own unique image from parts of different animals. Children are given cuts to various parts of animals. Children combine what they want to create their own animals. They call it, they say there are what features it has.
- Describe your image. In this case, the children portray the strange character they created. It is described. They can also be superheroes with strange characters.

- Offer the creation of magic objects. For example, learning to look at things they need in everyday life, such as a bike that floats in the water and flies in the sky, a spoon that cools food, smart shoes. For them, it can often be like a spy weapon.

The proposed methods will allow the introduction of preschool children to the test assignments contained in the international PISA program. A student of a pre-school educational organization may also find it slightly difficult to perform these duties. But they have to ensure that children are free, looking, doing what they want. Childhood inventions can be very amusing and negligible. Our task is to create a reflex in them in relation to the creation of novelty, to teach the invention to search from its imaginary world.

Folk pedagogy makes fruitful use of findings in the development of children's thinking, muscle abilities. With the help of mysteries children were taught primitive accounting (addition, division, multiplication and division). These include: "Pak-pakanabo 'yibor, yettiqavat to 'nibor" (piyoz), "Aylanaverib-aylanaveribsemirdixonim" (urchuq), and others.

A mystery is a mystery of two similar objects, referred to in a poem or prosaic assignment designed to find it based on characteristic similar signs. The mysteries also put forward educational ideas, through which thinking, outlook, resourceness, speech, modern qualities of human thinking are brought up. In the past, the population gathered on long nights of winter and voluntarily spent time telling proverbs, Matals, riddles, tales, fairy tales. Children also participated in such conferences. For example: in the mystery "Birparchapatir, olamgatir" the most nutritious feed - the Patir is similar to "Moon." One image is compared to another due to the fact that the shape of the Moon is similar to the shape of the Patir(type of bread)..

Mysteries also play an important role in developing figurative thinking in children. Because with the help of adjectives and similarities in the puzzle, he embodies in his mind many images, compares them to the qualities of the puzzle, and if he has an idea of this image, he can find the answer, otherwise he will not find it. It is important to note that though fairy tales help children to study, to learn and open for itself images, puzzles help them to develop ability to analyze, compare and compare the studied images.

It is advisable to use the following methods of using puzzles in the formation of figurative thinking in pre-school children.

### **"FIND A RIDDLE!" METHODS**

Method 1: In this method, children choose one theme by harmonization (such as about objects in a room or about events that everyone knows) and take turns finding puzzles on the topic.

**For example,**

Riddle 1. I see something rectangular, green, write on it, draw, the capital letter "B" ends with "d"! Answer: "Board".

Riddle 2. I see something round, shining, hanging from the ceiling, the capital letter "L" ends with "p"! The answer is "Lamp".

Method 2: Tell and find different interesting puzzles.

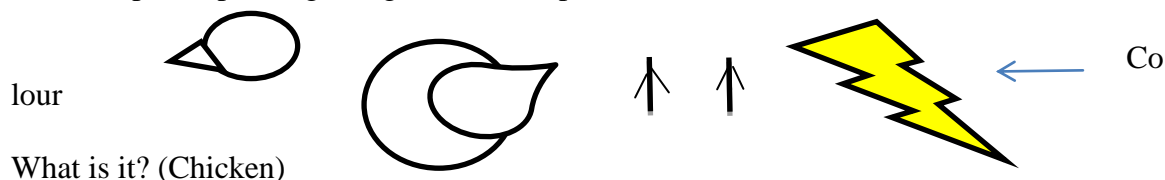
For example,

Uzuntumshuqsiyohli,  
Qo'shkaltakdekoyoqli,  
Egnidaqxalati,  
Tugmasiyo'q, g'alati(laylak)

Nozikkinajondir u,  
Dema, o'chginasibor,  
Yonidaemasuning,  
Nomidaninasi bor. (Ninachi)

Technique of "picture puzzle". This shows children a sequence of shapes and images that are defined for the object, animal, or image to be found. A child must generalize these forms to understand what they are talking about.

For example, depending on age, this is simpler as follows:



Or it is more difficult:



What favorite image of children is hidden in the picture? (Santa Claus) It's prepared like this.

It can also be used in various manifestations of such picture puzzles. Ribbed and figurative-logical mysteries are also part of this proposal.

At this stage, children must create simple "puzzles" themselves. Thus, the child learns to represent a certain image in his or her mind, analyze its qualities and explain it to others.

Either the children show the drawing by the teacher so that others cannot see it, and the child must represent the object depicted in the drawing to others. The rest of us have to find a hidden object through the qualities it says. For example, a teacher shows an image of an apple to one of the children in the group and asks him to describe it without naming it. A child can describe it as

"round, sweet, red, fruity." Thus, children are taught to imagine and analyze different images through their thinking.

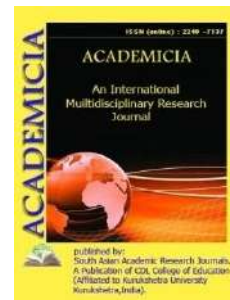
You can also work on puzzles with children through various multimedia exhibitions for children.

## CONCLUSION

In summary, it should be noted that the samples of oral creativity of the Uzbek people are rich and colorful, we are well aware that it has been enlightened for centuries on the basis of the great contemplation of the people, beautiful imagination, extraordinary creativity, dreams. Fairy tales and mysteries, which are models of oral folk creativity, are an important means of enriching thinking and raising children of pre-school age. Thanks to popular oral creativity, research can be carried out to explore even more effective possibilities for creating visual thinking of children. All this contributes to the development of creative thinking and inventive abilities of future pre-school children.

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## **BASICS OF ATLAS MAPPING OPTIMIZATION IN THE FERGHANA REGION**

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### **ABSTRACT**

*Thematic maps reflecting the negative or positive impact of natural and anthropogenic environmental factors on human living conditions are of particular importance in modern world ecological and cartographic research. In order to optimize the ecological situation in the region, including the river regions and oases of Uzbekistan, such ecological mapping involves the creation of atlases of a systematic collection of analytical and synthetic maps. In the world, environmental mapping gives preference to synchronization methods where specific atlas maps are systematically created by interconnecting environmental characteristics, that is, several maps that interactively interact with their didactic texts in GIS software are deployed on a computer screen at the same time. These research programs ArcGIS, QGIS, and SWAT model software focus on database creation, electronic map visualization, modelling, and analytical mapping.*

**KEYWORDS:** *Optimization Of Atlas Mapping, Ecological Atlas, GIS Technologies, Map Indicators*



## INTRODUCTION

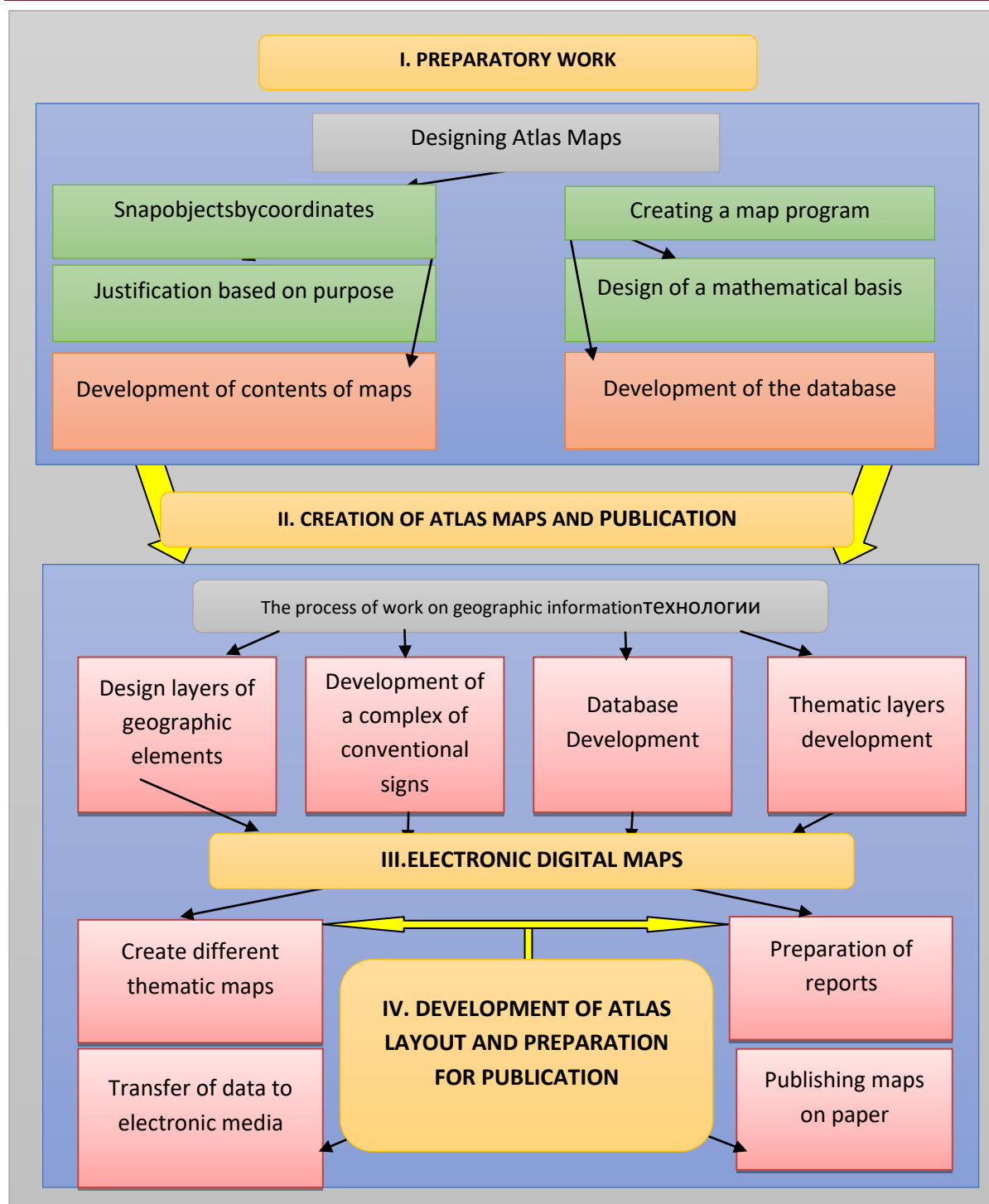
For this purpose, the structure and content of the Fergana Oblast ecological atlas were developed, as well as proposals and recommendations for its use. The research objectives are Substantiation of the importance of the use of cartographic methods in scientific research of the ecological condition of the depicted territories; Classification of scientific and practical atlases by type, for mapping the environmental condition and definition of database requirements; Development of the structure and content of the environmental atlas using the latest GIS technologies; Improvement of technical and software for the creation of a territorial multimedia environmental atlas; Improvement of evaluation and advisory maps in the environmental atlas of the Fergana region; Assessment of cartometric environmental indicators based on GIS technologies; Modelling maps based on spatial data reflecting the environmental state of the Fergana region; Provide scientific and practical suggestions and recommendations for the use of electronic inventory maps.

## MATERIALS AND METHODS

The object of the study is the environmental atlas of the Fergana region. The subject of the study is the structure and content of atlas maps reflecting the environmental state of the Fergana region, developed on the basis of modern GIS technologies. The foundations of environmental atlas optimization are improved on the basis of maps of "degree of anthropogenic load on landscapes," demo ecological state "; Improved digital maps depicting the environmental condition of areas in need of protection in the Fergana region using TIN (Triangulated irregular network), SHAPE vector file and GRID raster files; Improved inventory maps using interactive maps as well as the DEM (Digital Elevation Model);

The atlas provides maps of protected and restored territories, as well as proposals and recommendations for the development of measures to optimize the ecological state of the territory on the basis of the cartographic method.[1] System maps and database of multimedia maps have been created, which comprehensively characterize the environmental situation in the Fergana region. The results of the study are determined primarily in the use of the above methods in the development of targeted government programmes and practical measures to improve the environmental situation on the basis of conclusions and recommendations, thematic assessments and inventory maps.[2] On the basis of the environmental state mapping, theoretical and methodological issues of electronic environmental atlas creation, mapping image methods are described, scientific approaches and principles of environmental mapping are highlighted. It is shown that methods of creation of electronic atlas and analysis on modern GIS - programs and methods of their creation with a hybrid type of data storage have the most promising possibilities. Ecological atlas maps allow you to map the past, present and future, as well as to determine the place and time of the ecological condition by painting them in colour, which gives you the opportunity to develop measures to protect the components of nature.[3] With the help of atlas maps, there are great opportunities to show all the changes taking place in nature. Ecological situations are different, they affect nature and people in the regions of the republic differently. Water, soil, atmosphere, pollution levels, health impacts and other environmental data cannot be represented on the same map. It is, therefore, necessary to create a set of maps, i.e. an atlas covering all areas of the environment. An atlas is a system with specific sets of thematic maps that reflect the interactions of man and nature, social, natural and man-made

elements of society. Therefore, the main purpose of mapping is to record and assess the state of the environment. Environmental atlases include a system of maps on interlinked and complementary environmental issues and consist of basic maps of natural and socio-economic content. Sectoral and network maps describe and assess the ecological status of certain environmental elements and represent the ecological problems of different industries (such as agriculture, forestry, water, industry, etc.). [4] The content of the ecological atlas maps covers different types of mapping, and also works with many objects and events, but among them, there are several integrations and syntheses. Maps of different types of scientific and practical directions, their inventory, evaluation, forecasting and combination of content are shown in different directions, which are characterized by their distinctive features. In the Ferghana region, environmental pollution, including air, water and land by many industrial facilities, vehicles and various chemicals, is causing great harm to public health. Cities can be compared to active volcanoes. Urban industrial enterprises, vehicles and household waste pollute the air, water and soil. Therefore, the main goal of creating an environmental atlas of the Ferghana region is to provide a rich and comprehensive source of information and databases on the environmental situation in the region, as well as to develop a state environmental policy, optimize it and apply it in practice. As you know, the environmental situation is unstable and constantly changing under the influence of the human factor. Consequently, practical environmental maps, conservation of territories and cartographic optimization of the natural environment are used as the basis for project implementation and strategy, which is designed to strengthen environmental education, public awareness and environmental culture. Maps of the ecological atlas allow to visually determine the place and time of the ecological state of what has happened in the past, nowadays and probably will happen in the future by depicting it with colour, describing the possibility of counteraction. The cartographic method is most effective in assessing and predicting environmental situations in the "population-nature-society" system. At the same time, the environmental atlas created for the first time, along with traditional indicators, used a set of recommendations for the development of environmental culture and a set of measures to preserve the landscape. [5] The creation of an ecological atlas of the Fergana region will have a positive effect in the future in determining the state of geosystems changing under the intensive influence of human economic activities, in the development of a plan of action measures, as well as in ensuring sustainability. A systematic approach to the nature of the Fergana region and its environmental features will create a series of analytical and synthetic environmental maps of the region. Development of structure and contents of these ecological atlases with the use of the programs ArcGIS, QGIS creates the base of ecological information (database). This database will often serve as an invaluable source of information and relevant scientific findings, environmental forecasting, effectiveness and implementation of monitoring work, and future forward-looking directions.



**Fig-1. Designing and mapping environmental atlas in a GIS program**

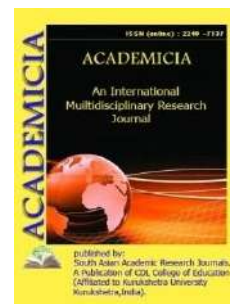
## CONCLUSION

Of particular importance is the operational information base on geodesy, cartography and inventories as soon as possible, with monitoring of the environmental situation and operational

information in emergency situations, as well as timely access to updated information on the environmental state of the region. In the GIS set modelling of commonly used mapping servers using internal or additional means, the raster and vector data model allowed to transform the field in which the spatial distribution of events in the Fergana region changes. This database is an important source for obtaining relevant scientific findings, assessing the environmental situation, monitoring, and identifying priority areas for the future. The environmental atlas of the Fergana region and its practical thematic environmental maps will serve as a basis for assessing the environmental situation, conservation of nature and rational use of natural resources, as well as optimization of the environmental situation.

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## STRENGTH OF BENDING REINFORCED CONCRETE ELEMENTS UNDER ACTION OF TRANSVERSE FORCES UNDER INFLUENCE OF HIGH TEMPERATURES

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### ABSTRACT

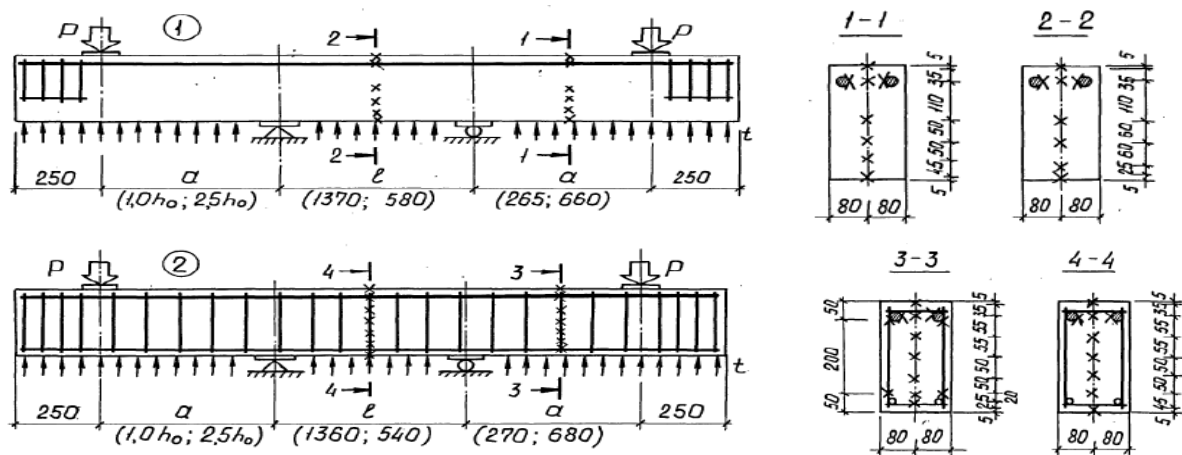
*The article presents the results of experimental and theoretical studies of stress-deformed state of reinforced concrete beams without transverse reinforcement and with vertical clamps tested for the action of transverse forces under conditions of influence of increased and high technological temperatures. The influence of the main factors on strength of inclined sections, deformation of concrete, longitudinal and transverse reinforcement in the shear zone, shape and type of breakage of the bent element is determined.*

**KEYWORDS:** Concrete, Reinforcement, Reinforced Concrete, Temperature, Heating, Transverse Force, Bending Moment, Strength, A Form Of Destruction, Stress, Deformation, Cut Span, Design Section.

### INTRODUCTION

In order to establish general regularities and features of stress-strain state in the section zone, the influence of various factors on strength along an inclined section of bent reinforced concrete elements under action of transverse forces and high temperature, experimental data of experimental studies were processed and analyzed [1-4].

**Prototype models and experimental research methodology.** The tests were carried out on reinforced concrete beams with a rectangular section of 16x30 cm length 240 cm. The beams were made of conventional heavy concrete of class B 35 on Portland cement with granite crushed stone and quartz sand and from heat-resistant concrete on alumina cement with shamoto aggregates of class B 35. The concrete of all beams had natural hardness. The beams were reinforced with two longitudinal rods  $\varnothing 18$  or 20 mm made of steel class a-W, grade 35GS, the yield strength of which ranged from 415 to 490 MPa, the temporary resistance from 610 to 760 MPa. Some of the beams were not cross-reinforced, others were reinforced with vertical welded clamps made of reinforcing wire  $\varnothing 6$  mm of class A-I, st3sp3 brand with a step of 8-10 cm. In beams made of heat-resistant concrete on alumina cement, the clamps were installed on the side of the less heated face at a height of  $2/3h$  (20 cm) on one half of the length of the beam (Fig.1). To determine the strength and deformed properties at normal temperature and when heated simultaneously with the beams, 10x10x10 cm cubes and 10x10x40 cm prisms were concreted. the tests of these cubes allowed us to qualitatively evaluate and establish in full the quantitative values of all the physical, mechanical and deformed properties of the applied concretes at different temperatures.



**Figure 1.** Scheme of reinforcement, heating and loading of beams:

1-beams without transverse reinforcement; 2-beams with transverse reinforcement; X-chromel-aluminum thermocouples

The beams were tested on a special installation consisting of an electric heating furnace and a loading system. The beam with a span of 137 (58) cm and two consoles of 51.5 (91) cm was installed on supports provided in an oven reinforced with a zone up. The beams to be heated were first heated from the side of the compressed concrete zone at a rate of 100 0C per hour to a predetermined temperature, held at that temperature for 2 hours, then loaded with two concentrated forces symmetrically applied to the cantilever portions. Load was given by hydraulic jack in stages equal to 0.05-0.1 of breaking one. When loaded, the temperature in the furnace was kept constant. The beams were tested at normal temperature and at unilateral heating at shear spans (distance from support to load) equal to  $h_0$  and  $2.5h_0$ . The temperature of the end fibre of the compressed zone of concrete in beams made of conventional heavy concrete was 70, 100 and 2000C, in beams made of heat-resistant concrete on alumina cement - 300, 500 and 8000C. During heating and loading, strains of longitudinal, transverse reinforcement and



concrete in the shear zone, beam deflection, longitudinal reinforcement slip, crack opening width, temperature of longitudinal and transverse reinforcement and concrete along the beam cross-section height were measured.

**Research results and their analysis.** The analysis showed that the stress-deformed state of concrete, longitudinal and transverse reinforcement in the zone of action of transverse forces under conditions of unilateral heating in reinforced concrete beams regardless of heating temperature, cut span value, concrete type and strength and reinforcement are the same.

When calculating strength and crack resistance of inclined sections of bent reinforced concrete elements, it is more convenient to operate with stresses of concrete, longitudinal and transverse reinforcement in span of cut. Based on the analysis of the results of the experiments, it was established:

- Before formation of inclined cracks, stress in concrete on the planes perpendicular to the inclined crack at the level of the center of gravity of the section reaches or exceeds the values of resistance of concrete to tension during heating;
- When the feature is broken along the sloped section:
- Stresses of the longitudinal reinforcement at the points of intersection with the inclined crack can reach the yield point of the reinforcement during heating;
- Dressings in clamps reach the yield point of valves taking into account the maximum temperature of their heating;
- Stress in the concrete of the compressed zone above the inclined crack reaches the value of concrete resistance to compression during heating.

The most characteristic parameters when assessing the strength of the inclined sections of reinforced concrete beams are the relative strength of the element along the inclined section

$$\frac{Q}{R_{bt} \cdot \gamma_{tt} \cdot b \cdot h_o} \text{ and the relative value of the maximum bending moment } \frac{M}{Q \cdot h_o}.$$

Relative strength along inclined section of reinforced concrete beams with increase of concrete temperature of compressed facet of section increases, and with increase of relative value of bending moment decreases. In beams made of conventional heavy concrete without transverse

reinforcement, the value of  $\frac{Q}{R_{pt} \cdot b \cdot h_o}$  at unilateral heating to 70, 100 and 2000 C increases by 8,

4 and 6% respectively. In beams with clamps the value of  $\frac{Q}{R_{pt} \cdot b \cdot h_o}$  is on average 30% higher than in beams without transverse reinforcement.

As the value of  $\frac{M}{Q \cdot h_o}$  increases from 1.0 to 2.5, the relative strength along the inclined section of beams made of conventional heavy concrete decreases by 2.4 times.

Relative strength along inclined section of reinforced concrete beams made of heat-resistant concrete at unilateral heating to 800-10000C increases to a greater extent than beams made of conventional heavy concrete.

The greatest increase in  $\frac{Q}{R_{bt} \cdot \gamma_{tt} \cdot b \cdot h_o}$  value is observed in beams made of heat-resistant concrete on Portland cement, the smallest - in beams made of heat-resistant concrete on alumina cement (Fig.2).

Relative strength of inclined sections of beams made of heat-resistant concrete on alumina cement without clamps at  $\frac{M}{Q \cdot h_o}$  with 1.6 at normal temperature increased to 2.9 at heating to

9000C on concrete of compressed facet of section;  $\frac{M}{Q \cdot h_o} = 2,5$  temperature increase on the

compressed facet of the section resulted in increase of  $\frac{Q}{R_{bt} \cdot \gamma_{tt} \cdot b \cdot h_o}$  from 0.47 at normal temperature to 1.08 at 3000C, to 1.3 at 5000C, to 1.5 at 8000C.

Relative strength of inclined sections of beams made of heat-resistant concrete on Portland cement without clamps at normal temperature at values  $\frac{M}{Q \cdot h_o}$  equal to 3.2 and 1.0 respectively

was 0.75; 1.10 and 3.13. Increase of concrete temperature on compressed edge of beams up to 10000C leads to increase of  $\frac{Q}{R_{bt} \cdot \gamma_{tt} \cdot b \cdot h_o}$  value respectively up to 3.1; 4.8 and 11.2.

Relative strength of inclined sections of beams made of heat-resistant concrete on liquid glass increases slightly less than in beams made of heat-resistant concrete on Portland cement, but much more than in beams made of heat-resistant concrete on alumina cement.

Relative strength of inclined sections of heat-resistant concretes with clamps with temperature increase on compressed face of section increases to approximately the same extent as in corresponding beams without clamps. Absolute value of  $\frac{Q}{R_{bt} \cdot \gamma_{tt} \cdot b \cdot h_o}$  value at the same heating

temperatures and  $\frac{M}{Q \cdot h_o}$  value for beams with clamps is higher than for beams without transverse reinforcement.

$\frac{M}{Q \cdot h_o}$  increases, the relative strength of the inclined sections of the heat-resistant concrete

beams decreases. The smallest decrease of  $\frac{Q}{R_{bt} \cdot \gamma_{tt} \cdot b \cdot h_o}$  value occurs in beams of heat-resistant concrete on alumina cement, the largest - in beams of heat-resistant concrete on Portland cement.

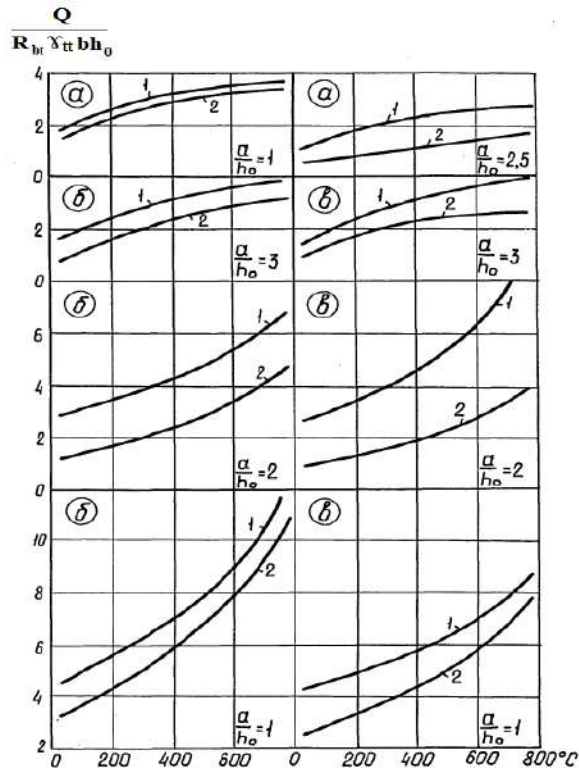
In beams with clamps  $\frac{Q}{R_{bt} \cdot \gamma_{tt} \cdot b \cdot h_o}$  value decreases to a lesser extent than in beams without transverse reinforcement (Fig.3).

Longitudinal reinforcement of beams located on less heated facet of section at  $h_o = 31$  cm even at temperature of 1000°C on compressed facet of section is heated only to 1000°C. As is known, the yield strength of 35ГC grade A-III reinforcement does not decrease when heated to 1000°C. Consequently, the role of the longitudinal stretch reinforcement in the operation at the bending member under unilateral heating is about the same as at normal temperature. Relative value of the strength resistance of the longitudinal reinforcement at unilateral heating increases. As the content and diameter of the longitudinal reinforcement increase, the strength of the bent element along the inclined section increases at unilateral heating.

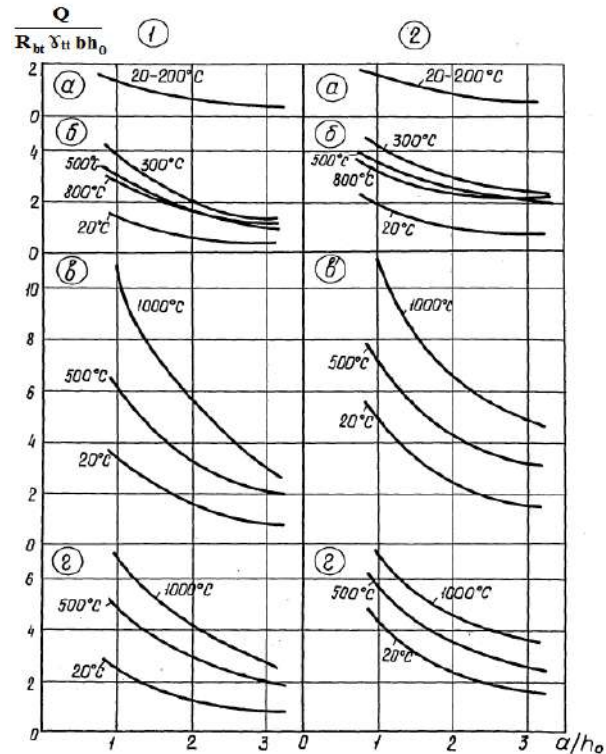
Strength along inclined section of beams with clamps at heating is higher than beams without transverse reinforcement. As the percentage of transverse reinforcement increases, the strength of the inclined sections increases during unilateral heating. At unilateral heating transverse reinforcement of beams is heated more strongly than longitudinal reinforcement and at high temperatures yield strength and modulus of elasticity of reinforcement of clamps are reduced. The amount of transverse force received by the clamps in the inclined section of the bent element when heated in the limit state is somewhat reduced compared to the normal temperature.

Increase or decrease of concrete strength leads respectively to increase or decrease of strength of inclined sections of bent element under action of transverse forces and one-sided heating.

The strength of the inclined sections of the element is mainly affected by the change in the strength of the concrete of the compressed section zone during heating. The analysis showed that concrete strength taken in practical calculations at the average temperature of the compressed section zone at the level of 0.2  $h_o$  from the most compressed edge of the element, as recommended in [5], gives satisfactory results. At reduction of strength of conventional concrete at heating to 70, 100 and 2000°C by 16, 28 and 10% strength of beams without clamps on inclined section decreased by 8, 12 and 5% respectively. Reduction of strength of heat-resistant concrete on alumina cement at heating up to 300, 500 and 8000°C by 50, 56 and 64% resulted in reduction of strength of inclined sections of beams on average by 15, 22 and 36% respectively.



**Figure 2.** Relative strength of reinforced concrete beams depending on the average temperature of the compressed zone of concrete: a - heat-resistant concrete on alumina cement; B - heat-resistant concrete on Portland cement; C - heat-resistant concrete on liquid glass, 1 - without transverse reinforcement, 2 - with clamps.



**Figure 3.** Relative strength of reinforced concrete beams depending on value  $a/h_0$ : a - normal heavy concrete, b - heat-resistant concrete on alumina cement; C is heat resistant concrete on Portland cement; G-heat resistant concrete on liquid glass; 1 - without transverse reinforcement, 2 - with clamps.

Strength of inclined sections of bent reinforced concrete elements at unilateral heating depends on load value and place of its application. The most favorable conditions for the resistance of the element to the action of transverse forces are created at small values of relative length between the support and the load  $\frac{a}{h_0} = 0,5 \div 1,5$ . As the value of  $\frac{a}{h_0}$  decreases, the value of the limit transverse force perceived by the inclined section of the element before breaking increases. The value of the maximum bending moment does not change significantly.

Strength of inclined sections of bending elements at high temperatures depends on the form of destruction along the inclined section. The bending element has high strength along the inclined section when the concrete of the compressed zone is broken above the inclined crack with simultaneous fluidity of the longitudinal reinforcement at the intersection of its critical inclined crack. Name of strength of inclined sections in case of element destruction due to failure of adhesion of longitudinal reinforcement with concrete and its anchoring.

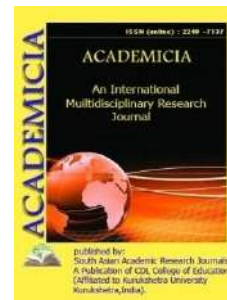
At small values  $\frac{a}{h_o}$  strength of inclined sections of element at destruction from crushing of concrete strip between support and weight is more than at its destruction from cut of concrete of compressed zone.

## CONCLUSION

The performed studies make it possible to improve the method of calculation of strength of inclined sections of bent reinforced concrete elements operating under conditions of exposure to high and high temperatures, their practical application provides saving of reinforcement steel, reduction of cost and labour input of structures manufacturing and significant economic effect is achieved.

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## STUDY OF COMPENSATION OF REACTIVE POWER OF SHORT-CIRCUITED ROTOR OF ASYNCHRONOUS MOTOR

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### ABSTRACT

*This paper provides an overview of the current state of reactive power compensation technologies. Principles of operation, design characteristics are presented. One of the basic questions connected with improvement of quality of the electric power in branches which will be solved both at a design stage and at the stages of functioning of industrial systems of electrical supply is the compensation of jet capacity, including a choice of corresponding sources, calculation and regulation of their capacity, placing of sources in the power supply system. Rational coverage of reactive power in industrial electrical networks involves many problems aimed at increasing the efficiency of electrical installations.*

**KEYWORDS:** *Capacitance, Capacitors, Condensation Unit, Control Systems, Current, Inductance, Load, Reactive Power, Reactive Power, Voltage Control, Voltage.*

### INTRODUCTION

Reactive power is the technical loss of electricity caused by electromagnetic processes in networks. Its disadvantage is the increase of conductors and congestion in the network, which leads to the operation of the power supply in extended mode. If compensation for power consumption is not provided, the consumption of reactive energy from the grid will require considerable costs. [9, c.24] Large reactive loads can lead to voltage drop and low power quality. In addition, power transmission lines and transformer equipment are subject to overloads, which leads to increased capital costs for the establishment and operation of distribution stations. [3]

### MATERIALS AND METHODS

AC power supply began in the late 19th century replacing existing small-town systems. With the expansion of local power supply systems and the provision of long-range transmission, first

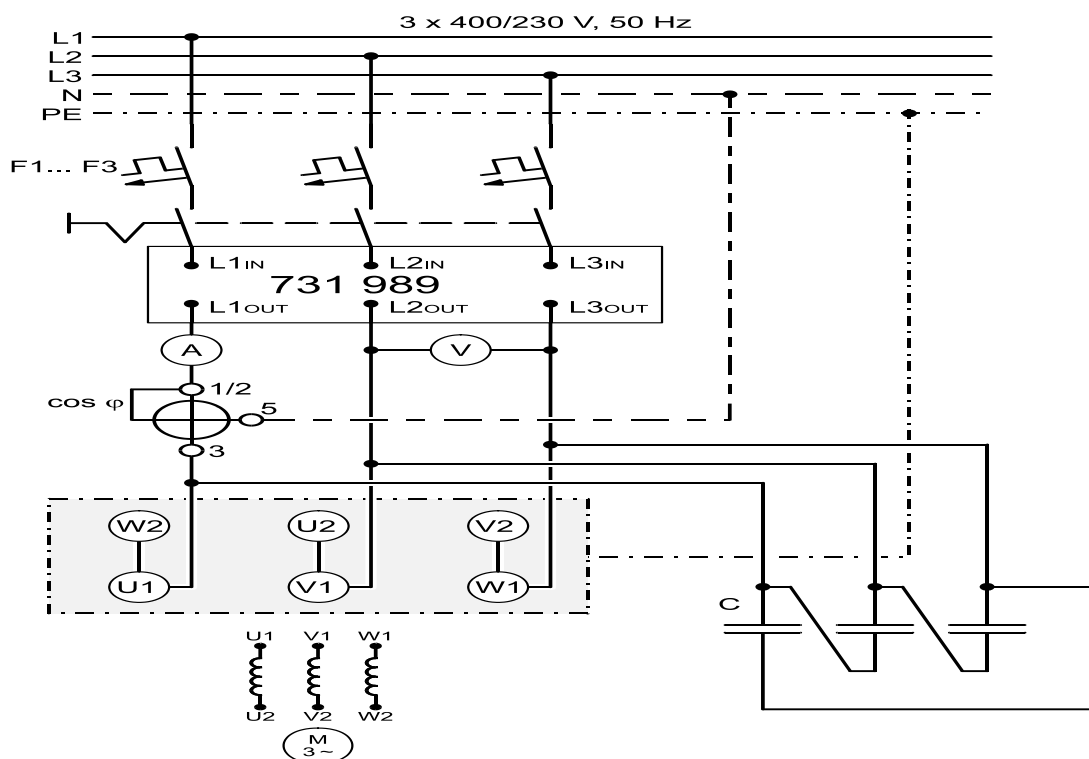


of all, due to the disproportionate reactive power in the local system and stability control, the first problems arose. Reactive power compensation (shunt capacitors and shunt reactors) was used to control voltage in the stationary system. The dynamic method was based on rotating machines such as synchronous compensators. [4; 8]

In the mid-1960s, the first static reactive power compensation devices were introduced, namely, DC-controlled reactors (mercury valves) and thyristor-controlled reactors (thyristor-controlled capacitors, thyristor-controlled reactors).

In short, many losses have eliminated existing limitations existing on rotating machines and devices controlled by direct current. [5; 9]

When compensating for reactive power in asynchronous engines with a short-circuited rotor, the following results were achieved. As shown in Figure 1, capacitors consisting of three 2  $\mu\text{F}$  capacitors were installed for the experimental circuit. condenser.



**Fig. 1.** Compensation of reactive power of short-circuited rotor of the asynchronous motor (machine and compensation capacitors, connected by triangular circuit)

In an uncompensated experiment, it measures the load moment and normalizes the result, the value of the torque of the object being tested is to measure  $T_{N, act}$  and  $I_{N, act}$ , the torque of the drive. For this purpose, the nominal values of the test object connected to the start circuit

$$T_{N, act} = 1.82 Nm \quad (1)$$

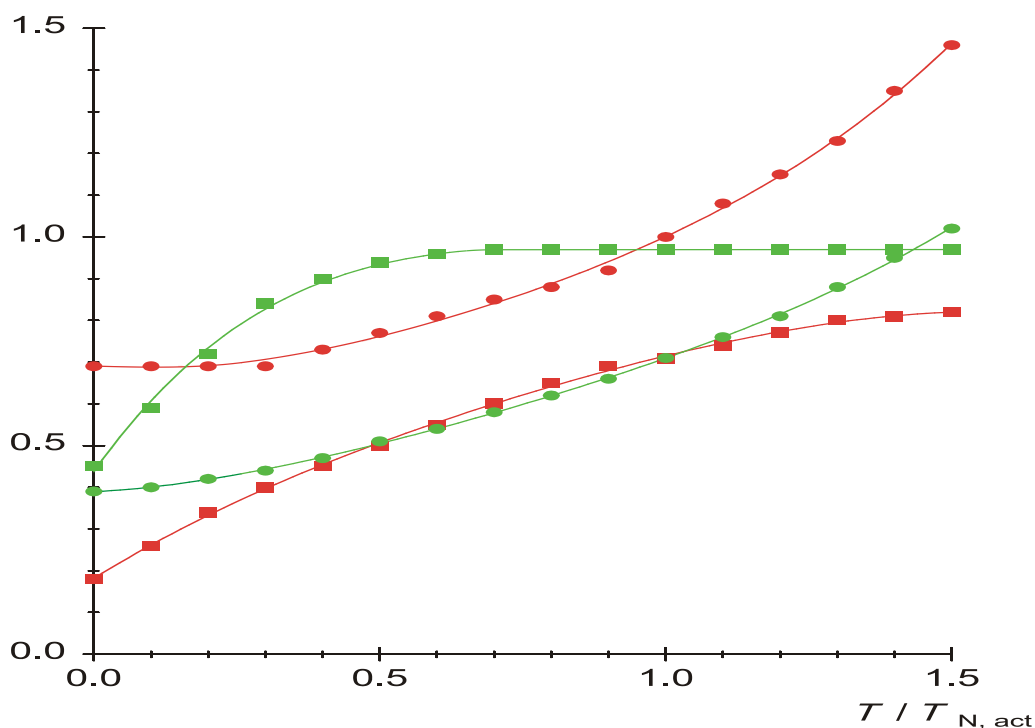
$$I_{N, act} = 0.93 A \quad (2)$$

By sequentially introducing a torque load by "torque control" and measuring the rotor short circuit current and power factor, the following results were obtained:

$T/T_{N, act}$ :	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7
$M/Nm$ :	0.00	0.18	0.36	0.55	0.73	0.91	1.09	1.27
$I/A$ :	0.36	0.37	0.39	0.41	0.44	0.47	0.50	0.54
$I/I_{N, act}$ :	0.39	0.40	0.42	0.44	0.47	0.51	0.54	0.58
$\cos \varphi$ :	0.45	0.59	0.72	0.84	0.90	0.94	0.96	0.97
$T/T_{N, act}$ :	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5
$T/Nm$ :	1.46	1.64	1.82	2.00	2.18	2.37	2.55	2.73
$I/A$ :	0.58	0.61	0.66	0.71	0.75	0.82	0.88	0.95
$I/I_{N, act}$ :	0.62	0.66	0.71	0.76	0.81	0.88	0.95	1.02
$\cos \varphi$ :	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97

**Tab. 1.** Measurement parameters of reactive power compensation in case of short circuit of the asynchronous motor.

The graph shows the current factors associated with the torque that was constructed to determine the efficiency of the power factor and current, the non-compensating motor, and the asynchronous short circuit motor.



**Fig. 2.** Effect of compensation on current and power factors on the motor of the short-circuited rotor.

Compensated  $I/A$ ,  $\cos$

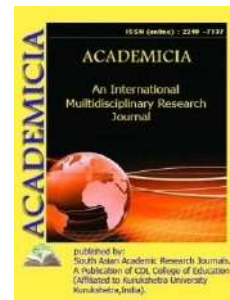
Not compensated  $I/A$ ,  $\cos$

Depending on the current and power factors shown in the line, we can conclude that in the range of low loads the current generating by the compensating machine is less than half the current by the non-compensating machine. [10]

Also when working with a heavy load, not compensated amount to 65-80%. The effect of compensation on the strength factor is more pronounced: when the load is at nominal rotation, this value is 0.9 and then increases to almost 1.

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## **PRODUCTION TEST FOR PRODUCING POROUS FILLER FROM BARKHAN SAND WITH ADDITIVES OF HYDROCASTIC CLAY AND OIL WASTE**

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### **ABSTRACT**

*2 batches of aggregate were produced under production conditions at the expanded clay plant according to the developed technological scheme, confirmed by laboratory data.*

**KEYWORDS:** *And, Clay, Waste, Additive, Charge, Mass, Moulding, Granule, Furnace, Porous Aggregate, Agloporite Crushed Stone.*

### **INTRODUCTION**

As the use of reinforced concrete structures made of light concrete expands, new types of cheap fillers are needed.

Production of porous aggregates should be developed based on local raw materials or industrial wastes, like England, countries of Eastern Europe, where slag pemza, agloporite gravel and crushed stone from TPP ash are used [1].

The raw material base for the production of artificial porous aggregates in Uzbekistan is very limited and, accordingly, its rational use is required, as well as the exploration of new species through waste production and local raw materials, including even non-standard ones.

## MATERIALS AND METHODS

For industrial construction, which has developed in the Republic, it is necessary to search for new types of artificial porous aggregates based on local raw materials. Many districts have huge reserves of non-standard raw materials: velvet sands, loess loams, dacite porphyries, industrial wastes, based on which new types of artificial porous aggregates - keramoporite, camporite, carboporite and others - are obtained [2].

In the production tests, the following materials were used to obtain the light aggregate: Kamyshtashinsky hydrosludic clay raw material and Yaz-Yavan (Central Fergana) velvet sands, as well as Fergan refinery waste used as a plasticizing and pore-forming additive. Carried out laboratory experiments showed that the optimal composition of the charge is velvet sand 70%, clay 20% and oil waste 10%. Comparison of results of physical and mechanical properties of a light aggregate made of velvet sand sintered at temperature 1100, 1150 and 11800 °C makes it possible to conclude that optimum burning temperature of studied aggregate is within the range 1150-11800 °C [3].

The results of laboratory studies showed that at material density 600-650 kg/m<sup>3</sup> the aggregate has strength 2.5-2.6 MPa, frost resistance more than 60 cycles, and weight loss at iron and silicate decay is practically non-existent. From the above results it can be concluded that for all indicators of the developed composition of porous filler gravel-like shape meets all requirements of GOST 11991-83 for aglopore crushed stone, and for strength exceeds the required values.

### 1. Information about the materials used.

The results of chemical analysis of 7 samples of clay and velvet sand are given in Table 1 [3].

The table shows that the raw material is almost uniform in  $SiO_2$ ,  $Al_2O_3$ ,  $CaO$ ,  $MgO$  content,  $CaO$ . Oxides  $CaO$  and  $MgO$  in the velvet sand up to 30% which characterize it as a high carbonate raw material.

TABLE 1

#test		$SiO_2$	$Al_2O_3$	$Fe_2O_3$	$CaO$	$MgO$	$SO_3$	$CO_2$	$TiO$	$Na_2O$	$K_2O$	Hygros cope. water	PPI
Clays of the Kamyshtashinsky field	1	51,48	14,78	5,60	6,08	3,40	1,6	3,97	0,67	2,32	3,55	1,87	11,6
	2	52,64	12,75	4,96	6,35	4,0	1,33	3,60	0,79	2,32	3,40	1,84	12,3
	3	55,06	14,34	5,6	4,72	4,70	0,19	4,12	0,79	1,35	3,84	1,38	9,38
	4	52,74	14,12	5,97	6,35	3,80	0,28	5,0	0,78	1,62	4,00	1,44	10,4
	5	52,74	14,31	5,16	6,77	4,20	0,30	5,44	0,8	1,48	3,83	1,28	10,96
	6	51,58	14,7	5,52	6,44	3,00	0,39	4,49	0,63	2,39	2,96	1,88	12,58
	7	54,1	18,72	6,70	5,87	3,78	0,6	8,07	-	-	-	-	-

	the average factory.	7					0						
		51,28	16,21	5,42	5,75	2,85	0,56	4,40	0,66	2,70	3,01	1,70	5,70
Sand	1	52,35	7,38	3,72	16,3	1,26	0,46	-	-	3,04	-	-	14,74
	2	51,16	6,89	3,66	15,94	1,16	0,44	-	-	2,98	-	-	14,77
	3	51,71	7,21	3,78	17,99	1,33	0,47	-	-	3,10	-	-	14,45

Clay granulometric composition is determined by Rutovsky method and pipette, results of which are given in Table 2 [3].

**TABLE 2. GRANULOMETRIC COMPOSITION OF THE STUDIED CLAYS**

Clay samples	Granulometric composition				
	sandy		dusty		clayey
	0,25	0,25-0,05	0,05-0,01	0,01-0,005	0,05
1	4,37	5,16	21,35	9,20	59,92
2	1,42	4,18	30,4	7,2	57,16
3	7,95	8,96	24,9	10,36	47,88
4	0,48	7,21	21,11	11,96	59,24
5	2,74	7,28	20,82	10,1	58,78
6	0,77	16,81	20,1	9,88	52,44
7	1,07	2,87	19,62	10,36	66,38
Factory average sample	5,58	3,75	22,95	8,08	59,64

From the data of Table 2, we can see that the study of clay belongs to the group of finely dispersed and the content of particles with the size less than 0.005 mm is within the range of 47.88-66.38%, and in the factory average sample of the field - 59.64%.

Ceramic and technological properties of raw materials were determined in accordance with GOST on clay raw materials, Table 3 [3].

The particle size distribution of barchan sand was determined by sieving it through a standard set of sieves with hole sizes: 5, 2.5, 1.25, 0.63, 0.315, 0.14 mm.

The grain composition of the sand consists of the following fractions listed in Table 4. **Ceramic and technological properties of clays from the Kamybashinsky deposit**



**TABLE 3**

Plasticity number	Forming humidity, %	Shrinkage, %		Mechanical durability of samples		Note
		воздушная	огневая	сырцовых	Обожженных при 1000 <sup>0</sup> С	
10-19	21,9-22,5	6,4-7,8	7,8-8,1	2,3-6,0	34,1-40,9	Clay does not swell, but sinters

**Grain composition of barkhan sand****TABLE 4**

Size of control screen holes, mm	The total residue on the control sieves, mass %
5	0
2,5	0
1,25	0
0,63	3,86
0,315	33,23
Passage through sieve 0.14	7,76

According to Table 4, the grain composition of sand is plotted, from which it is determined that the grain composition curve is outside the area of its allowable use in concrete, as the sand belongs to fine-grained sand with  $M_k=0,18-1,32$  and as a concrete aggregate it is impossible to use due to high cement consumption [3].

Constant composition of oil refining industry wastes:  $C=85,0\%$ ;  $H=13,0\%$ ;  $S=1,20\%$ ;  $N=0,683\%$ ;  $O=0,12\%$ . Wastes contain burning substances in amount of 30-35% consisting of bitumen and paraffin.

**2. Process diagram of production of porous aggregate from velvet sand.** The barkhansand is supplied for production without processing to the hopper, on which the mesh with a diameter of holes up to 5 mm, and then from the hopper by a plate dispenser is directed to the belt conveyor directly to the mixer-humidifier, into which ground clay is supplied from the grinding plant (as cement) in kraft bags, its fineness of grinding up to 1 mm. The oil effluent is fed to the aggregate plant in the form of lumps requiring grinding. Wastes are directed to disintegrator and then to belt conveyor and mixer-humidifier. All three components are mixed in a two-shaft mixer-humidifier, in which the mixture is moistened to 20% and directed to a hole roller, from which granules in the form of cylinders with diameter of 5-10 mm and length of 10-20 mm come out. The granules are fed from the rollers to a belt conveyor and then to a 2 m<sup>3</sup> storage bin. Granules with a moisture content of 18-20% are fed from the hopper by plate dispenser into the rotary furnace where granules are dried, sintered and cooled to 9000C.

The hot granules fall into a chain-type refrigerator and then onto a screen for fractionation and each fraction is sent to metal bins, and from there to the consumer, Fig.1.

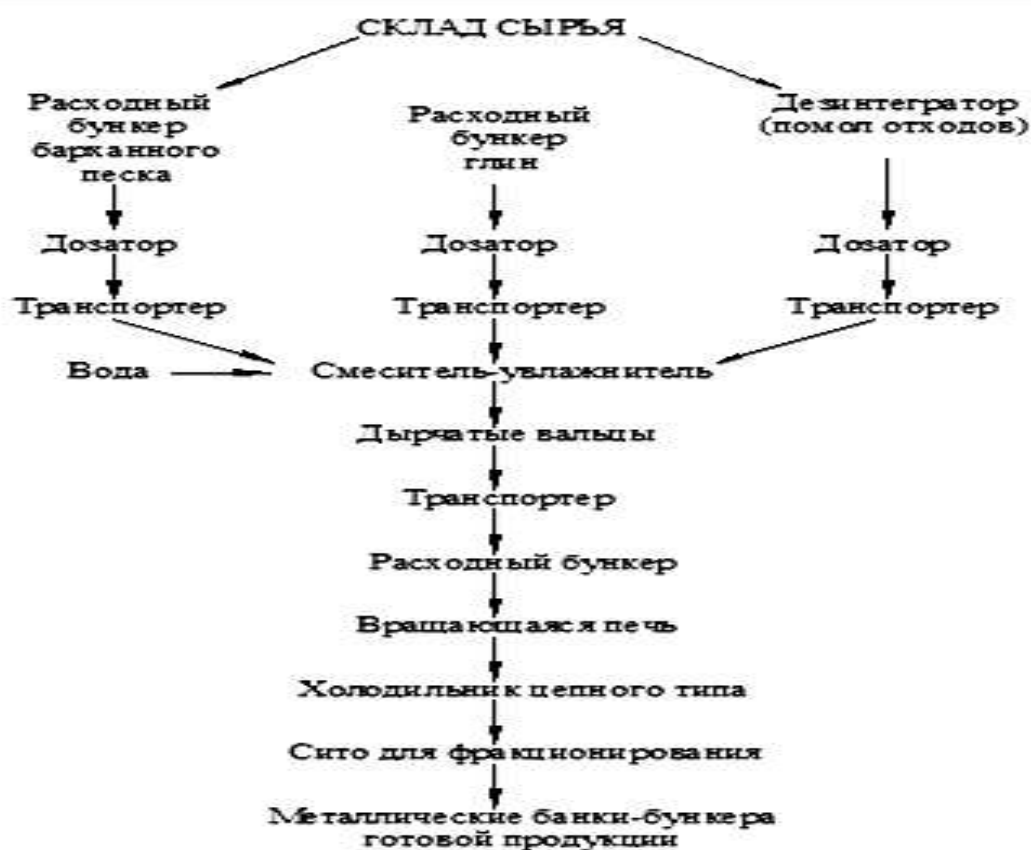


Fig. 1. Process diagram of production of porous aggregate from barkhan sand.

1. Production tests of the porous aggregate production technology parameters developed under laboratory conditions. Testing of optimal compositions of masses based on barkhan sand, clay and wastes of the oil refining industry was carried out at the Fayziabad plant for the production of ceramzite and the material base of the Tashkent NIIS throm project. To this end, about 60 tons of velvet sand, 18 tons of fine clay and 14.5 tons of oil refining waste were delivered to the Faizabad Ceramic Plant. Packing of masses consisting of 70% of velvet sand, 20% of hydraulic clay and 10% of wastes was carried out in a mixer, and formation of granules was carried out on perforated rollers with a moisture content of 18%. Without prior drying, the granules were fed into the elevator and then from the receiving bin the plate dispenser was directed to a rotary 22-meter oven. Sintering mode is selected according to [4.5]. The temperature of granule sintering in the zone of boiling of the rotating furnace fluctuated in the range of 1150-11800C, and the off-gas 450-5000C.

The sintering time of the material from the moment of loading and output of the finished product was 40-45 minutes. The fired porous aggregate obtained under production conditions is characterized by the following physical and mechanical properties, table.5.

From the table data, we can conclude that the resulting porous aggregate fully meets the requirements of GOST 11991-83 "aggloporite crushed Stone". An experimental batch of porous aggregate was obtained on the material base of the Tash NIIS thromproject. To conduct these tests, raw materials were delivered to the base – sand, hydrosfluidic clay and oil refining waste;

granulated in a disc granulator and fired in a 9-meter rotating furnace, in which the material was sintered for 40 minutes and a porous structure was formed due to the burning of oil products.

### The main properties of the filler

**TABLE 5**

#	Indicators	Един. измерения	Результаты по фракциям	
			5-10мм	10-20мм
1	Bulk density	кг/м <sup>3</sup>	640	620
2	Compression strength in cylinders	МПа	2,4	2,2
3	Water absorption in 1 hour	%	15,8	14,9
4	Frost resistance	циклы	60	60
5	Losses of weight at:			
	ferruginous disintegration	%	No	No
	silicate disintegration	%	No	No
	calcinating	%	No	No
	boiling	%	No	No

The results of the GOST test 9758-83 the methods of testing the porous inorganic aggregate for light concrete [6] of the obtained porous aggregate are given in Table 6 and they show that the main characteristics of the obtained material meet the requirements of the industry.

According to the data of tests (Table 6) according to GOST 9758-83, the obtained aggregate meets the requirements of GOST 11991-83 "Agloporite crushed stone" [7].

It should be noted that the strength characteristics and bulk density of the material are free to compete with ceramsite.

Basic physical and mechanical properties of the filler from the optimal composition of the mass obtained on the material base Tash NIIS thromproject

**TABLE 6.**

Indicators	Units of measure	fractions	
		5-10	10-20
Bulk density	кг/м <sup>3</sup>	640-660	620-640
Volume of ceramsite emptiness	%	55,5	59,3
Porosity of grains	%	18,6	18,8
Pressure strength in a cylinder	МПа	2,7	2,4
Water absorption:			
A) after 1 hour	%	16,8	17,7
B) after 48 hours	%	16,8	17,1
Softening coefficient	-	0,82	0,81
The mass loss at:			
a) calcination	%	0,1	0,2
b) silicate decomposition	%	No	No
c) iron decay	%	No	No
g) boiling	%	No	0,02

d) test in solution	%	No	No
Frost resistance	cycle	50	50
The content of sharply blown grains	%	No	No
Aggregate strength in concrete	МПа	12,5	12,5
Determination of hydraulic activity	мг	58,18	58,3
Bulk mass of aggregate grains in cement paste	кг/дм <sup>3</sup>	2,02	0,03

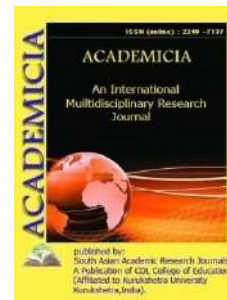
From the analysis of Table 6, it can be concluded that the obtained aggregate under the production conditions meets all the requirements of GOST not only for aglopote but also for clay. Thus, at the bulk mass of the aggregate of 620-650 kg/m<sup>3</sup>, the strength was 2.4-2.7 MPa, which is higher than that of clay. There is practically no study of mass loss in different types of tests compared to aglopote. Light concrete for structures can be obtained from this aggregate.

## CONCLUSION

According to the results of industrial tests, the technology of obtaining porous aggregate with high strength indices from 2.4 to 2.7 MPa at a bulk density of 620-640 kg/m<sup>3</sup>, meeting the requirements of GOST 11991-83 for aglopote crushed stone, has been developed.

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## MECHANICAL-MATHEMATICAL MODEL OF TRACTOR WHEEL PROPULSOR INTERACTION WITH BEARING SURFACE

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### ABSTRACT

*Within the framework of the general program of modernization of agriculture, qualitative renewal and replenishment of the agricultural machinery fleet are required, especially equipping it with new high-performance tractors capable of working in different soil-climatic conditions. This article presents proposals and conclusions on improving the technology and improving the efficiency of soil treatment of agricultural machines in order to effectively solve these problems.*

**KEYWORDS:** *Modernization Of Agriculture, Agricultural Machinery, High-Performance Tractors, Agro-Technology.*

### INTRODUCTION

Within the framework of the general program of modernization of agriculture, qualitative renewal and saturation of the fleet of agricultural machinery are required, especially equipping it with new high-performance tractors capable of working in different soil-climatic conditions.

Effective solution of the set tasks is possible only in case of a complex approach to their execution, in particular, it is necessary to work simultaneously on scientific justifications of new

solutions, to engage in concrete design, to develop new Agro technologies for effective use of new machines in agricultural production.

This is due to the fact that agricultural tractors, depending on their purpose and type, are subject to different requirements, which in no small part is related to climatic, soil and economic and technical conditions. However, today Uzbekistan lacks the energy that is sufficiently adapted to work in desert conditions.

## MATERIALS AND METHODS

Compacted pressure wedge is formed on compacted soils under the wheel as well as under flat die. With a small thickness of the loose layer, for example on a groin, the compression wedge may become a general compression of the loose soil layer laid by the solid base. Extrusion of soil in the sides during rolling of the automobile wheel on loose soils is weak, and on coherent soils in a soft-plastic and fluid state is predominant.

In one pass of the wheel, the soil does not have time to deform by a value corresponding to load. Therefore, with successive passes of the wheel on one track, there is a gradual increase in both the pinch wedge and the lateral extension of the ground.

Based on the experience of creating such mathematical models, to solve the above problem, it is necessary that, according to the known vertical load on the  $P_z$  axis of the wheel, the longitudinal speed  $V_x$  of the movement of its axis and the amount of longitudinal sliding  $s_x$  in the spot of its contact with the bearing surface, the longitudinal component  $P_x$  of the force transmitted by the wheel to the frame of the machine and the moment  $M_k$  occurring on the axis of the wheel are determined.

The design scheme is given in Fig. 1 was used in the development of this mathematical model. This diagram shows a variant of the interaction of the elastic wheel with the deformable bearing surface, which occurs in the driving mode of its rolling. This design diagram is obtained on the basis of the analysis of similar design diagrams given in [1,2,3,].

From Fig.1.it is visible that the wheel rotates at an angular speed of  $[\theta] k$ , and its axis has a longitudinal speed of  $V_x$ . In this mathematical model, the relationship between these parameters is determined on the basis of the recommendations given in [2] and has the form:

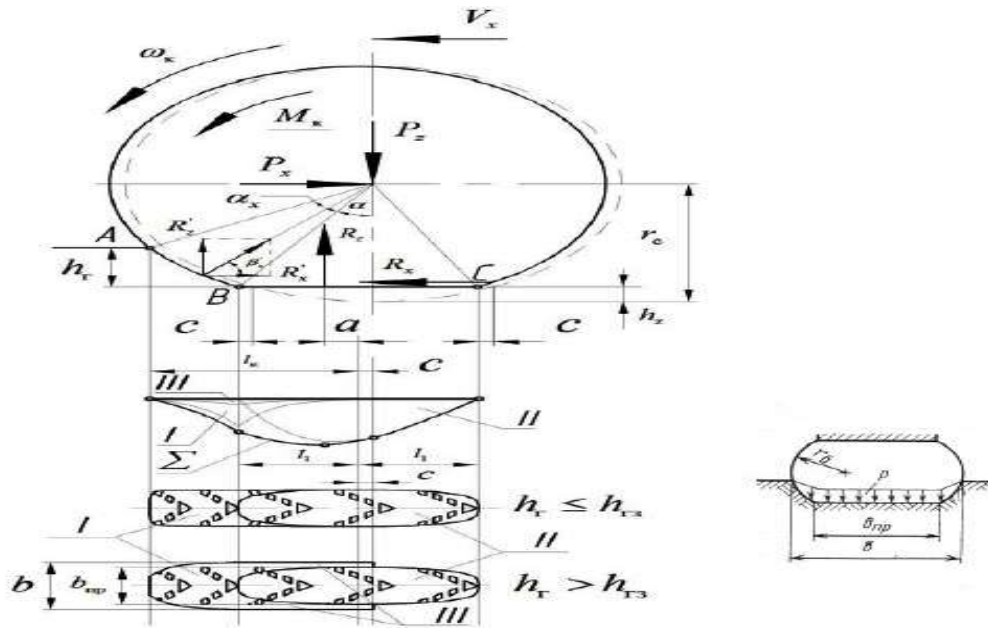
$$V_x = w_k * r_k * (1 - S_x) (3)$$

Where:  $r_k$  the rolling radius of the elastic wheel excluding sliding.

From fig. 1. It is also seen that the wheel through the axle receives longitudinal  $P_x$  and normal to the support surface with leaving forces from the frame of the machine, as well as moment  $M_k$  coming from the drive.

On the other hand, the elastic wheel interacts with the deformable bearing surface. The result of this interaction is the corresponding normal and tangential deformation of the tyre and the ground, as well as the resulting forces in the spot of their contact.





**Figure. 1** - Design diagram of elastic wheel interaction with the soil.

In accordance with the recommendations made in [1], in this model, tyre-to-ground contact is conditionally considered to consist of three areas (Fig.1):

- the first area - on a side view the main part of this area is presented by AV arch in a front part of the contact. In the top views (depending on the relation between the value of normal deformation of the ground  $h_g$  and the height of the hook ground  $h_g$  of the tread of the tyre) this area is indicated by the number I. Here it is also indicated:  $b_{pr}$  is the width of the tread of the tyre,  $b$  is the width of the formed gauge;
- the second area - on a side view this area is presented by VS horizontal. In plan views, this area is indicated by II;
- the third area - is formed in the presence of contact of a side surface of the tire with soil in case the size of normal deformation of  $h_g$  soil exceeds height tire  $h_{gz}$  hook soil. In the corresponding plan view, this area is indicated by the numeral III. In addition, this area is shown in the front view of the wheel.

Due to this approach, it is possible to provide continuity in the development of a mathematical model of an elastic wheel rolling on a deformable support surface, creating it on the basis of a mathematical model of an elastic wheel rolling on the undeformed surface. This continuity is important to solve the set tasks of the study from the point of view of identification of factors that need to be taken into account in the creation of intelligent transmissions of wheeled machines operating both in conditions of the non-deformable and deformable support surface.

To this end, it is proposed to use the superposition method, which in the developed mathematical model is implemented as follows.

Within the second region of the contact spot (surface BC), it is assumed that the elastic wheel interacts with the bearing surface on the bottom of the formed track in the direction normal thereto as well as when rolling on the non-deformable bearing surface. Therefore, the processes

accompanying the elastic deformations in the tire and the associated rolling losses are mainly determined by the forces generated in this second region of the contact spot. In the same region, a longitudinal traction force  $R_x$  of the driving wheel is formed.

The ground deformation normal to the support surface and the associated mechanical energy expenditure on gauge formation is due to the forces generated by the interaction of the wheel with the ground in the first and third regions of the contact spot. At the same time, it is assumed that the process of wheel milling of soil is not taken into account in modelling.

This method of superposition is illustrated in Fig.1 in the form of epurs of distribution of values of normal loads assigned to longitudinal coordinate  $x$  within these three areas. The number of the epic corresponds to the received number of the contact spot area. The same figure shows the view of the total distribution of these load values, which is close to the real distribution [1].

Thus, considering that a part of the normal loading which is coming on a wheel axis from the outside of a car skeleton is implemented in the first and third areas of a spot of contact in the form of  $R_z$  force, normal deformation of the tire  $h_z$  in the model is calculated in size of reaction  $R_z$  which is determined from the equation of balance of a wheel in the vertical direction by a formula:

$$R_z = P_z - R'_z(2)$$

Hence, the value of  $h_z$ , according to the recommendations [2], is determined by the formula:

$$h_z = \frac{K_z \cdot (R_z)^{0.75}}{1 + 10 \cdot p_w}(3)$$

where:  $K_z$  - coefficient constant for a given tire, is determined according to [2];  $P_w$  - tire pressure.

The strength  $R_z$  is estimated in accordance with the recommendations given in [1,4] based on the following energy considerations. It is obvious that the specific work spent per rut per unit of track travelled by the wheel axis is numerically equal to the corresponding specific work on plastic deformation of the soil in the direction normal to the supporting surface. According to [1], this specific work is equal to the total reaction  $R_z$  of the deformable soil in the direction normal to the supporting surface. Considering the accepted assumptions that this force is formed in the first and third regions of the contact spot (Fig. 1.), and recommendations [1]  $R_z$  in the adopted case is determined by the formula:

$$R'_z = k_z \cdot b_{np} \cdot \int_0^{h_r} p(h) \cdot dh + (1 - k_z) \cdot b_{np} \cdot \int_0^{h_r - h_{r3}} p(h) \cdot dh + \\ + \frac{2}{3} \cdot (b - b_{np}) \cdot \left[ \int_0^{h_r - h_{r3}} p(h) \cdot dh + p(h_r - h_{r3}) \cdot (l_1 + c) \right], \quad (4)$$

where:  $k_z$  is the saturation coefficient of the tire tread;  $p(h)$  is the dependence of the pressure in the contact of the tire surface with the soil on the normal deformation of the soil, determined by the recommendations [1].

Thus, knowing the load component  $P_z$  normal to the supporting surface, which is perceived by the axis of the wheel in question, and using the recommendations [1], which allow us to estimate the dependence of the pressure in the tire surface contact with the soil on the normal soil

deformation  $p(h)$ , from equations (2), (3) and (4) the values of normal deformations of the tire  $h_z$  and soil  $h_g$  are determined under the given conditions of a wheel rolling.

Next, we consider the operation of the elastic wheel in the second region of the contact spot (surface of the aircraft in Fig. 1).

In accordance with the assumptions made, the work spent on rolling the tire to its normal deformation from the force  $R_z$  and the circumferential deformation from the moment  $M_k$  determines the rolling loss of the elastic tire itself. In this model, these losses are considered equal to the losses that occur when an elastic wheel rolls along an undeformable base with the same magnitude of loads. Therefore, in accordance with the recommendations given in [2], the coefficient  $f_m$  of rolling resistance of an elastic wheel, which determines these losses, is estimated by the formula:

$$f_{uu} = f_0 + f_m \quad (5)$$

where:  $f_0$  is the coefficient of rolling resistance of the elastic wheel in the driven mode, based on the recommendations given in [2], is equal to:

$$f_0 = \frac{(1+0,467 \cdot 10^{-3} \cdot V_x^2) \cdot (\alpha_f + \beta_f \cdot R_z^2)}{1+p_w} \quad (6)$$

$\alpha_f$  and  $\beta_f$  are the coefficients determined for a given tyre according to the recommendations given in this paper;

$f_m$  is an additional component of the rolling resistance coefficient of an elastic wheel loaded with torque,

As noted above, within the second area of the contact spot (the AF surface), due to the interaction of the tire's tread (hitch ground) with the ground, a longitudinal component  $R_x$  of force is also formed which, as is known [1,2], is generally determined by the formula:

$$R_x = \varphi_x \cdot P_z \quad (7)$$

where:  $\varphi_x$  – the longitudinal force coefficient or the coefficient of adhesion of the elastic wheel with the supporting surface in the longitudinal direction is determined by analyzing the interaction of the wheel with the soil in the tangential direction within the second region of the contact spot depending on the longitudinal slip  $S_x$  in accordance with the recommendations given in [1].

Based on the analysis of the interaction of the tire with the soil, in accordance with the recommendations set forth in the work, within the second region of the contact spot,  $R_x$  can be determined by one of the following formulas:

$$h_r \geq h_{r3}, \text{ to } R_x = S_{II} \cdot \left[ k_z \cdot \tau_{rp} + (1 - k_z) \cdot \tau_{cp} \right]; \quad (8)$$

$$h_r < h_{r3}, \text{ to } R_x = k_z \cdot S_{II} \cdot \tau_{rp} + h_r \cdot b_{np} \cdot \frac{2 \cdot l_1}{t_z} \cdot \tau_{cp}, \quad (9)$$

here:  $S_{II}$  - an area of the second area of the contact spot (surface of the  $BC$  in Fig. 1);  $\tau_{tr}$  - friction stress in contact of the outer surface of the ground of the hooks with the supporting surface, determined in accordance with recommendations [1];  $\tau_{cp}$  the ground shear resistance stress of the ground by hooks in the trough between them, is determined in accordance with the recommendations [1];  $l_1$  is half the length of the contact spot;  $t_z$  is the step of the ground of the tire hooks.

It should be noted that the result of the interaction of the elastic wheel with the ground in the first and third areas of the contact stain, in addition to the force  $R_z$  is also the longitudinal force indicated in Fig. 1.  $R_x$ . Essentially, this force creates additional resistance that occurs when the elastic wheel is rolling on a deformable base. According to the recommendations [1] force,  $R_z$  is created as a component of the force from the normal deformation of the soil (track formation), which is characterized by the coefficient  $f_g$  of rolling resistance of the elastic wheel on the ground, due to losses on its deformation, and the force from the ground raking in front of the wheel. To estimate this additional resistance in accordance with the recommendations [1], a special coefficient  $f_b$  of rolling resistance of the wheel on the deformed surface from the raking soil in front of the wheel is used.

From here, the mathematical model is accepted:

$$R'_x = (f_r + f_b) \cdot P_z \quad (10)$$

Then from the equation of uniform movement of the wheel in the longitudinal direction, taking into account the relations (7) and (10), we will obtain the longitudinal component  $P_x$  of the force arising on the axis of the considered wheel:

$$P_x = R_x - R'_x = (\varphi_x - f_r - f_b) \cdot P_z \quad (11)$$

According to the recommendations stated in [1], it is accepted that the line of action of the vector of equal forces  $R_z$  and  $R'_x$  passes through the axis of rotation of the wheel, forming some angle  $\beta_x$  with a supporting surface. This assumption, according to the assertion [1], can be accepted because the wheel ground contact surface in the first area (arc  $AB$ ) is close in shape to the side surface of the circular cylinder with the wheel axle coinciding with the wheel axle. The consequence is that this equivalent does not create additional torque around the wheel axle.

From here, it follows that:

$$R'_z = R'_x \cdot \operatorname{tg} \beta_x \quad (12)$$

To determine the value of the angle  $\beta_x$ , the assumption is made at modelling that the line of action of the vector of equidistance forms a central angle equal to  $\alpha_3/x$  from the  $OM$  line, where  $\alpha_x$  is the central angle determined by the value of arc  $AB$ . This assumption is based on the fact that within the first region of the contact spot (arc  $AB$ ) of the epyurean distribution of the relative value of the normal to the reference surface of the force is close to a triangular force (see Figure 1). Fig.1).

For geometric reasons, the angle  $\alpha_x$  is determined by the formula:

$$\alpha_x = \arccos\left(\frac{r_c - (h_z + h_r)}{r_c}\right) - \alpha \quad (13)$$

where:  $r_c$  - free radius of the elastic wheel, determined in accordance with recommendations [2, 5], and in Fig.1.is equal to the segments of OA and OM;

$h_z$  - normal deformation of the tyre to the support surface;

$S_g$  - normal to the supporting surface deformation of the ground;

$\alpha$  is the central angle determined from the ratio:

$$\alpha = \arcsin\left(\frac{l_1 + c}{r_c}\right) \quad (14)$$

$l_1$  - Half the length of the BC contact spot (second area), determined from the formula:

$$l_1 = \sqrt{(2 \cdot r_c \cdot h_z - h_z^2)} \quad (15)$$

$c$  - additional demolition of the vertical reaction in the second area when the elastic wheel is running in rolling mode.

As is known, this additional demolition of the vertical reaction is due to the resulting tangential (circumferential) deformation of the tire loaded with the applied torque  $M_k$ , coming from the wheel drive and realized in contact with the wheel with the supporting surface. The analysis showed that the value is determined from the formula:

$$c = \lambda_k \cdot M_k \cdot \varphi_x \quad (16)$$

Hence the value of the angle  $\beta_x$ , according to Fig. 1, is determined from the formula:

$$\beta_x = \frac{\pi}{2} - \left(\alpha + \frac{1}{3} \cdot \alpha_x\right) \quad (17)$$

Thus, the given relationships (1) - (17) allow in the given rolling conditions of the elastic wheel along the deformable base at the known value of the moment realized on the wheel axis  $M_k$  to estimate the longitudinal component of the force  $P_x$  perceived by the frame of the machine through the axis of the wheel in question.

Moment  $M_k$  realized on the axis of the considered drive wheel is determined from the equation of its power balance [1,2]. According to the recommendations given in [1], when the elastic wheel is rolling along the deformable base, this equation is as follows:

$$N_k = N_T + N_s + N_{f_{\text{ш}}} + N_{f_r} + N_{\delta} + N_{\pi} \quad (18)$$

where:  $N_k = M_k \cdot \omega_k$  - Power supplied to the wheel from the drive;

$N_T = P_x \cdot V_x = (\varphi_x - f_r - f_{\delta}) \cdot P_z \cdot r_k \cdot \omega_k \cdot (1 - s_x)$  - traction power of a wheel;

$$N_s = P_x \cdot V_s = (\varphi_x - f_r - f_\delta) \cdot P_z \cdot r_k \cdot \omega_k \cdot s_x - \text{Towing loss power};$$

$N_{f_{\text{ш}}} = f_{\text{ш}} \cdot R_z \cdot r_k \cdot \omega_k$  – Rolling loss power of the elastic tire (due to losses on normal and circumferential deformation of the tire);

$$N_{f_r} = \hat{f}_r \cdot P_z \cdot V_x - \text{Power of losses for soil deformation by the wheel};$$

$N_\delta = f_\delta \cdot P_z \cdot V_x$  – The capacity of losses from soil heating before the wheel (bulldozer action) is estimated based on the recommendations of the work [1];

$N_{\text{п}} = f_{\text{п}} \cdot P_z \cdot r_k \cdot \omega_k$  – Loss power caused by soil stickiness is estimated on the basis of work recommendations [1].

After algebraic transformations taking into account the above formulas and recommendations given in [2], we will obtain:

$$M_k = P_z \cdot r_{k0} \cdot \left[ \varphi_x + f_0 \cdot \left( 1 - \frac{R'_z}{P_z} \right) - (f_r + f_\delta) \cdot s_x + f_{\text{п}} \right]_{(19)}$$

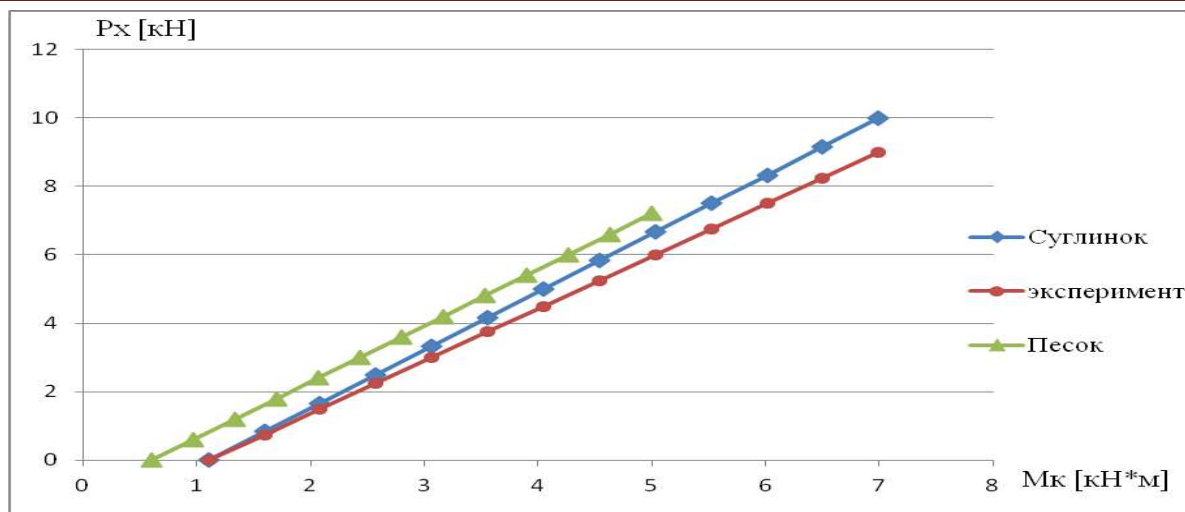
Analysis of formula (19) shows that it uses only the parameters involved in obtaining dependencies (2) - (17), which means that formula (19) closes the system of equations characterizing the operation of the elastic wheel when it interacts with the deformable bearing surface. That is, the given system of equations (2) - (19) is a mathematical description of the processes characterizing this work.

Based on the proposed mathematical description, a corresponding calculation methodology was developed in the form of a software module written in Turbo Pascal for Windows

Fig.2 shows graphs of the dependence of parameters characterizing mutual action of the elastic wheel of  $\Phi\text{Д-12М}$  grade (dimension 28,1R26) with two versions of horizontal deformable bases (with conditional names: "loam" and "sand") obtained as a result of calculation according to the proposed mathematical model and comparative graph of experiment results given in [6].

Parameters of the elastic wheel of  $\Phi\text{Д-12М}$  grade (dimension 28,1R26) are taken from operation [7], and characteristics of support surfaces are selected from data given in operation [1]. Operating conditions were set by the following parameters: tire air pressure -  $p_w = 160$  kPa, vertical component of wheel axle load -  $P_z = 42$  kN, wheel rotation angular speed -  $\gamma_k = 2.24$  rad/s, as well as a range of change of longitudinal sliding value in the wheel contact spot with bearing surface -  $s_x = 0 \dots 0.5$ .





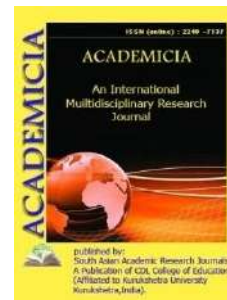
**Figure 2.** Dependence of  $P_x$  on  $M_K$

A comparative analysis of theoretical results with experimental data showed (for “loam”) that the average deviation is 9.19%, the maximum deviation is 9.96% and the standard deviation of the values from the average 2.76%.

Thus, an analysis of the results of theoretical studies showed that the proposed mathematical model adequately describes the process of rolling wheel propulsion on a deformable surface (using the “loam” example, the maximum deviation is 9.96%) and it can be used when rolling wheel propulsion on the sand.

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## LINGUODIDACTIC BACKGROUNDS OF CREATING VIDEO LESSONS

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### ABSTRACT

*The article deals with some aspect of using video in teaching English as a foreign language. The main attention of the article is focused on the benefits and goals of using authentic video materials for language learning and teaching, as well as the advantages of using videos at the English language lessons. At each stage of practice, there's a variety of tasks, ensuring the successful perception of foreign speech by students that increase their motivation to learn a foreign language. Video material stimulates interest, is a role model, expands students' knowledge of the linguistic and cultural features of the language being studied, and also provides effective material for the subsequent discussion. Using video in teaching a foreign language opens up ample opportunities for the teacher and students in mastering the language and foreign culture. Video resources have an advantage over audio and printed information. Visual information allows you to better understand and consolidate factual information and language features of speech, as visual support contributes to a complete and accurate understanding of the meaning, activating attention and memory and contributing to the development and skills of listening and speaking. The main point in the issue is that for certain teaching purposes technology is an irreplaceable means and for others (like authenticating the input, listening to native speech) is the most appropriate from logistical and practical points of view. Besides, multimedia technology that involves interaction (so-called non-linear multimedia) is a strong source of learner motivation to perform the teacher's assignment. These objective features, together with the fact that classroom digital technology is based on multimedia, which, itself, is centred on video, lead to the teachers' using videos more and more intensively and often encounter the aforementioned problems. The current intense of the video usage makes it necessary to give all efforts to try alleviating the potential problems caused by it.*

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**KEYWORDS:** *Adapted Resources, Classroom Setting, EL Classrooms, Follow Up Assignments, Foreign Language Teaching, Integration Of Visual Materials, Introductory Exercises, Speaking Skill, Video Materials, Video Technique.*

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## I. INTRODUCTION

A video is a powerful tool in today's classroom. It provides a strong context through which to teach English. Meaning brings the outside world into the classroom and gives teaching "reality". Video also provides all the paralinguistic features of language that only audio can't. The success of teaching a foreign language through video depends on preparing students for the perception of a video. Analysis of the current system of organizing language learning shows that learning standards, curriculums and textbooks do not fully meet the current requirements, particularly in the use of advanced information and media technologies. Education is mainly conducted in traditional methods. Further development of a continuum of foreign languages learning at all levels of education; improving skills of teachers and provision of modern teaching materials are required. Modern English-as-a-Foreign-Language (EFL) teaching methodology is strongly based on a variety of tools. Moreover, the scope of these tools is becoming exceedingly rich. Today, speaking about this issue, we do not mean only the tools of mind and primitive displaying devices like chalk - or whiteboard or objects like textbooks and handouts. Modern teaching methodology gradually turns essential such tools like computers, data projectors, audio and video players, and displays, i.e. electronic multimedia devices. However, often, even having a rich set of such devices available, teachers are unable to use them effectively. This happens for two main reasons: incompetence in handling the equipment, and lack of awareness of the teaching techniques that would allow employing the usage of multimedia. The theoretical value of the research lies in synthesizing the already done researches in the field of video technologies applied to teach languages and enriching the scope of selection criteria and didactic activities that it will recollect in its course. The practical importance of the research is mainly in assisting specialists in EFL teaching who have not gained enough experience in teaching the language using video materials. Thus, the work will provide the patterns of the lessons taught with the usage of video and the criteria for video material selection will be of high practical applicability.

## II. METHODOLOGY

In the article, we have used the methods of pedagogical-sociological methods (observation, analysis, accumulating the information and facts, summarizing the ELT experience); statistical methods (for calculation the qualitative and quantitative indications of the results of the experimental work). The materials for the research were a series of researcher-designed lesson plans developed based on findings made in the secondary study, several videos displayed while teaching the experimental group of subjects with the help of a computer, and two formats of researcher-developed tests that functioned as a pre- and post-test to compare the progress of experimental group with that of the control group. The videos selected for the reasons provided in the paper were several episodes of Big Bang Theory sitcom, which were utilized in the teaching process continuously throughout the primary research. Methodological foundation for the article is comprised of the state documents on the higher education and several works on applied EFL teaching methodology.

### **Linguodidactic basis of using video in the English language classrooms.**

Video is a valuable and possibly underused classroom tool. There is always the temptation to simply put a video on at the end of term and let our students watch a film without even challenging them to be actively involved. [5]. Video as a listening tool can enhance the listening experience for our students. We very rarely hear a disembodied voice in real life but as teachers, we constantly ask our students to work with recorded conversations of people they never see. This is often necessary in the limited confines of the language institutions and sometimes justifiable, for example, when we give students telephone practice. However, we can add a whole new dimension to aural practise in the classroom by using video. The setting, action, emotions, gestures, etc, that our students can observe in a video clip, provide an important visual stimulus for language production and practice. So, there are various views provided about the effective usage of video materials in the classroom by different linguists which the further part of the paper deals with. This is helped reveal a number of important aspects of the use of electronic media; particularly, authentic video material; in modern EFL teaching classroom. Having started with an analytical exploration of the features of such a classroom, it led the researcher to the points about the present-day need of interactive, or —outward, usage of language; and about the need to take account of not only competence (i.e., the mastery of language), but performance (i.e., language used for the definite pragmatic purpose) as well. Moreover, of the two, i.e. knowing how to perform and performing itself, the latter must be prioritized as language is primarily a means of communication, but not a system, awareness of which is the top virtue. Besides, another part of the secondary study recalled the notion of learning styles and the importance of providing for a combination of the maximum of them. Examined against that capacity, video materials can provide for visual, auditory, and (if supplemented with mingling-oriented activities) kinesthetic learners' needs. That makes them a perfect tool for instruction and skill mastering. Later on, the research has examined and contrasted traditional and modern methods of teaching EFL and focused on revealing the drawbacks of traditional ones, mostly based on teaching grammar and translation; and the strength of modern communicative approaches. A rather outdated teacher-centred paradigm where the learners are to behave obediently and are under the total control of their instructor was also examined in the course of the study. Many advantages of learner-centeredness over teacher-centeredness were inferred as a result of comparative analysis. In the course of the secondary study, it has also been revealed that modern EFL teaching has made essential such novelties as CALL and MALL, which include a variety of means able to fulfil a wide range of didactic purposes and greatly intensify and speed up the learning process.

### **Principles of selecting video materials for English lessons.**

Whether using authentic or instructional videos, there are criteria to be followed in their selection. Stempleski suggests that teachers ask themselves the following questions before choosing a video or video series: [6]

**Inspiration/Motivation/Interest:** Will the video appeal to my students? Will it make them want to learn?

**Content:** Does the content match my instructional goals? Is it culturally appropriate for the learners?

**Clarity of message:** Is the instructional message clear to the students? Here the teacher is vital. Preparing the learners to understand what they are going to watch makes the difference between time wasted and time well spent.

**Pacing:** Is the rate of the language or instruction too fast for the students? Many authentic videos move at a pace difficult for a nonnative speaker to follow. Even an instructional video may be too fast-paced and dense for adults new to English.

**Graphics:** What graphics are used to explain a concept? Do they clarify it? Do they appear on-screen long enough to be understood by the learner?

**Length of sequence:** Is the sequence to be shown short enough? With second language learners, segments that are less than five minutes are often sufficient. A two-to three-minute segment can easily furnish enough material for a one-hour lesson [7].

**Independence of sequence:** Can this segment be understood without lengthy explanations of the plot, setting, and character motivation preceding and following it?

**Availability and quality of related materials:** What print materials accompany the video?

**Use of videos:** How will I use the video? In the classroom, a teacher can help students tackle video presentations that are linguistically more complex and in which the storyline and characters are more ambiguous. Videos of this type should probably be avoided when assigned for self-study.[4] The modern spread of technology allows a wide range of videos available for any EFL teachers. We decided to stop at a selection of those having strongest didactic and skill-developing potential, out of which we shall later choose one meeting most of the aforementioned criteria.

Recently, several videos for adult English language learners have been produced for broadcast on public television stations and as videotapes to purchase. They are published in multimedia packages that include teacher texts, student books, audiotapes, and, in some cases, reading texts, reproducible masters for the classroom, and assessment materials. These videos may be used in library programs, community-based programs, or workplace programs where learners meet with an instructor weekly or monthly, but most of the learning is through self-study. The following videos are marketed for use with adult English language learners in the classroom, distance learning, or self-study settings.

The review of the videos has led the researcher to realize the need of taking into consideration a criterion Stempleski ignored. This is the criterion of authenticity. If not considered when selecting videos for the classroom, it can lead to artificializing the context and habituating the learners to non-real-life situations. For that reason, the researcher has chosen ten episodes from *Bing Bang Theory* to carry out his research with the students as it meets most of the requirements for video material selection mentioned by Stempleski and besides, remains authentic and is not targeted at language learners. The selected video is an American sitcom which is centred around five characters: roommates Leonard Hofstadter and Sheldon Cooper; waitress Penny, aerospace engineer Howard Wolowitz and astrophysicist Raj Koothrappali. The intellect of the four guys is contrasted for comic effect with Penny's social skills and common sense. First of all, it can get students interested in its humorous content -- it is a comedy with different situational jokes and funny moments. Another important factor is it teaches American culture to students which enhances their socio-cultural competence. Besides, the content is also



appropriate for my learners as it is about four guys who specialize in different spheres of science and all their talks are mostly about science, that is, from the educational sphere. Pacing is also adequate for students to be able to catch up with what is going on in the video. To meet the graphical requirements, subtitles are provided at the bottom part of the screen which enables students to have full comprehension of the video. Independence of sequence is another asset that this series contains enabling students to understand different episodes regardless of previous or following ones. Another important aspect this series possesses is the length of an episode which is around twenty minutes. The researcher considers it to be perfect timing for a pair of the lesson, twenty minutes of which is used for video watching and the rest 60 for integrating the video with didactic practices in the forms of discussions, pre-, while-, and postwatching activities involving other language skills. As it is a very popular sitcom, the scripts of it can be found from the internet with minimal difficulty both for teacher and students, with the possibility of assigning home reading of the scripts as a means of simplification. The video we've examined appears to possess most of the features that make it successful for utilizing in an EFL classroom, thus the researcher has stopped on it as the one to be used in the experimental part of the current research.

### **The techniques and ways of using video in EL classrooms.**

Now as the video to be used in this research has been selected, it is important to discover the ways it can be introduced to the learners. According to the Russian Methodists, working with the video includes 1) three stages (pre-textual, while textual and post-textual tasks) [1] or 2) five stages (preparational, receptive, analytical, reproductive and productive) [2]. At the same time, MilliFazey of Kentucky Educational Television (KET) (1999) suggests that teachers think of using a video as three stages, including pre-viewing, viewing, and post-viewing activities. In the frame of our work, we support the last three-pointed stages, which can be characterized in a next way. *Before presenting the video*, the teacher must engage the learners' interest in what they will be doing and prepare them to do it successfully. The teacher tells the students or leads them to discover for themselves why they are viewing the video. Preparation may include a pre-viewing reading activity or a discussion of new vocabulary from the video. It may involve looking at still pictures from the video and predicting language and content to be covered. Finally, pre-viewing preparation means ensuring that an operating VCR and monitor is available and that the screen is large enough for all students to easily view the film. Fazey recommends using a 20-inch screen for a class of 12 to 15 learners.

*While learners view the video*, the teacher should remain in the classroom with the learners to observe their reactions and see what they do not understand, what they are intrigued by, and what bothers them. The teacher is there also to press the pause, rewind, and play buttons as needed. Sometimes it is best to leave the lights on. This facilitates the teacher's observations and enables learners to take notes and to complete worksheets prepared by the teacher. The teacher can provide students with some tasks to be dealing with while watching the video which could include filling the gaps, true-false statements or multiple choice statements. This would encourage students' active participation and watch of the video. *After the viewing*, the teacher should review and clarify complex points, encourage discussion, and explain and assign follow-up activities whether they are included in the student texts and materials that accompany the instructional videos or they are developed for authentic videos. For example, post-viewing activities can include discussing in small groups the language and cultural concepts presented in the video, work on grammar and vocabulary taken from the language and structures used in the



video, and then do a consensus-building and problem-solving activity and complete a project that takes them to the larger community. Many things can be done with the videos in the course of teaching a language. There is a wide variety of them, out of which the most noticeable points will be examined below. This will take the form of a sketchy description of the pattern that each activity type has; thus, they could be adapted for use with any particular video depending on availability. Moreover, the activities below are targeted at a variety of learner levels and are designed within the principles of the communicative approach.

Harmer (2007) suggests a variety of viewing techniques when using films and videos in EL classrooms which include: **1. Show only the picture. Commonly referred to as “silent viewing”**, this presentation techniques involves playing a video sequence with the sound turned down and having students decide what is happening and what the speakers are probably saying. The technique is appropriate for use with dramatic sequences containing visual clues about the situation or relationships among the characters. **2. Freeze framing.** This is another technique which keeps students attentive while watching a video by freezing the picture in the video and asking students what they think will happen next. This one is as good as the former one in terms of effectiveness and enrollment of critical/ creative thinking. **3. Partial viewing.** This is one of the most unusual and original techniques which could be used during the lesson according to which most of the screen is covered with a piece of paper causing difficulty for students to watch. And, the students are asked to guess what is going on in the video by calling for discussion. **4. Picture or speech.** Sometimes this technique is referred to as split viewing and It presupposes students' working in two groups half of whom watch the video and the second half faces away. The ones who face away will express their opinion about the setting of the conversation and characters while the second half will correct them and check their understanding. **5. Subtitles films.** Usually, students with lower-level have a hard time keeping up the flow of speech and understanding the video. In such cases, subtitles are provided with help students see and hear at the same time which enhance their understanding. However, most students find subtitles distracting and ask the teacher to switch it off. **6. Picture-less listening.** It is listening to the audio before watching the video. However, this is not always effective as students can get bored if a video lasts for more than ten minutes. **7. Describe the speaker.** This activity, which is good for reviewing descriptive adjectives with students works best with a sequence in which the voice of only one character is heard, such as a one-sided telephone conversation or a monologue. The teacher distributes or writes on the blackboard a list of adjectives, some that describe the character in the sequence and some don't. **8. Five W's and H.** (who, what, why, when, where and how) This activity works well with brief excerpts from news program documentaries in which a single presenter introduces a subject, such as the 1st minute of the KOKO sequence on the national Geographic documentary Gorilla. The teacher begins by writing six questions words on the board. **9. Play only the beginning.** In this technique teacher only shows the beginning of the sequence, ask the class to predict what they will see and hear later in the video story. **10. Write the dialogue.** Students are asked to pick a five minute part of a previously watched video and write the script for it which should be completely different from the original one. Students will work in pairs and different variations of scripts for the video is compared and performed in the classroom. In our opinion is the more effective result in teaching EL gives DVD as a multimedia tool. Its technical characteristics were described by M.U.Novikov[9]. By the help of DVD, we can manage the temp of the speech, that help for sanitization of the acoustic image of the lexical units, grammar constructions and to

avoid the meaning mistakes. This type of task is called relative (in French - *ralentir*, in Russian - *релативный*) in the methodical literature [9]. For example 1) Listen to the phrases/sentences in the slow tempo and choose the phrases and sentences which link with the plot of the film. 2) Listen to the phrases/sentences in the slow temp and choose the adequate translation to them. 3) Watch the fragment of the film in the slow than in normal regime. Extend the dialogue with suitable replicas. DVD can be used in many ways to cause effective learning of a foreign language. While working with video materials certain steps should be taken into consideration as pre-, while- and post- video stages application of which can bring effective usage of video. Besides, the above mentioned techniques are recent trends in using the medium in EFL classrooms. And they can be used in different stages of the lesson depending on their type. With a little practice, teachers usually find video easy to use, and the resulting motivation and language learning outcomes are usually satisfying. The researcher used most of the techniques mentioned above and followed the stages of pre-, while- and post- stages of video viewing.

**Approbation of the worked-out technology.** Subjects of the conducted research were students of English Philology with whom the researcher had Practical English classes. Students varied in age, level of English proficiency which is between elementary and intermediate and culture i.e. there were representatives of Uzbek, Russian, and Korean culture. There were involved two groups of the learners in the research. The first group was “A” which consisted of 12 students, while the second group “B” contained 8 students. The reason for having a few students in both groups was that not all students wanted to participate in the research and some of them had issues with attendance. The researcher had pre-tests with the subjects according to the results of which experimental and control groups were formed. So, the researcher out of 20 subjects picked up the 12 ones who had lowest grades and they were put into an experimental group. Rest of the subjects were put into a Control group. The reason that the researcher decided to carry out his study with lower-level students is that he wanted to observe the improvements which could be made by the students with poorer academic skills than with the ones with higher results. The experimental group attended the Video lessons conducted by the researcher. This group consisted of seven female and 5 male learners with different characteristics. The researcher met with them several times to give them pre-test, posttest and to discuss some other things necessary for the research process. The researcher should mention that pre-interview of the learners of both groups revealed that the vast majority of them had no exposure to authentic videos in the process of their previous learning. Most of the teaching materials were represented in the aforementioned teacher’s reference books. They were aimed at developing four basic language skills (reading, speaking, listening, writing), as well as critical thinking, vocabulary and culture learning abilities, using them in sequence, while conducting pre-viewing, while-viewing, and post-viewing activities. We have created different activities focused around the topic represented by the authentic video materials chosen by the investigator. Activities motivated learners to use only English in the classroom, helped students to lower the barriers between their own and target language’s culture, and accelerated learners’ interest in acquiring a language through video content. These teaching materials were expected to provide necessary data on student’s learning progress of the target language and culture. Authentic video materials were chosen according to criteria developed by the investigator. Topics of the video content varied, including American history, lifestyle, the young generation, studies etc. The video contained language and cultural-based content with various samples of English varieties, non-verbal communication, unique expressions etc, and it was used in segments, providing learners with enough time to comprehend

the content and do the tasks. The researcher chose these materials to provide learners with proper information about the target language and culture so that the outcomes of the research were satisfactory.

The researcher met with the learners and briefly explained the importance of authentic video materials in the language learning process. Students were asked to actively take part in the process of the study, which gave them the opportunity to effectively acquire the target language, i.e. English, and culture, and sensibly, as well as enjoyably, spend their time. Learners were informed that they would be able to improve their English language skills actively participating in the study process. The main thing they had to do was to watch the video segment and do some practical tasks. The researcher had video classes with subjects two times a week and the research lasted for 5 weeks from 11. 02. 2013 to 03. 15. 2013. The investigator presented the topic of the first lesson. After, students were asked to predict the plot of the upcoming video segment. The aim of the researcher was to enhance their motivation as much as possible. Finishing that task, students were asked to do some while viewing and post-viewing tasks in a form of questions, games, activities etc. Whenever a term or a phenomenon from a target culture appeared in the video segment, the researcher paused the video and asked students whether they knew it or how they understood it. In the cases when they couldn't provide the answer, the teacher gave a full explanation of that thing. In the end, as a home assignment learners were given different tasks in which they had to work together and create something based on that video. The rest of the study was conducted in the same manner, but using various other activities such as role-plays, video dictation, silent watching, split viewing, etc. detailed description which will be given in appendix section. At the end of the experiment, students took the test to compare their previous results with the last one. Also, learners had short interviews with the investigator, where they expressed their attitude towards the research process, the method used, and drawbacks where the participants gave their feedback to the study process and method used. The members of the experimental group gave extremely positive comments on the study and admitted that the use of authentic video materials helped them very much. They hoped that this method would be used further in their academic studies. The process of the data collection of the current research lasted for five weeks. Nevertheless, before the actual process started, the great amount of time was spent on preparing necessary materials and research tools.

The members of the Experimental Group took the post-test first because they were still attending the Video lessons. At first, it was difficult for the investigator to gather Group B altogether since the younger students were preparing for their midterms. However, with the great diligence of the researcher to finish the study, the control group also met together and took the post-test. Now, the investigator had all the relevant results to be compared. The pre-test was going to be compared to the post-tests, and the average scores would be contrasted between two groups.

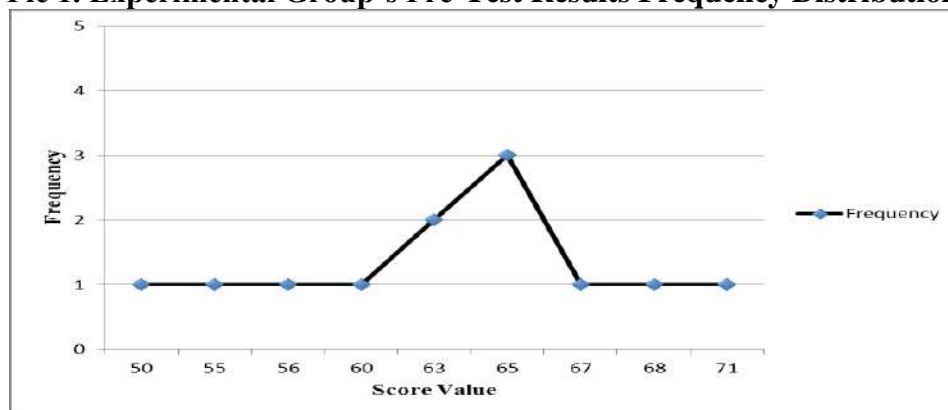
### III. RESULTS AND DISCUSSION

After all the data relevant to the research were collected and analyzed them and put into various tables, charts and graphs. All the results were carefully taken from the pre-tests and post-test which participants took during the research process. They were analyzed from two perspectives to maximize the reliability and validity of research conclusions. The pre-test results, which helped the researcher determine the participants' reading, speaking and listening skills, are presented below in Table 1.

**TABLE 1. PRE-TEST RESULTS OF SUBJECTS**

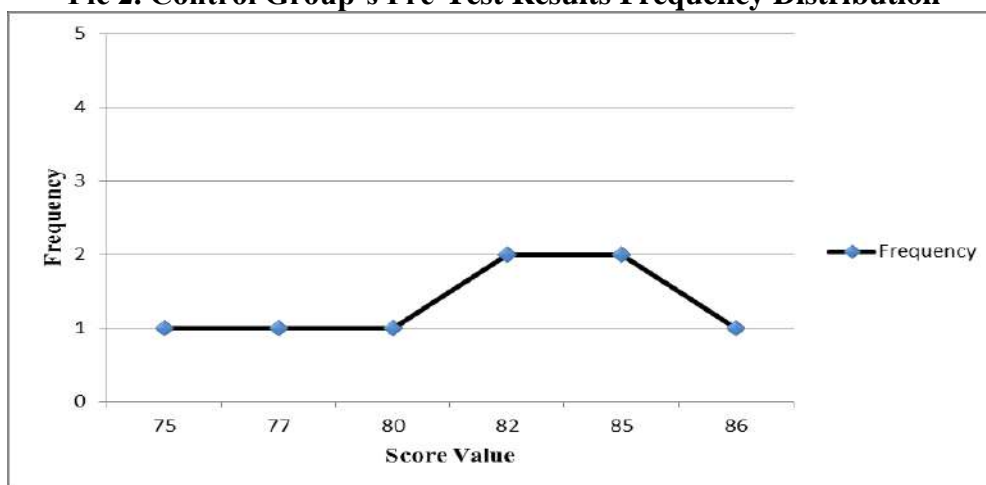
No	Participants'	Reading	Speaking	Listening	TOTAL
1.	A.	95	90	80	88
2.	B.	90	85	80	85
3.	C.	90	90	75	85
4.	D.	85	85	75	82
5.	E.	85	80	80	82
6.	F.	80	80	80	80
7.	G.	80	80	70	77
8.	H.	80	75	70	75
9.	I.	75	75	65	71
10.	J.	70	70	65	68
11.	K.	70	67	65	67
12.	L.	70	65	60	65
13.	M.	75	60	60	65
14.	N.	70	60	65	65
15.	O.	65	65	60	63
16.	P.	70	60	60	63
17.	Q.	65	60	55	60
18.	R.	60	60	50	56
19.	S.	60	50	55	55
20.	T.	50	55	45	50

The above-shown results assisted the researcher in dividing the students into Group A, which was the experimental group, and into Group B, which was the control group. The criterion for such division was the gained scores of the participants below the 75% (Experimental Group) and above it (Control Group). The researcher also organized the chart of Frequency Distribution of both groups to summarize data of pre-test and clearly see how many subjects behaved or performed in the same way and what range of the subjects' behaviour or performance was.

**Pic 1. Experimental Group's Pre-Test Results Frequency Distribution**

As can be seen from the chart, the scores of students ranged between 52 and 69 with several of them having identical figures in some cases. The very fact of the great variety of scores shows the heterogeneity of subjects and helps the researcher come up with reliable results and see how the hypothesis of the study applies to the learners of different initial levels. The main trend of the figure above shows that the majority of identical results occurred in the middle of the range of scores, which suggests that the selection of subjects was adequate and most were of the medium initial level of language mastery.

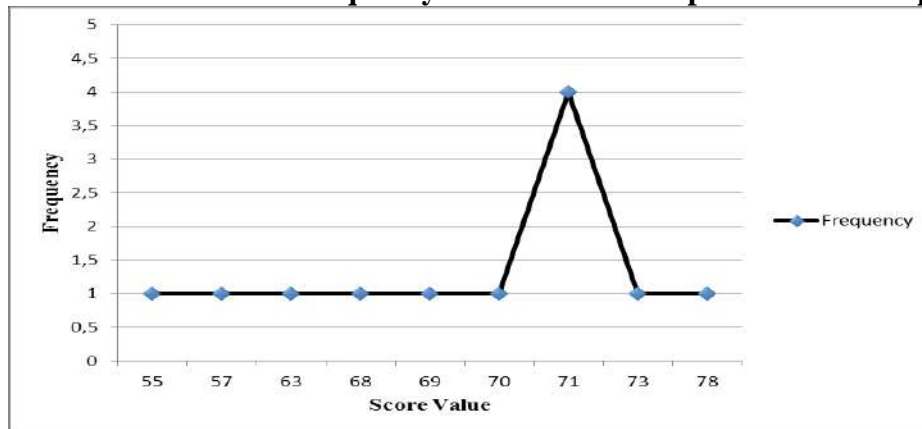
**Pic 2. Control Group's Pre-Test Results Frequency Distribution**



The chart shows that the score range of the Control group was between 75 and 86 with fewer curves than the Experimental group. However, even in the control group, there was only one A score with others having B's. The shift of the graph's vertex towards the right along the X-axis suggests that most of the subjects in the control group were initially stronger. This makes the conditions for confirming the research hypothesis even more challenging, as the experimental group eventually has to outperform the initially strong control group for the hypothesis to be proved.

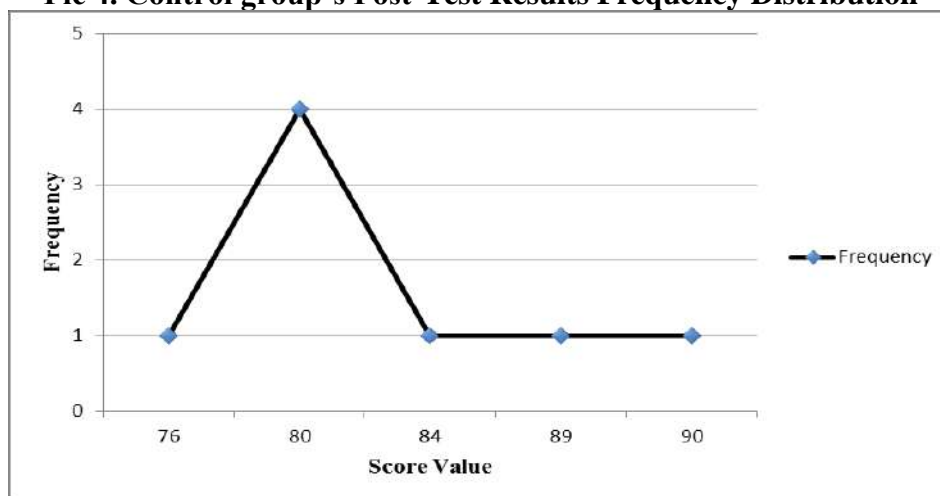
Further, the researcher divided the results of students' tests into three categories, i.e. Reading, Speaking and Listening and then put them in the diagram below in order to compare with the post-test results and to be able to have a clear picture of differences made during the study.

**Pic 3. Post-test results frequency distribution of Experimental Group.**



In this graph, there is an apparent growth of both the number of subjects and the points of score they got. This suggests that, in comparison to the state by the pre-test, the development of skills of the majority of experimental group members has relatively increased. Moreover the number of subjects whose performance got better increased as well.

**Pic 4. Control group's Post-Test Results Frequency Distribution**



The investigation done within the current chapter had its starting point at examining the criteria for selecting video materials appropriate for a particular group of EFL learners. It helped the researcher consider a wide range of features when reasoning the suitability of the series of videos he chose for the experimental part of the research. Thus, except obvious characteristics of videos like content, and clarity, the researcher realized the need to pay strong attention to the tempo of videos; independence of video episodes from one another; motivating potential of the plot, context, and characters; availability; graphics; and didactic applicability of video material. All these criteria were then applied to the analysis of a collection of videos which had a certain potential of being utilized as classroom videos in the process of EFL teaching. As a result of this procedure, the video that meets the highest number of the criteria was determined—the sitcom entitled *Big Bang Theory*. Thus, having obtained the most significant material for the primary part of the current research, the investigator proceeded with finding out the ways to introduce the video to classroom reality. The surface analysis of the issue revealed that basically, the classroom activities done about most videos fall under three categories: pre-viewing, while-viewing, and post-viewing activities. The presence of the activities of all of the three types when working with one video in the classroom can surely provide for a high degree of student comprehension, internalization, and retention of the demonstrated material. A deeper inquiry into the same issue has led the researcher to Jeremy Harmer's taxonomy of viewing activities, which the researcher has combined in different patterns when creating the lesson plans for the experimental part of the study.

#### IV. SUGGESTIONS

The secondary and primary studies done in the course of developing the current paper have helped discover a series of the advantages which video materials have in the course of being used as EFL teaching tools. However, it's not possible to make a simplistic and straightforward conclusion that one's mastery of language will increase in all possible directions once he/she is



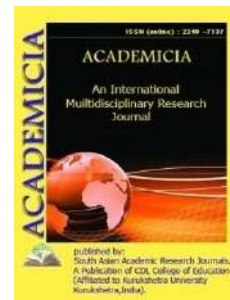
taught with the application of videos. Moreover, to take a powerful effect, videos must be selected against a set of criteria for effective classroom application and be supplemented with several activities to create learner motivation for watching.

## V. CONCLUSION

The current paper focuses on the usage of video, the most popular and efficient means to be used in the classroom, the current research has its main aim of compensating for the second reason of poor usage of electronic media in EFL teaching. In the course of doing that, the study has tackled the issues of appropriate video material selection and analysis of the activities that can be used to effectively use videos in teaching. In the experimental part, the researcher has trialled the selected activities on a group of subjects to check if and how well they improved particular language skills. Videos can prove especially effective within the growing modern trend of the communicative approach, which aims to create a 'real-life' environment during the process of learning foreign languages. The function of videos in providing such authenticity is mainly that of modelling. Once the video hasn't been created for education-only purposes, it captures a situation of real-life interaction, allowing the learners to get immersed into it as spectators. If the model then is successfully repeated, the communicative competence of the learners' increases. The effect is boosted if the activities designed for accompanying the video are properly selected. Once the activity designer is guided by the same theoretical inferences as to the researcher, and the analogous set of activities is chosen, the lesson is likely to succeed. The reasons for it is that once common sense and experience are combined with the principles of sequencing the lesson events from guided to free, from comprehension to production, and from easy to complex, a highly relevant set of activities will be chosen, from which most of the students will benefit in terms of learning.

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## INVESTIGATION OF SOLUBILITY KINETICS AND INTERACTION OF STABILIZING ADDITIVES IN PRODUCTION OF COMPLEX FERTILIZERS BASED ON GRANULAR NITRATE AND STABILIZING ADDITIVES

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### ABSTRACT

*Recently, the world market for mineral fertilizers has seen a high demand for various types of complex fertilizers. Ammonium nitrate (AN) ranks first among nitrogen fertilizers, as it is the fertilizer that fully satisfies agriculture. At the same time, production of complex fertilizers based on ammonium nitrate faces a number of negative factors related to commercial, physical and chemical properties of AS and safety of its circulation. At present, producers of mineral fertilizers face the task of producing less explosive ammonium nitrate with improved physical, chemical and agrochemical properties and fertilizers based on them.*

**KEYWORDS:** *Ammonium Nitrate (AN), Stabilizing Additives, Solubility, Activation, Aqueous Solution, Dusting, Grinding Tonin.*

## INTRODUCTION

Ammonium nitrate (AN) ranks first among nitrogen fertilizers in terms of efficiency, so it is the kind of fertilizer without which agriculture is almost impossible. Belonging to the family of nitrogen fertilizers, versatility of application, the possibility of industrial production volumes - these are the "advantages" that keep the AN unshakeable position in the fertilizer market. At the same time, the problems connected with the necessity of improvement of commodity, physical and chemical properties of AN and safety of its circulation are well known. However, modern technological developments make it possible to take this nuance into account and optimize it at the production stage. The introduction of unreasonably strict restrictions on the production and handling of ammonium nitrate, on the one hand, puts the relevant enterprises on the verge of closure and leads to a significant reduction in the use of a true agrochemical valuable fertilizer. On the other hand, the risks of uncontrolled situations at any stage of production, storage and transportation of ammonium nitrate cannot be ignored.

Manufacturers of many countries have been tasked to make the transition to production of less explosive ammonium nitrate with improved physical and agrochemical properties and fertilizers based on it as soon as possible. The technology of improvement of physical-chemical and commodity properties of AC is directed, first of all, on the influence of polymorphic transformations on kinetics and increase of durability of granules of a product, decrease in its traceability. The tendency of fertilizer to absorb atmospheric moisture (hygroscopic) affects the conditions of production, quality of the product during storage, transportation and application in the soil. At considerable hygroscopic AN is observed, its flow ability worsens, granules lose their hardness. The main drawback of an AC is its traceability - the tendency of its particles to turn into a monolithic mass under certain conditions. The traceability of the loudspeaker results in high losses and additional labour costs for the grinding of the product before application. As it has been shown, it is caused by the low mechanical strength of granules, high hygroscopic salt, polymorphic transformations and technological shortcomings. Phosphorus-containing additives have proven to be the best choice for overcoming the main shortcomings of loudspeakers - traceability and explosion hazard. Proceeding from the aforesaid, carrying out systematic researches on development of the most rational technology of reception of new kinds of the stabilized complex fertilizers based on ammonium nitrate is very actual.

## MATERIALS AND METHODS

Objects and methods of research: For the physical and chemical justification of the technology of obtaining new types of stabilized nitrogen-phosphorus fertilizers, as well as for the purpose of assessing the possibilities of transportation using existing equipment in the plants, the kinetics of solubility and interaction of stabilizing additives in the production of complex fertilizers have been studied on the basis of granulated ammonium nitrate and stabilizing additives - amorphous, simple superphosphate obtained by decomposition of Kyzylkum phosphate raw material at incomplete norm (60% of stoichiometry) of concentrated (92.5% of H<sub>2</sub>SO<sub>4</sub>) sulfuric acid. For dusting the surface of ammonium nitrate granules with stabilizing additives, the granulated ammophos in the ball mill was ground to various grinding. The process of dusting the surface of ammonium nitrate granules with additives was carried out on a plate granulator in the presence

of a binding solution. The resulting complex fertilizers were tested after drying. Ammonium sulfate and ammonium nitrate were used as the binding solution. Results and discussions: To study the solubility rate of complex fertilizers, a certain mass of the sample was dissolved in 100 ml of water. Table 1 shows the results of a study to determine the solubility of samples of complex fertilizers obtained by dusting the surface of ammonium nitrate granules in the presence of an ammonium sulfate solution, depending on the grinding tone of the additives.

The results show that as the weight of the complex fertilizer increases, the dissolution rate increases. For example, the speed of dissolution of 10 g of the complex fertilizer received by dusting a surface of granules of ammonium nitrate by ammophosny dust less than 0.3 mm in size in 100 ml of water is 38 sec. With an increase in mass from 20 to 50 g the speed of dissolution increases from 58 to 129 seconds. The dissolution rate of 10 g of the compound fertilizer obtained from ammonium nitrate granules and 0.3-0.5 mm ammophos dust in 100 ml of water was 36 seconds. And at 20 and 50 g - 56 and 124 seconds respectively.

The dissolution rate of the sample obtained from ammophos dust with size 0.5-1.0 mm at a studied range of mass varies from 34 to 121 seconds.

The study showed that the tonin of ammophos grinding practically does not affect the dissolution rate of the complex fertilizer (Table No. 1).

**TABLE 1. SOLUBILITY RATE OF GRANULATED COMPLEX FERTILIZERS TREATED WITH AMMONIUM SULFATE SOLUTION DEPENDING ON GRINDING TONE OF STABILIZING ADDITIVES**

№	Granulated compound fertilizer samples	Solubility rate of SU, sec, gramme per 100 ml of water				
		10	20	30	40	50
1	Ammonium nitrate + ammophos dust > 0.3 mm	38	58	97	110	129
2	Ammonium nitrate + ammophos dust 0.3-0.5 mm	36	56	94	108	124
3	Ammonium nitrate + ammophos dust 0.5-1 mm	34	54	90	104	121
4	Ammoniumnitrate + powderedsuperphosphate	32	43	85	96	116

Table 2 shows the results of studying the dissolution rate of complex fertilizers obtained by powdering granules of ammonium nitrate with stabilizing additives in the presence of a solution of ammonium nitrate.

The measurement results show that samples of complex fertilizers dissolve slightly faster in comparison with samples treated with ammonium sulphate. In addition, the overall dependence of the dissolution rate on the grinding fineness and the norm is maintained.



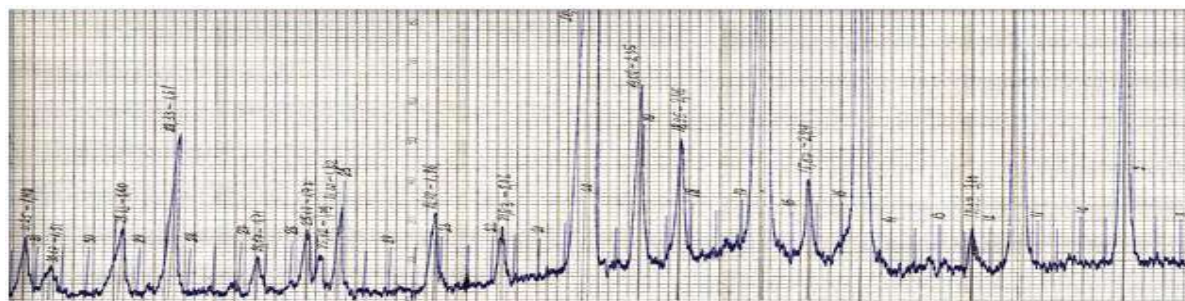
**TABLE 2. SOLUBILITY RATE OF GRANULAR COMPLEX FERTILIZERS TREATED WITH A SOLUTION OF AMMONIUM NITRATE, DEPENDING ON THE TONE OF THE GRINDING OF STABILIZING ADDITIVES**

№	Granulated compound fertilizer samples	The solubility rate of SU, g / s, per 100 ml of water				
		10	20	30	40	50
1	Ammonium nitrate + ammophos dust > 0.3 mm	34	52	82	100	109
2	Ammonium nitrate + ammophos dust 0.3-0.5 mm	32	50	80	98	105
3	Ammonium nitrate + ammophos dust 0.5-1 mm	30	48	78	96	101
4	Ammoniumnitrate + powderedsuperphosphate	31	40	72	89	106

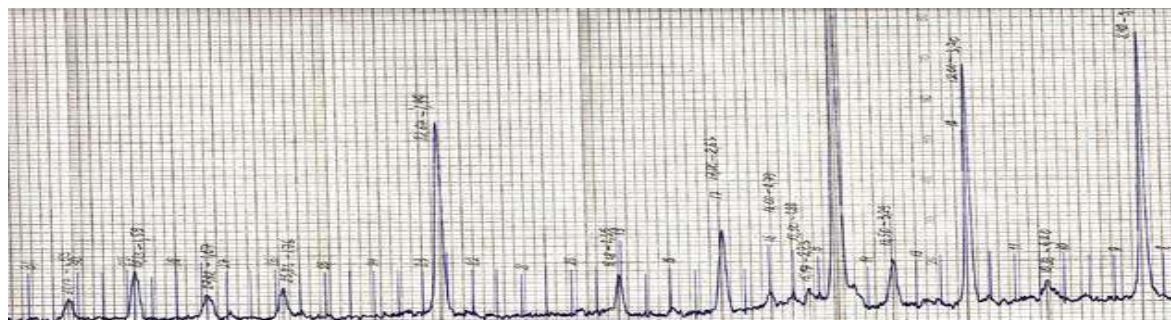
Thus, it has been established that at powdering the surface of granules of ammonium nitrate the size of powder of stabilizing additives practically does not influence the speed of dissolution of complex fertilizer.

X-ray phase analysis was used to study the interaction of ammonium nitrate with stabilizing additives.

Figures 1, 2 and 3 show X-rays of pure ammonium nitrate, ammophos and compound fertilizer based on them. Comparison of interplane distances of samples (Table 3) shows that the complex fertilizer obtained by powdering the surface of granules of ammonium nitrate with ammophos dust mainly consists of a mixture of ammonium nitrate and ammophos.



**Fig.№1.**Roentgenogram of ammonium nitrate



**Fig. No. 2.**Roentgenogram of ammophos





3,60	6,98	3,31	27,00	3,85	38,89
3,05	81,40	3,03	17,65	3,55	6,67
2,84	11,62	2,84	29,41	3,42	31,48
2,69	90,70	2,45	5,88	3,29	7,41
2,45	17,44	2,31	27,06	3,03	59,26
2,35	25,58	2,19	23,53	2,80	10,37
2,24	100,00	2,07	10,59	2,66	100,00
2,06	8,14	1,99	11,76	2,40	11,11
1,96	11,62	1,93	5,88	2,34	18,52
1,82	16,28	1,86	21,18	2,29	7,41
1,79	4,65	1,73	14,12	2,22	85,19
1,77	8,14	1,64	17,65	2,18	6,67
1,71	5,81	1,56	5,88	2,06	7,41
1,61	23,26	1,53	5,88	1,98	1,85
1,60	10,47	1,48	5,88	1,91	1,48
1,51	3,49	1,39	4,71	1,85	6,67
1,48	8,14	1,31	9,41	1,81	2,22
1,45	17,44			1,76	2,59
1,43	2,33			1,72	3,33
1,36	17,44			1,71	3,33
1,35	4,65			1,63	3,70
1,33	3,49			1,61	5,56
1,31	3,49			1,55	3,70
				1,49	1,85
				1,47	4,44
				1,44	5,56
				1,35	4,44
				1,27	44,44

Thus, it was found that when dusting the surface of granules of ammonium nitrate with ammophos dust and powdery superphosphate, the interaction of ammonium nitrate with the components of the additive practically does not occur, i.e. complex fertilizer consists mainly of a mixture.

The process of interaction (activation) of the components of a complex fertilizer usually proceeds when it is dissolved. To study this process, the pH of the medium and the chemical composition of aqueous solutions of complex fertilizer samples were determined depending on the concentration. Table 4 shows the results of a chemical analysis of the main components of solutions based on ammonium nitrate and ammophos at a ratio of 80:20.

When 10 g of granular compound fertilizer is dissolved in 100 ml of water, the solution contains 2.71% of the total nitrogen, of which 46.49% is in the ammonium form, and 53.51% in the nitrate form, 0.83% of the total phosphorus, of which 96, 38% indigestible and 83.13% in water-soluble forms. With increasing concentration of the solution, the content of the water-soluble form of phosphorus increases. For example, when dissolving 20 g of a complex fertilizer, the water-soluble form is 83.55%, and when dissolving 50 g, it is 84.49%.

**TABLE 4. THE CHEMICAL COMPOSITION OF THE AQUEOUS SOLUTION, DEPENDING ON THE NORM OF COMPLEX FERTILIZER (CF) BASED ON AMMONIUM NITRATE AND AMMOPHOS (AS: A = 80: 20)**

Weight CF/100 ml H <sub>2</sub> O	Nitrogen content, %			contents P <sub>2</sub> O <sub>5</sub> , %			Ass. Total. /	Water/General
	gene.	ammon.	nitrat	gene.	усв.	водн.		
10	2,71	1,26	1,45	0,83	0,81	0,69	96,38	83,13
20	4,98	2,30	2,68	1,52	1,48	1,27	97,37	83,55
30	6,88	3,18	3,70	2,09	2,06	1,75	98,56	83,73
40	8,53	3,94	4,59	2,59	2,56	2,18	98,84	84,17
50	9,95	4,60	5,35	3,03	3,00	2,56	99,01	84,49

When dissolving a complex fertilizer obtained on the basis of ammonium nitrate and simple superphosphate, the undecomposed portion of phosphorite is activated. With an increase in the concentration of the solution from 10 to 50%, the content of the assimilable form and water-soluble form increases, respectively, from 96.55 to 98.61% and from 83.33 to 84.72% (table 5).

**TABLE 5. THE CHEMICAL COMPOSITION OF THE AQUEOUS SOLUTION, DEPENDING ON THE NORM OF COMPLEX FERTILIZER (CF) BASED ON AMMONIUM NITRATE AND SUPERPHOSPHATE (AC: C = 80: 20)**

Weight CF/100 ml H <sub>2</sub> O	Nitrogen content, %			contents P <sub>2</sub> O <sub>5</sub> , %			Ass. Total. /	Water/General
	gene.	ammon.	nitrat	gene.	усв.	водн.		
10	2,76	1,38	1,38	0,30	0,28	0,25	96,55	83,33
20	5,52	2,76	2,76	0,57	0,55	0,48	96,49	84,21
30	8,28	4,14	4,14	0,86	0,84	0,72	97,67	83,72
40	11,04	5,42	5,42	1,15	1,13	0,97	98,26	84,35
50	13,80	6,90	6,90	1,44	1,42	1,21	98,61	84,72

We have also determined the pH of the medium of solutions obtained during the dissolution of complex fertilizers. Table 6 shows the results of pH determination of solutions medium depending on the concentration of initial components and complex fertilizers, as well as on the type of stabilizing additives.

**TABLE 6. CHANGE OF PH OF SOLUTION OF INITIAL COMPONENTS AND COMPLEX FERTILIZERS DEPENDING ON CONCENTRATION AND STABILIZING ADDITIVES**

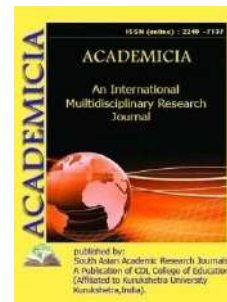
№	Образцы удобрения	pH раствора при концентрации, %				
		10	20	30	40	50
1	Аммиачная селитра + аммофосная пыль	3,66	3,54	3,42	3,31	3,18
2	Аммиачная селитра + суперфосфат	4,58	4,48	4,38	4,27	4,19
3	Аммофос	3,78	3,70	3,63	3,54	3,45
4	Суперфосфат	3,55	3,52	3,48	3,44	3,40

## CONCLUSION

At present, experimental batches of nitrogen-phosphorus fertilizer for agrochemical tests have been developed.

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## **ANALYZING THE SUPERVISED LEARNING METHODS FOR PREDICTION OF HEALTHCARE DATA IN CLOUD ENVIRONMENT**

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### **ABSTRACT**

*In the present era of massive usage of computers, an enormous set of data is being generated from different organizations each day, each hour and each second. This data would be of prodigious use to a diverse set of people based on their needs. Predictive analysis is a process of analyzing data and identifying the different patterns in it, so as to predict the occurrence of these patterns in future. The predicted output can help plan a new strategy and adopt innovative solutions for the decision making. This paper attempts to analyze the various predictive models which are applied in the healthcare domain. These models which are analyzed in depth will be proposed to be available on the cloud environment in future and can be accessed by those concerned for potential analysis.*

**KEYWORDS:** *Predictive Modeling, Predictive Algorithms, Predictive Analytics In A Cloud Environment, Supervised Learning.*

## INTRODUCTION

Healthcare domain has been one of the most interesting areas for researchers to experiment with predictive analytical techniques. With the advent of cloud computing infrastructure, the data which is generated at different health care units can be made available on a distributed environment.

The inherently large size of data generated by several healthcare organizations is throwing numerous open challenges for researchers. They are forced to think of newer and better techniques for managing and organizing the humongous data which is generated every second.

Research findings in the area of predictive analytics over cloud environment would provide great insights to healthcare firms to overcome the problems associated with traditional database architecture. Presently many healthcare firms use the traditional database systems to store and maintain the doctor's and patient's data. But as and when the data collected increases over time due to growing population and their health issues, the space required to store this data is more and adds up the cost of hardware and maintenance. It needs substantial amount of time for the data analyst to split the existing data. However literature states that about 80% of the available data is a suitable data and can be used to future analysis. 20% of the data would not be suitable for analysis as it may contain unfitting or junk data, which further requires to be studied for its relevance. With the aid of predictive analytical techniques classification of this data can be done in lesser time. Predictive analytical solutions would provide decisive information which would help healthcare organizations to take right decisions at the right time.

## RELATED WORK

A number of research literature is available in the healthcare domain and the usage of predictive models for the same. Many such models like regression models, classification models and few other aspects are presented in this paper.

### A. *Predictive Data Analytics*

Predictive data analytics is defined as the collection of machine learning methods/techniques as well as the statistical methods applied on the datasets to predict the future [1]. Machine Learning techniques help in a better way to gain all the useful information from the given data so that corrective actions can be taken to improve revenue, quality, and customer satisfaction [2] in general.

### B. *Predictive Data Analytics in Healthcare*

Data Analytics is finding its extensive application in healthcare industry. It attempts to provide proof based medication which aids in the appropriate diagnosis of the diseases and their associated treatment. In healthcare domain, predictors are used to anticipate the effectiveness of the treatment.

The medical industry has evolved with a tremendous amount of data which are saved in the form of papers to a much more digital one. As the world is getting digitized, papers are getting replaced by e-copies, e-forms etc. Some of the advantages of applying analytics to this data in the healthcare industry can be listed as below:

- It would be easy to detect diseases based on specific patterns and these diseases can be given treatment early to ensure its effectiveness.

- The advancement or developments of many of these diseases can be predicted and can be addressed with analytical techniques.
- It helps in achieving patient churn and be able to provide leaner, much faster treatments to the patients.
- By adopting the predictive models in determining the diseases, there will be less room for human errors during treatment of patients.
- By analyzing the patterns of diseases, the doctors and hospitals will be able to provide better health observation and better responses to the treatments.
- It also helps in giving proof based medicines.
- The data collected with respect to the diseases; the necessary treatment information; planning of the future treatment-will all be available on a distributed cloud environment. By this the geographic barriers can be totally avoided. This would ease the work of the both hospital administration and patients to a great extent.

Paper [3] describes how predictive analytics can help the researchers to gain novel and deep insights to clinical and organizational decision making. The paper focusses on different learning algorithms such as classification, clustering and association and lists out major benefits and limitations of each algorithm.

The authors discuss the algorithms such as Naïve Bayes, Artificial Neural Network, Decision Tree, Support vector machine, Ensemble and AdaBoost under Classification. Apriori algorithm under Association. The authors also mention about guidelines followed while performing the execution of the above algorithms.

The author concludes that the decision tree performs well among classification algorithms because of its ability to visually represent the classification decisions made.

Thanh Nguyen, Abbas Khosravi, Douglas Creighton and Saeid Nahavandi proposed an algorithm called fuzzy-standard-additive-model (SAM) with the integration of Genetic-algorithm (GA) to address uncertainty and computational challenges faced by high-dimensional medical data collected. The hybrid integration technique GSAM is implemented against Probabilistic neural network, Adaptive vector quantization (AVQ), Fuzzy ARTMAP. Their implementation results show the dominance of the GSAM method over other models in terms of accuracy, F-measure and AUC (area under characteristic curve) [4].

The authors in the paper [5], discuss the methods of machine learning for analyzing tumor features in breast screening. The data is extracted from dynamic\_contrast\_enhanced magnetic\_resonance\_imaging (DCE-MRI). They demonstrated the algorithms such as k-means, self\_organizing\_maps (SOM) in order to analyze the signal structures. K-nearest neighbor (k-nn), support vector machines, decision trees are used for classification. Their result showed that self-organizing-maps performed well followed by k-nn and decision trees with respect to smoothness energy function for projection quality and classification accuracy in sensitivity and specificity.

Shipeng Yu, Faisal Farooq, Alexander van Esbroeck, Glenn Fung, Vikram Anand and Balaji Krishnapuram [6], in their experiment applied a novel framework on different hospital data to evaluate the patient readmission risk. They considered the classification models support vector machines and cox regression along with LACE model (industry standard method which is



followed by hospitals). LACE model is described as: L-length of stay, A-acuity of admission, C-comorbidity in index score, E-number of visits to emergency during last 6 months. In the work, the framework designed is more effective and flexible compared to LACE model with respect to hospital readmission risk prediction [6].

The objective of the paper [7] is to predict heart related complications based on the existing patient history. The authors discuss the machine learning techniques namely support vector machines, AdaBoost, logistic regression, k-likelihood ratio test and Naïve Bayes. They evaluate their models with respect to prediction accuracy and AdaBoost performed to be the best among all techniques under prediction accuracy followed by support vector machines.

The authors Guilia Toti, Ricardo Vilalta, Peggy Lindner, Barry Lefer, Charles Macias, Daniel Price [8] in their work demonstrates the association rule based technique Apriori algorithm in R environment to analyze the correlation between asthma in infants and exposure to pollutant mixtures. The authors collect the data related to asthma infected infants and associated them with six pollutant levels recorded earlier. The result showed that Apriori algorithm described 27 rules that reduced the false detection rate (FDR). FDR is proved to be less than 13%. The result also showed that the support of the rules varies from 0.54% to 5.82%.

In the paper [9], the authors Dursun Delen, Glenn Walker, Amit Kadam experimented with the algorithms artificial neural networks, decision trees along with logistic regression to develop the predictive model on the breast cancer dataset. The authors also adopted 10 fold cross-validation techniques to compare the performance. The metrics considered for the performance measures are accuracy, sensitivity and specificity.

The results in their experiments show that the decision tree performed with highest accuracy of 93.6% followed by artificial neural networks with an accuracy of 91.2% and logistic regression with the least accuracy among three 89.2%.

Luis Claudio de Oliveira Silva, Allan Kardec Barros, Marcus Vinicius Lopes [10] in their paper discuss the experiments conducted to detect abrasions in dense breasts and for the analysis the authors take two public databases with two groups of regions of interest(dense breasts and non-dense breasts). Independent component analysis and principal component analysis techniques are used as part of experiments.

The paper concludes that independent component analysis performed better with an accuracy of 92.71% in dense breasts and 79.17% in non-dense breasts when compared to principal component analysis in detecting abrasions in the dense breasts.

### *C. Predictive Data Analytics in Cloud environment*

With the. Advent of cloud and mobile expertise, data has advanced immensely in terms of quality and volume to fulfill a diversity of user requirements. Handling and processing such huge data proficiently and effectually is a chief task to the industry. The probability of pay-per-use with on-demand operations by cloud service providers is gaining fame in readiness computing model.

A considerable amount of work has been done in the field of cloud computing in few years.

Haluk Demirkan, Dursun Delen [11], in their paper discusses about a conceptual-framework for decision support system and also the fundamental foundation elements for service-orientation in

cloud environment. The authors provide major requirements for a decision support system to implement and information about the unique model called Analytics as a service. The paper does not discuss the impact of the service-orientation on the working of decision support system in cloud.

In the paper [12], the authors Karsten Molka and James Byrne discuss the predictive cost models for cloud ecosystem. Private cloud, cloud federation multi\_cloud, cloud-brokerage and cloud-bursting are considered for the cost analysis. The authors work on the parameters like real-time analysis of the service, virtual and physical information of the resource from cloud infrastructure in order to carry out the economic and predictive models evaluation which can anticipate upcoming service economic trends and the effect on total cost of ownership at the infrastructure provider side.

The authors Bo Jin, Yong Wang, Zhenyan Liu and Jingfeng Xue [13] in their study propose a trust model based on the combination of the cloud model and Bayesian network. They evaluate the trust model using naïve-Bayesian network where conditional probability tables are drawn for the values. An algorithm is designed for the context free trust evaluation.

With the help of the algorithm and experimental results, the authors suggest that anyone can use the Bayesian network to build the trust model and it helps in selecting the service provider.

In the paper [14], the authors Deval Bhamare, Tara Salman, Mohammed Samaka, Aiman Erbad and Raj Jain makes an analysis on the feasibility of the supervised learning for the security of the cloud ecosystem. Authors use the datasets UNSW and ISOT on which the performance of the machine learning models is evaluated. The algorithms include regression, decision trees, naïve Bayes and support vector machines. The authors stress on the fact that the machine learning models which are tested with particular dataset have to be tested with other datasets also to check the robustness. The authors determine in their experiment that logistic regression performed best with an accuracy of 89.26% followed by J48 of decision trees with an accuracy of 88.67%.

The authors Weider D. Yu , Manjula Kollipara , Roopa Penmetsa and Sumalatha Elliadka [15] in their experimental study, propose a model of the distributed-storage-solution for hybrid cloud designed to store and retrieve the voluminous digital data in an effective way for a cloud based healthcare application. The authors mainly focus on blending the approaches of RDBMS and NOSQL instead of using the solitary approach. The proposed system consists of a huge number of all the combination of structured, unstructured and semi\_structured data. In this process, private cloud is used to collect critical data related to patients' as well as the data related to the public is stored in public-cloud.

The author analyzed and observed the time taken in loading and retrieving the data from Amazon storage and Network Attached Storage (NAS). The author concludes that Amazon is faster because of its powerful virtual instances and NAS was equally competitive due to its ease of operation, storage capacity and security.

The authors Kiran Rao and Sandeep Kumar [16] in their paper explores and discusses about the application of machine learning methodologies on resource-monitoring, resource-provisioning and management of cloud ecosystem. The machine learning approaches such as linear regression and reinforcement learning are used for virtual machine mapping and resource provisioning respectively to develop a framework for self-resource monitoring in cloud environment.

## METHODOLOGY

The methodology or the procedure to be followed is as follows:

### Step1: \_\_\_\_\_

Define the dataset: The dataset is created which satisfies the objectives of the project. This dataset describes all the necessary information related to the specific domain. Convert the dataset into digital format using Microsoft excel.

### Step2:

Data preprocessing: After the collection of the dataset, apply preprocessing techniques (ex: feature selection, correlation –if applicable) and make the data ready for algorithm implementation.

### Step3:

Test the model: Apply the supervised learning models on the preprocessed data.

### Step4:

Evaluation of the output: Learning models are compared according to the performance metrics such as accuracy, error rate, ROC.

### Step5: \_\_\_\_\_

Store and Retrieve from cloud: All the predictive models / datasets developed are stored in the cloud ecosystem. These details can be accessed from the cloud as per the user's needs.

The main advantage of supervised learning methodology with cloud access is to get cloud based ready solution for the user according to their individual requirement. The user can access the predictive models on “on-demand” basis. It helps the user or the organizations to take rapid decision by reducing the excess man-hours thus saving time, energy and increases the productivity.

Cloud access leverages the usage of facilities which the cloud service providers offer.

## CONCLUSION AND FUTURE SCOPE

This paper mainly contemplates on the different machine learning methodologies available for use in the field of healthcare. Supervised learning algorithms can perform tasks based on the predefined set of rules provided by the user. The review on the available literature indicates that the results obtained by applying these predictive techniques on the healthcare data sets will provide insights on the basic attributes and parameters of the same. These predictive models will further play a very important role in recommending the most suitable machine learning technique for the given dataset.

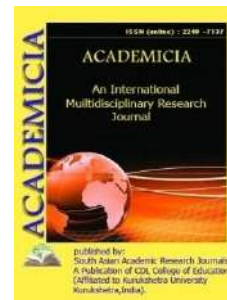
Here an attempt is made to give an exhaustive analysis of the application of machine learning algorithms to several datasets pertaining to healthcare domain. Finally we have summarized the advantages and feasibility of deploying the predictive models and the data sets on the cloud environment. This indicates a futuristic use of the same to analyst and end-users.

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## INFLUENCE OF INFORMATION COMMUNICATION TECHNOLOGIES ON STUDENTS DURING THE PERIOD OF GLOBALIZATION

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### ABSTRACT

*The essence of this article is to include the modern information, information technology, education systems in the process of globalization, which affects the minds of the students during their academic activities. In addition to the problems associated with identifying and eliminating the negative effects of information technology on the students personality, they are shown how to explore the optimal conditions for using these technologies in the learning process.*

**KEYWORDS:** Globalization, Information, Internet, Hacking, Virtual World, Computer Technology, Internet Technology, Phone Mobile, Telecommunication, Information Technology, Information Resources, The Media, Stupidity, Avoid Violence, Information Culture, Radio, A Television.



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## INTRODUCTION

There are various situations in which modern information technology has an effect on the students' mentality. This is primarily due to the students' direct contact with information technology in their learning activities. It is important to remember that today, computer games and attractions based on virtual world technologies, even when not connected to the computer, people interact with computers in situations that they do not know, using cell phones, animated films, credit cards, and plastic cards. In addition, the teachers themselves interact with information technology to make their impact wider.

When using modern information technology in the learning process, teachers should pay special attention to the following.

First, the innovations that may be taking place in the field of information technology are being transferred to traditional communication environments. Conducted pedagogical and psychological research shows that there is an increasing demand for clarity, consistency and reflexivity of issues. This is where the role of spiritual communication diminishes.

Second, feedback increases. The peculiarities of traditional activities are computerization. There is also a 'humanization' of software and hardware for the educational process, including for young children. Users fill in their activities with elements that are not available but are needed for some action. These situations create a complex and controversial structure of various activities related to information technology (including educational activities).

The impact of modern information technology on students has grown, ranging from a limited range of psychological effects to complete personality change (internet connection, computer software, hacking syndrome). To date, the question of complete transformation of personality has not been fully researched by scientists. Therefore, it is necessary to actively involve teachers and psychologists in the development and implementation of modern information technology for educational process. They are also concerned with identifying and addressing the negative effects of information technology on students' personalities, apart from issues that explore the optimal conditions for using these technologies in the learning process.

As an example, consider the use of Internet technologies in education. Internet technologies can bring about positive changes in the upbringing of individuals based on qualitative changes in communicative and cognitive activities, as well as changes in learning methods. Because of the use of the Internet, students become more active, the learning process is individualized, authoritarian relationships between the teacher and the student are reduced, and the opportunity to work with different sources of information (which may be contradictory or mutually exclusive). This will improve the personality of the students. They create incentives for independent thinking, initiative and mobility. However, adverse effects may also occur.

Intensive intellectual and creative development cannot ensure that students adapt to existing social environments. They can be connected to a variety of computer resources, including boarding schools. This may lead to a person's future separation. There may be dramatic changes in children's mentality, such as replacing their friends with the heroes of the virtual world, declining in psychosocial reactions, and narrowing their interests. In addition, it is important for scientists to identify which of the psychological components obtained by modern information technology can be transferred to a 'computer-free' environment and the mechanisms for

influencing education informatization. This, in turn, is one of the most pressing issues for teachers.

Educators who use information technology in the learning process emphasize that learning activities can be transformed by such qualities as accuracy, efficiency, and predictability. It should not be underestimated the impact of training and other computer software on how to develop students' minds. Teaching students how to properly explain the situation, and how to choose the best solutions for problem solving becomes a major challenge for educators.

Psychologists say that the use of computers in the learning process is rebuilding some of the psychic components that were there but were forgotten for some reason. Email, chats, and teleconferences require written communication skills (which have been forgotten by virtue of the development of telephone communications in developed countries). This requires getting to know the Internet, working with business and personal correspondence, and exploring specific characters that express their moods.

The Internet raises interethnic communication to a new level, enhances intercultural knowledge, and facilitates the intensive study of foreign languages during the correspondence process.

The application of information technology to various areas of activity is based on the preparation of conditions for the development of a person from excessive and labor-intensive work and its development. Modern information technology is slowly leading to some loss of skills and competencies. For example, one cannot deny the importance of spreadsheets today. They help people get rid of a lot of unnecessary work. However, the use of calculators, even in the early grades, can cause them to lose verbal, fast computing skills. This results in students failing to act properly on the concept of numbers.

In the conditions of unprecedented speed of information sharing, Western centers have been trying to spread the "charm" of Western life among other nations and nations, including the effects of "popular culture" as "breezes of freedom." The famous American political scientist A.F. Remember Zbigniew Brzezinski, a consistent successor of Dalles' work: "In the cultural process, America has a special appeal among young people around the world. This will ensure that AKD has political influence over any country in the world. In particular, American television programs and films occupy three-fourths of the global market. His popular music, American reading, eating habits and so on are all imitated around the world. "

Obviously, these and similar concepts promote the "democratic" freedoms of the West and limit the dissemination of other ideas as much as possible. It is important to note that their essence remains unchanged today, and it uses widespread false ideas of "absolute freedom", "boundless freedom", "free morality" to distract our young people and their world outlook.

Samples of "mass culture", various information technologies, radio and television, social networks of the Internet are used in this way.

The First President Karimov said: "If we look at history, previously strong powers openly conquered and powered weak countries, by the end of the twentieth century, this policy had taken on a new form. Today, powerful nations and certain political centers strive to achieve their goals, first of all, to depend on the minds of the people who want to influence them. "

The negative impact of the rapid development of the media on the upbringing of young people in the context of globalization is reflected in the following:

First, as a result of the rapid development of the media, the penetration of the Internet, mobile phones, telecommunications and various news publications. The "values" offered by these means often distract young people from our national values, in other words, lead to the formation of unique "rootless" individuals and their historical roots.

Second, the growing popularity of various forms of "popular culture" among young people. These are mainly manifested in dress, behavior, leisure, taste, and attitude towards national values. The "mass culture", which represents the alien culture, brings to our young people such Western personalism, egocentrism, nihilism, indecency, neglect and violence, neglect of national values and social interests.

Third, there are cases of imitation among young people, blind adherence to Western ideals. At the same time, it is easy to see that the morals and customs common in foreign countries are absorbed in the minds of young people through film, fashion and various advertising. As a result, young people tend to spend time in front of computer games rather than reading books, watching movies of various genres that are shallow.

Unfortunately, in many cases the principle of gradual separation of young people from their national identity, undermining national traditions and customs, and preserving their historical memory, is being strengthened.

We live in an age of information, ideological conflict, and, as President Islam Karimov once said, "the influence of ideological forces of various meanings that serve the interests of certain states and political forces" is constantly being felt. One of the most important tasks is to create an immune system to protect them from attacks and ideological influences. To do this, young people must be free, independent thinkers, faith-based, intelligent, strong-willed, educated and wise, and to put in their hearts and minds the invaluable scientific and spiritual legacy of their land, their great ancestors.

In this regard, we do not neglect all the achievements of the progressive humanity, the universal values and principles of democracy that contribute to the development of our nation. On the contrary, we recognize that national traditions and customs, which have been preserved over centuries, must be harmonized with universal values. In other words, the principles of democracy should serve not only for the renunciation of national values, but for their further development and prosperity.

For this reason, it is important for young people to understand the content of a large volume of information in the form of intense events and events, to interpret it correctly and to draw conclusions. In this case, to meet the information needs of young people:

- To further develop the national information space and to enrich it with information resources, to develop the skills of searching, processing, storing and using information. meeting their needs through methodological assistance in the selection of materials from existing sources; Special attention should be paid to hiring.

It is important to increase the relevance of issues related to the development of a person's worldview, capacity, and experience, such as the selection, selection, and proper culture of

information from a person, to the youth's preference for a deeper knowledge, greater understanding and greater use of information. One of the issues

The idea of globalization is one of the most pressing issues at the moment, but at the same time it is not uniformly interpreted. He has his own supporters and opponents. Despite the apparent and mysterious opposition to this process, it is advancing and should therefore be dealt with separately.

Globalization has come from the words "globe" ("globe" in English), "global" ("global"), and "globalization". It is worth noting that globalization, by most experts, means economic integration. In this view, globalization occurs within economic relations. However, globalization is a concept that is directly related to every aspect of life, including the human spirit. For this reason, some encyclopedia dictionaries describe 'global' problems as having a broader scope, scope, and understanding of the problems affecting the entire world.

When we think of the term "globalization," we must first say that this concept was mentioned in the American scholar T. Levitt's article in the 1983 issue of the Harvard Business Review. Of course, the concept was used to reflect economic relations, including the process of merging the diverse product markets produced by large transnational corporations. But today we see that globalization is manifested in all spheres of social life, and in the end it has become a powerful tool of ideological influence.

In this regard, the first President Islam Karimov commented on the phenomenon of globalization: "From a general point of view, this process creates a completely new economic, socio-political, natural and biological environment, including the current national and regional problems. is becoming a worldwide problem ". He said.

On the basis of these statements of the former head of our state, it is necessary to state the situation arising from the processes of globalization. The main ones are:

- The escalation of economic, political, legal, scientific, technical, socio-cultural, ethno demographic and environmental problems in the global scale.
- If the powers of the states were determined before the first industrial revolution, depending on the size of the population and the territory, between the first and second industrial revolutions depending on the types of energy and the amount of state-owned power, the state's power, now, is, above all, with information technology and information resources. and depending on their use. Information and communication technologies are considered not only as the basis of socio-economic, political and cultural development, but also as a means to solve internal and external problems due to rapid changes in the field.

Although the process of informatization of society itself is often regarded as a purely technological process, in essence it is also a deep social process. This is because informatization refers to the transition from one form of society to a higher level of social development and defines future features of society. In today's world, unprecedented scientific discoveries, tremendous technical capabilities, universal technologies, and the globalization of information dissemination are rapidly growing. For example, opportunities for information exchange through the Internet and, consequently, ideological influences, are increasing. In fact, globalization of information is a process that creates great opportunities for society, for people to interact with people all over the world, for the acquisition of scientific and cultural values. But we must not

forget that there are negative aspects of information globalization. Ideas emerging in any region or country are rapidly spreading around the world. As a result, human beings are constantly experiencing the pressure of various ideological centers, spreading from distant and distant sources, which serve the interests of certain states and political forces. In such a situation, a person who lacks his own convictions, firm convictions, strong wills and worldviews will not be able to cope with the ideological pressures that are manifestly open and secret. Today, ideological attacks from outside the country have not ceased.

It is important to note that the majority of the global audience of young people are young, with information aimed at poisoning their minds and worldview with alien ideas. So, young people who are pursuing a career in the profession and aspiring to pursue a career in the future have come to the forefront in hopes of getting positive information, so that young people unwittingly engage in various social networks, forums and dating sites. Today, the Internet offers a great opportunity for young people who speak different languages.

Particularly, the increasing number of mobile Internet users has a great potential for open access to various content. In contrast, adolescents are more interested in and interested in. As a result, the global network, which is now emerging in the world of information revolution, is a major concern for society. They create a society of aborigines that these societies do not call themselves "cyber international NET", "children of the Internet", "citizens of the Internet".

They are joining the youth through the Internet and appearing in the political arena as an international cybercrime that opposes the government's official messages.

We urge young people who are coming to life to be alert: "We fully support the aspirations of our people to make greater use of the Internet. Again, we would like to say that we do not like to build a wall in the information world, to wrap ourselves in the shell and limit ourselves. At the same time, considering what is happening around us today, in nearby regions, we are also aware of the disastrous consequences that unnatural forces trying to distract young people who have not yet formed their minds and lives can use to access the Internet for their own benefit. cannot be missed."

While the Internet is a great achievement of mankind and a great opportunity in our lives today, it is no secret that this miracle is a powerful ideological tool and creates serious problems. The information-cultural and information-ideological expansion of the global telecommunications networks and media is of concern in many countries around the world. The prospect of dependence and loss of independence worries leaders, public institutions and citizens. Many countries already have to take special measures to protect their culture, traditions and spiritual values from the influence of foreign information.

Examples include international conventions on cybercrime, the introduction of secure Internet and online resources for minors, the recommendations of the European Parliament Assembly, the United Nations Convention on the Rights of the Child, the Code of Conduct in the UK and the Secure Network. »Controls the flow of harmful, illegal information. It should be noted that the laws "On the Protection of Youth" in Germany, in Lithuania "On Protection of Minors from the Negative Impact of the Media" and in Russia "On Protection of Children from Information Damaging the Health and Development" were adopted.



If you look at Germany from the international experience, today there are laws regulating the security of cyber security in the country with the provisions of the Law "On the Protection of Youth", "On Television and Television and Television".

It is clear from the foregoing that a number of laws and regulations have been adopted in the Western countries to prevent access to information that could negatively affect the minds of young people from the Internet. Although they have different names and functions, their purpose is the same.

It is worth noting that in a number of countries, a number of legal and organizational measures have been taken to protect young people from information that could harm them. In particular, on July 11, 2012, the State Duma of the Russian Federation adopted a law "On the protection of children from the data that could endanger their mind, health and development." It provides a mechanism for establishing a system for monitoring, filtering and blocking Internet resources containing potentially dangerous information for children. In addition, the law "On Amendments to the Federal Law" was adopted, and a new article was added to the article "Common Registered Names and Universal Indicators of Internet Sites, which are banned in the Russian Federation."

Lithuania's Law on Protection of Adolescents from Negative Information is aimed at preventing the dissemination of information among young people, which has a negative impact on their psychological and physical development. On: Processes that promote aggression, violence, erotic fears, call for gambling, promote drug, psychotropic, taboo, alcohol, suicide, ideally kill information about human dignity associated with criminal activity information or personnel that performs paranormal acts of individual or community abuse based on gender, origin, illness, social status, language, religion, or adolescents' violence instantaneous, promotes sex, belittles family abuses, reflects offensive behavior, instructions and advice on the use and preparation of explosives, including narcotic drugs, psychotropic substances, and information on mass hypnosis sessions that promote harmful symptoms in hygiene and nutrition.

In the current conditions of the Republic's independence and its progress towards social development, a thorough study of the information security system of the population and, first of all, enriching it with new principles, approaches, and new approaches to the existing problems in this system are of utmost importance.

It should be noted that systematic organizational and legal measures are being carried out in our country as well. In particular, in accordance with the Decree of the President of the Republic of Uzbekistan "On establishing a public educational information network of the Republic of Uzbekistan" of September 28, 2005, various information resources created by various departments of Uzbekistan in information transfer networks are integrated into a single national educational network "ZiyoNET". The creation of this network was an important factor in countering information attacks.

The main tasks of the network are: formation and development of national information resources for young people, wide access to information promoting youth spiritual and intellectual development, promotion of healthy lifestyles and popularization of physical education and sports, distance learning for students and youth. assistance in the integration of access methods and other information and communication services into the education system.



Today, universities and their regional branches, all educational establishments are connected to the national educational network «ZiyoNET» and high-speed Internet.

At the same time, creating a user-friendly information space for further information security of minors, further improving the educational information portal "ZiyoNET", enhancing its organizational and technical and interactive capabilities, integrated Internet resources, popular social services and developing games. Appropriate measures are being taken to develop applications and integrate them into the curricula of educational institutions.

Critical approach to information gained from the Internet and broadening its worldview based on its useful sources, the formation of the perception of defamatory information, the formation of an ideological immunity is an important aspect for each young person to gain certain skills and knowledge, the ability to understand religious and secular knowledge in the world. should not be indifferent to the ongoing political and economic processes.

Today, the use of information technology in many ways is aimed at fighting the human heart and mind. This process can be said to consist of three main stages:

At the first stage - certain information is received by a person.

At the second stage, information is stored as information in the human mind and serves as a source for decision-making on another issue.

At the third stage, information as a thought or idea captures the human heart, becomes an integral part of its spiritual and spiritual state and becomes the basis of its action.

If you look at the global informatization process around the world, we can see that the use of the Internet as a global network is growing at a rapid pace.

Recently the game that has gained popularity in various segments of the social network and has caused a lot of controversy has included fifty days in groups of underage teens for fifty days in groups of underage teenagers. The end of the game, which is required to be completed, ends with the player's suicide. According to the rules of the game, the participant's terms and conditions will be entered and accepted at 4-20 in the morning. First you need to start drawing a blue whale on white paper, and then drawing those underneath.

Information security is the protection of underage adolescents from the destructive ideas that separate them from their beliefs, sacred ideals, and beliefs. Thus, the spiritual impact on the values associated with the need for information security, first and foremost, of the individual and society, the person and the state, the individual and its inviolability, national and national values, including traditions, traditions, historical and cultural heritage, generations. Indicating the existence of destructive ideas.

Adolescents' inability to act on information security and take effective action against them will inevitably lead to genocide of nations and nations that have historically existed by destroying national values. Unfortunately, malicious targets attract young children and teenagers through various social networking sites. As a result, children become "puppets" in this game and even commit suicide. Preventing these situations is a growing concern in children's safety. However, the need for information networks is growing day by day.

In particular, the global use of the internet was 140,000 in 2003, 400 million in 2010, 952.51 million in 2014, 1280.78 million in 2016, and 29.57% of the world's population in 2019. 12 billion. A presentation by the Mapshchur Kleiner Perkins CaufieldByers website entitled "2019 Internet Trends" states that the number of Internet users worldwide is 2.9 billion.

It should be noted that from the very first days of independence, the head of our state identified as a priority policy of our state to educate young people in deep understanding of the world.

Among the issues of upbringing high potential youth is the formation of information culture in them. Since the formation of an information culture is directly linked to the development of society, it is a socially important issue in the country. Therefore, in the formation of an informed society it is important to study all aspects of the informatization process.

Currently, one of the most important resources of the nation and the state is the human potential and educational level of the people. Social development shows that, as previously imagined, it is in the forefront of history that countries that have achieved a higher standard of living or advanced technology, but those that have achieved a higher level of education and training. In the future, the priority will be to develop the ability of young people not only to learn and use new technologies, but also to ensure their greater involvement in the creation and improvement of such technologies. This, in turn, puts the task of young people in acquiring a deeper knowledge, greater absorption of information and more efficient use of it.

In this sense, as our First President IA Karimov pointed out, "We live in a very difficult time in which we are all surrounded by, say, the world of turmoil, confrontation and sharp conflict. Given the turbulent situation in the country, the whole life demands that we remain vigilant, attentive and vigilant.

In the context of globalization, we can see from the example of a number of countries in the world that acceleration of information processes poses a problem of inadequate human readiness to receive, process, absorb, and effectively use information and resources.

Therefore, the formation of the skills of effective use of information resources and information among citizens and, first of all, in the youth has become one of the most pressing issues of the present.

It is worth noting that in Uzbekistan no serious economic, social or technical problem can be solved without the development of modern knowledge, intellectual potential and advanced technologies, and a culture of effective use of information resources and modern means of communication.

Given that more than 62% of the country's population is now under 30 years of age, the Internet and its forms - internet television, internet radio, e-mail, online video, social networking and information technology - can help young people. The importance of purposeful and reasonable use in raising the level of education is evident.

In our country, a number of exemplary works are being carried out to establish a national information system and to meet the information needs of the population. In particular, it should be noted that Internet users are contacting the national segment of the national domain - UZ domain, registered on April 29, 1995, to find out more about what is happening in Uzbekistan.

Taking into account the fact that today the number of sites registered in the national domain system is more than 17 thousand, first of all, they have done a lot of work in our country.

It is known that all the necessary conditions for obtaining objective and accurate information in the air. So, on the portal 01am.uz >> our country and the world are receiving it news, news, email, search engine, block access, job or weather information. More than a thousand users visit this site every day. Uznet is also developing its social networks. Of course, it is difficult to compete with world-famous companies in this regard. However, Uznet's social networks have their own specifics. Launched in 2012, Muloqot.uz has an interface in the Uzbek language, which indicates that 15,700 accounts have been registered. This means that the national segment of the Internet is promising.

In the national segment of the Internet, websites such as Hi-Tech, Culture, Science, Chord Sport, Business, Public Administration, and the introduction of new services are also contributing to this. At the same time, the number of Internet users in Uzbekistan exceeds 10 million.

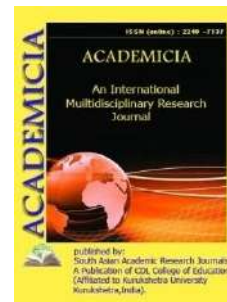
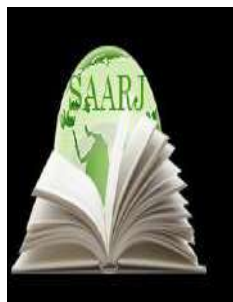
## CONCLUSION

In summary, we acknowledge that as a young person enters a society, not only is he possessed a perfect profession, but also the right use of the media. Everybody should be aware that it is the sacred duty and responsibility of the parents and all caregivers to control the observance of the law while ensuring that the information they receive is in accordance with human rights and the laws of society.

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## ADVANTAGES OF AGRICULTURAL BIOLOGIZATION IN CONDITION OF SOIL SALINITY

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### ABSTRACT

*Producing food by using mineral fertilizers is dangerous for human health. Therefore, field experiment was carried out on producing ecologically clean food by decreasing the norm of mineral fertilizers, using crop rotation, organic and green manure crop fertilizers. In this, ecologically clean food was produced by using 25% mineral fertilizer and additionally 30 t/ha or 40 t/ha organic fertilizer.*

**KEYWORDS:** *Agriculture, Biologizing, Organic, Mineral, Green Manure Crop Fertilizers, Saline Soil, Tomato, Yield.*

### INTRODUCTION

Most of crop production in our region rely on chemical intensification agriculture. Intensive application of chemicals and mineral fertilizers has led to biological degradation of soil fertility, decrease diversity of soil microorganisms, and accelerate the soil pollution processes. Soil nitrates transforms from soil to the crop, then accumulates in fruits that people consume.

Meanwhile Amu Daryamineralization as the main water source for irrigation fluctuate 1.5 g/L or even more. These factors are not able to ensure the quality of the crop products and led harmful consequences to human health. More rational fertilizer use practices will be critical in the future to inducing higher crop yields.

In our experiment during 2009-2011, we aimed to ensure crop production with application of minimum amount (up to 25%) of mineral fertilizers and non-fertilizer conditions.

Confirmed:

- possibilities agriculture biologization through crop rotation, organic agriculture with greenside rite application practices;
- the impact of agriculture biologization to the soilsphytosanitary condition;
- the effect of crop rotation and organic agriculture practices to the soil fertility;
- The effect of agricultural biologization on crop yields and product quality.

The "ecologically clean product" term has been used widely among the developed countries globally, where agricultural farms produce ecologically clean products through applying agriculture biologizationpractices. Thus, agriculture biologizationis the one of the key issues for agriculture scientists.

Therefore, we have to shift from conventional agriculture to organic practices in agriculture to ensure healthy population and preserving the environment.

### 1. Experiments layout

Treat №	Annual amount of mineral and organic fertilizer			total amount of NPK, %	amount of organic fertilizers to compensate NPK
	N	P	K		
1	-	-	-	-	-
2	40	31	20	25	30
3	75	65	38	50	20
4	115	95	60	75	10
5	150	125	75	100	-
6	Organic fertilizers 40 t/ha			-	-

As it can be seen in Table 1, the experiment consist six replications. In the first treatment(control) fertilize has not been used, at the sixth treatment organic fertilizers has been applied, while treatments 2, 3, 4, 5 has annual amount of mineral fertilizers with variables of 25% , 50%, 75% and 100%. Less used mineral fertilizers (25%, 50%, 75%) were compensated with organic fertilizers.

Applied amount of the mineral and organic fertilizers before planting, flowering and during flowering – fruiting period given on the Table 2.

### 2. The amount and duration of both organic (t / ha) and mineral (kg / ha) fertilizers

Treat №	The amount and duration of both organic (t / ha) and mineral (kg / ha) fertilizers									
	Before planting				Before flowering			Flowering –fruiting		
	Organic fertilizers	N	P	K	N	P	K	N	P	K
1	-	-	-	-	-	-	-	-	-	-
2	30	-	20	-	20	11	10	20	-	10
3	20	-	45	-	40	20	20	35	-	20
4	10	-	65	-	60	30	30	35	-	30
5	-	-	85	-	75	40	40	75	-	35
6	40	-	-	-	-	-	-	-	-	-



Tomato plant has been used during experiment and plant growth, yield were different due to the amount of organic and mineral fertilizers.

At the control treatment yield of tomato plant were 395 kg/ha, while treatment with only organic fertilizers was 881 kg/ha.

Treatment with 25% of annual amount of mineral fertilizer (N 40, P 31, K 20 kg/ha) with supplemented organic fertilizers 30 t/ha per hectare has the highest yield (1309 kg/ha).

The treatments with the mineral content 50%, 75% and 100% has the lowest yield 22; 217 and 279 kg/ha. In addition, the yield quality at these treatments were lower to compare with treatments 2 and 6.

Thus, the highest yield of tomato plant were recorded at the treatment with mineral fertilizers (25%) with added organic fertilizers (30 t/ha) and obtained best fruits quality without containing any nitrites or chemical elements and other substances that are harmful to the human health.

Along with increasing organic fertilizers amount we were able to improve the soil agrochemical and agro physical properties.

Application of organic fertilizer with amount of 30-40 t/ha (treatments #2 and #6), the amount of water soluble salts in the soil were lower compared to other treatments at the end of the growing season (Table 4). This creates favorable conditions for obtaining the healthy plant growth and development. Also at this treatments the highest level of soil humus were observed (Table 5).

As we know, the soil with rich content of organic matter and less presence of both mineral from chemicals fertilizers has better the agro physical, agrochemical and microbiological properties. Therefore, its creates favorable environment for microorganism growth and reproduction, those are naturally considered as the assets of the organic matter in the soil. All these factors considered as a necessary condition for the crop/plant development. At the treatment where organic fertilizers applied with 30-40 t/ha, number of soil microorganisms 2-3 times higher comparing to the treatments only with mineral fertilizers (Table 6).

We believe that promotion of agriculture biologization practice is promising technique to meet the population demand for high quality food products in the future.

### 3. Tomato growth and yields in relation to both organic and mineral nutrients

Treat ment №	Average in 3 years				Tomato seed			Aver age	Difference ±		
	1.VII		1.VIII						Non fertil izer	From 25% NPK	Fro m orga nic fertil izer
	Planth eight, cm	Numero ffruits	Planth eight, cm	Numero ffruits	20 09 yea r	20 10 yea r	20 11 yea r				
1	32,8	12,0	68,8	8,0	54, 0	34, 0	30, 4	39,5	00	-91,4	-48,6
2	77,4	24,5	84,5	19,9	12 8,2	13 4,5	13 0,0	130, 9	91,4	00	42,8
3	79,3	22,0	85,5	20,1	12	13	12	128,	89,2	-2,2	40,6

					8,2	0,5	7,5	7			
4	84,7	20,5	84,2	16,9	10 6,1	10 9,5	11 2,0	109, 2	69,7	-21,7	21,1
5	77,7	17,2	80,8	15,3	96, 3	10 4,8	10 8,0	103, 0	63,5	-27,9	14,9
6	76,3	14,1	78,6	14,6	89, 6	84, 6	90, 1	88,1	48,6	-42,8	00

#### 4. Amount of soluble salts in water, %, 0-30 cm

№ vap	Before experiment		In beginning of the vegetation		In the middle of the vegetation		In the end of the vegetation		Accumulation of salts Spring-Autumn period	
	CL	Σ	CL	Σ	CL	Σ	CL	Σ	CL	Σ
1	0,035	0,593	0,037	0,363	0,040	0,660	0,043	0,713	0,060	0,077
2	0,036	0,610	0,036	0,626	0,037	0,650	0,037	0,653	0,001	0,027
3	0,035	0,640	0,035	0,643	0,040	0,653	0,039	0,663	0,004	0,020
4	0,037	0,633	0,037	0,643	0,041	0,660	0,042	0,720	0,005	0,077
5	0,038	0,656	0,037	0,660	0,042	0,686	0,048	0,770	0,011	0,110
6	0,034	0,613	0,036	0,623	0,038	0,626	0,036	0,596	0,0	-0,027

#### 5. Soil humus amount %, 0-30 cm

Treat №	beginning of vegetation	middle of the vegetation	end of the vegetation
1	0,639	0,636	0,590
2	0,736	0,733	0,746
3	0,760	0,733	0,717
4	0,658	0,673	0,650
5	0,670	0,673	0,653
6	0,740	0,753	0,806

#### 6. Soil micro flora depending on the fertilizers type and amount (million / g in the soil)

Treat №	Number of microorganisms			
	Before experiment	beginning of vegetation	middle of the vegetation	end of the vegetation
1	13,5	14,0	12,7	11,8
2	16,5	42,0	41,7	35,5
3	17,0	33,0	29,1	31,0
4	15,5	29,0	29,0	25,2
5	16,0	21,2	20,7	20,0
6	18,5	42,2	38,3	37,0

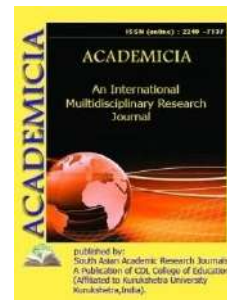
In the case of soil salinity, it is necessary to improve the reclamation of arable lands for obtain high yields of agricultural crops. It is difficult to get high yields of agricultural crops in any agro-technical condition with presence of the harmful salts in the soil that need to be washed away at the field condition.

Thus, it was found that even in the case of soil salinity, possibilities to produce ecologically clean products by application of both organic and green siderate fertilizers practices.

**Nukus, Uzbekistan**

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## USING THE CAPABILITIES OF MODERN PROGRAMMING LANGUAGES IN SOLVING PROBLEMS OF TECHNICAL SPECIALTIES

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### ABSTRACT

*This article provides recommendations and examples of how to use modern capabilities of programming languages in technical specialization, as well as to solve these problems on the example of the C ++ programming language. In addition, the C ++ programming language describes the array, its types, capabilities, array problems, and several programming solutions.*

**KEYWORDS:** C ++, Low-Level Programming Language, High-Level Programming Language, Operators, Arrays, Multidimensional Arrays, Static Arrays, Dynamic Arrays, Character Arrays, Word Arrays, Functions, Alloc, Malloc, Size Of, Null, New .

### INTRODUCTION

Accelerating the updating of modern educational content in the field of programming, the formation of teaching methods, programming tools and methodologies is facing challenges. The development of electronic devices, the systems that support them, and the increasing complexity of software and programming languages pose new challenges to the education system. Constant improvement of computer programs forces the user to change the existing approaches to their development.

Modern computers were initially able to perform the simplest arithmetic and logic operations. In order for a machine to solve a complex problem, it must have a program in its memory. As you know, a program is a specific sequence of machine codes that controls the operation of a specific computing tool. Hundreds of programming languages have been created to make the software creation process easier.

**The goal.** In addition to specialization programs, specialization programs in technical universities can be completed using the capabilities of programming languages. This requires a good knowledge of programming language skills. Teaching students to specialize in technical programming by using modern programming languages and using the capabilities of programming languages. In this way, students learn the basics of both specialization and programming languages. Nowadays, programming languages are the basis of the management of any electronic devices<sup>1</sup>.

**Scientific novelty of the article.** Operators used in a program based on algorithms must meet the requirements of structured programming. It has no input / output, no dynamic memory allocation, no parallel computing. These tools are implemented through the external functions of the program. The following is an example of a C ++ programming language that analyzes the structure, types, and several examples of programming languages.

C ++ programming serves to increase the performance of computers and operating system capabilities. That's why it's designed for professional programmers. The C ++ programming language is related to the Unix operating system, and many of the programs used in this system were originally written in C ++. The C ++ programming language allows you to take full advantage of all the features of a computer. In C ++, programs represent actions that result in data being retrieved. In the program, actions are given by operators. Data is made by identifying and describing objects. It is necessary to describe the objects used in the program. The description links the object and some of its characteristics. These characteristics include type, designation, memory class, range of motion, and initial values.

The main types in the programming language are integers and floating point numbers. It also creates full versions of data from pointers, arrays, and operands. An expression consists of operands and pointers. Each expression can be an instruction, including a call to a value transfer function. Indicators determine the arithmetic of a machine with an unrelated address. In C ++, the instructor ({}), conditional branching (if), selecting a long-standing alternative (switch), upward repetition (for, while), downward repetition (do), as well as repetition There are control structures such as break. The disadvantage of this language is the inconvenience of the syntax of these language structures.

In C ++, arrays can be used to perform some complex types of tasks, and a number of conveniences are created when performing these tasks. An array is an ordered set of finite values of the same category. Examples of arrays are vectors and matrices from a math course. Arrays are generally divided into one-dimensional, multidimensional, dynamic, and static types. An array is said to be one-dimensional if its element can be referenced by an index. The index of array elements in C ++ programming languages always starts from zero.

Multidimensional static arrays. There are no restrictions on the type of array element in C ++, but these types must be of a finite size. Because the compiler must be able to calculate how much free space (bytes) the array takes up in memory. In particular, the component of an array can be

an array, resulting in a two-dimensional array called a matrix. If the elements of the matrix are also vectors, the result is a three-dimensional array. This way you can create arrays of any size, depending on the task at hand. In a two-dimensional array, the first index indicates the number of rows, and the second the number of columns<sup>2</sup>.

Results and practical applications. Declaring two-dimensional static arrays is as follows: type array\_name [array\_strings\_number] [array\_columns\_number];

When declaring two-dimensional static arrays, the difference from one-dimensional is that the array name is followed by two values in parentheses ([]). The first of these represents the number of rows, and the second the number of columns. That is, a two-dimensional array element is referenced by two indices. Two-dimensional arrays are reminiscent of matrices known from the mathematics course. Example of declaring a two-dimensional array:

```
int a[3][3], b[2][4];
```

A matrix B matrix

```
a00 a01 a02 b00 b01 b02 b03
```

```
a10 a11 a12 b10 b11 b12 b13
```

```
a20 a21 a22
```

A matrix has 3 rows and 3 columns. The matrix B has 2 rows and 4 columns. In two-dimensional arrays, index 1 represents the row, and index 2 represents the column. The first element of the first line a10 - a is read as one zero element. a is not called ten. An array (mxn) with m rows and n columns is called a dimensional array. If m = n (the number of rows and columns are equal), the square is called an array. The following are some examples of initializing multidimensional arrays:

```
int a[2][2]={ 1,5,7,2};
```

```
int b[2][3]={ {0,2,3}, {4,5,6} };
```

For example. A program that outputs the matrix to the sum of rows and arrays.

```
#include<iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
long n,m,a[100][100],w[100],s[100];
```

```
cout<<"enter the size of the matrix columns =";cin>>n;
```

```
cout<<"enter the size of the matrix rows =";cin>>m;
```

```
for (int i=1;i<=n;i++)
```

```
{ for (int j=1;j<=m;j++)
```

```
{ cin>>a[i][j];} }
```



```

for (int j=1;j<=m;j++) s[j]=0;
for (int j=1;j<=m;j++)
{ for (int i=1;i<=n;i++)
{
s[j]+=a[i][j];
}
}
for (int j=1;j<=m;j++) {
a[n+1][j]=s[j];
}
for (int i=1;i<=n;i++) w[i]=0;
for (int i=1;i<=n;i++)
{
for (int j=1;j<=m;j++)
{
w[i]+=a[i][j];
}
}
for (int i=1;i<=n;i++)
{
a[i][m+1]=w[i];
}
for (int i=1;i<=n;i++)
{
for (int j=1;j<=m;j++)
{
cout<<a[i][j]<<" ";
} cout<<a[i][m+1];
cout<<endl;}
for (int j=1;j<m;j++) cout<<a[n+1][j]<<" ";
cout<<a[n+1][m];
return 0;}

```

```

enter the size of the matrix columns =3
enter the size of the matrix rows =2
6
5
4
7
8
9
6 5 11
4 7 11
8 9 17
18 21

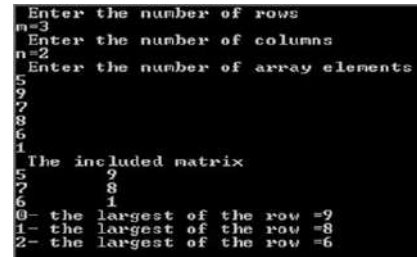
```

**The result:**

You can send an array as a function parameter and get an array as a function result. When passing a matrix to a function, you must also send the number of rows and columns of the matrix by its name. There are several ways to use an array in a function, some of which we will look at. Transfer the matrix to the function:

```
#include <iostream>
#include<math.h>
using namespace std;
void matrix_print(int a[10][10], int m, int n){
//output the matrix in tabular form
for (int i = 0; i < m; i++){
for (int j = 0; j < n; j++){
cout << a[i][j] << "t";}
cout << "n";}}
int row_max(int a[], int n){
//determine the largest element of the array
int max = a[0];
for (int i = 1; i < n; i++)
if (max < a[i]) max = a[i];
return max;}
int main(){
int m, n, a[10][10];
cout << "Enter the number of rows \nm="; cin >> m;
cout << "Enter the number of columns \nn="; cin >> n;
cout <<"Enter the number of array elements \n";
for (int i = 0; i < m; i++)
for (int j = 0; j < n; j++)
cin >> a[i][j];
cout << "The included matrix \n";
//the number of matrices, rows, and columns is sent to the function
matrix_print(a, m, n);
for (int i = 0; i < m; i++){
// the address of the 0th element of the i-th string to the function
```

```
// and we send the number of elements
cout << i << "-the largest of the row =" <<
row_max(&a[i][0], n);
cout << endl;}
return 0;
system("pause");}
```



```
Enter the number of rows
n=3
Enter the number of columns
n=2
Enter the number of array elements
5
9
2
8
6
1
The included matrix
5      9
2      8
6      1
0- the largest of the row =9
1- the largest of the row =8
2- the largest of the row =6
```

### The result:

Dynamic arrays. The disadvantage of static arrays is that their elements need to be declared in advance. In addition, these elements are limited by the size of the memory segment allocated to the data. Second, a large enough array may be declared and the allocated memory may not be fully utilized to solve the problem. These shortcomings can be overcome by using dynamic arrays. Because they allow you to create arrays of the size you need during program execution and delete them when you don't need them. You can use the malloc (), calloc () functions, or the new operator to allocate memory to dynamic arrays. The delete operator is used to free up memory allocated to a dynamic object<sup>3</sup>.

The above functions are located in the <<alloc.h>> library. The syntax of the Malloc () function is Void \* malloc (size\_t size), which separates a continuous byte-sized area from memory. If memory allocation is successful, the malloc () function returns the start address of the allocated field. If the required memory allocation is successful, the function returns NULL. As you can see from the syntax, the function returns a value of type void. In practice, it is necessary to allocate memory for the object. This is done using a specific type of void conversion technology. For example, allocating space to an array of length 3 for an entire type can be done as follows:

```
int * pint=(int*)malloc(3*sizeof(int));
```

The calloc () function, unlike the malloc function, initializes array elements with a value of 0 in addition to allocating space for the array.

The syntax of this function is: Void \* calloc (size\_t num, size\_t size); The num parameter tells you how many elements are in the allotted area and the size of each element. The Free () memory release function has a single parameter that points to the partition to be erased. Void free (void \* block); Having the Free () function set to void allows you to delete any type of memory. The following is a program for finding the largest of the elements of an array for dynamic arrays:

```
#include <iostream>
using namespace std;
intmain()
{
int *arr;
int size;
```

```

        cout<< "n = ";
        cin>> size;
        if (size <= 0) {
            cerr<< "Invalid size" <<endl;
            return 1;
        }
        arr = new int[size];
        for (inti = 0; i< size; i++) {
            cout<< "arr[" <<i<< "] = ";
            cin>>arr[i];
        }
        int max = arr[0];
        for (inti = 1; i< size; i++) {
            if (arr[i] > max) {
                max = arr[i];
            }
        }
        cout<< "max = " << max <<endl;
        delete [] arr; // free up memory
        return 0;
    }

```

```

n = 3
arr[0] = 5
arr[1] = 6
arr[2] = 8
max = 8

```

### The result:

The C ++ programming language also uses other types of arrays, which are analyzed below with examples. Array pointers are defined as: <type> \* <name> [<number>]. For example, the definition `int * pt [9]` inserts an array of nine elements into objects of type `int`. An array of pointers is useful for describing arrays of rows. For example, a two-dimensional array is used to enter a list of surnames:

**Char fam[][20]= {" Ergashev","Shukurov","Jabborov"};**

The memory consists of 60 elements, as each last name is filled with 0's. Using an array of pointers, this array can be described as follows.

**Char \*pf[]= {" Ergashev","Shukurov","Jabborov"};**

The list here contains 23 items in memory, as each last name is marked with a 0 at the end. Arrays of pointers allow you to sort complex elements in a simple way. In the following example, the first elements of the matrix rows are displayed in ascending order. Here, an array of

auxiliary pointers is created, the array is sorted, and matrix elements are output based on the array.

## IN CONCLUSION

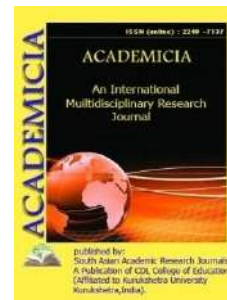
The purpose of the above considerations and considerations is not to learn a programming language, but to develop algorithmic thinking. Introducing a variety of ways and means of thinking that can be used to solve some problems. Another of these approaches is to get acquainted with these programming languages. To do this, it is sufficient to solve algorithmic problems using arrays and its capabilities in a programming language environment.

The convenience of programming in C ++ is that it is as versatile as any other programming language. This article will give you a good understanding of the structure of a C ++ program, the description of characters, the concept of algorithms and programs, the use of data input and output operators, as well as the ability to work with arrays, their types and rows in the program. It also provides general information about arrays, the order in which they are stored in memory, sorting, sorting, associating with functions, and a number of examples of their use in applications.

C ++ is a handy tool for creating programs that run in the Windows operating system environment, automating programming on a computer, reducing errors, and simplifying programmer work. The use of arrays in the C ++ programming language has several advantages over other programming languages. Working with arrays in C ++ makes some computational problems much easier. The speed of the program also increases several times due to their space in memory. This creates a number of conveniences for those who are familiar with the skills of programming languages in solving problems of technical specialization, and ensures a clear problem statement and high-precision solutions through appropriate algorithms.

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## THE RMODYNAMIC PARAMETERS OF TECHNICAL AND PURIFIED CARBOXY METHYL CELLULOSE SAMPLES

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### ABSTRACT

*In this paper, the interaction of technical and purified Carboxymethylcellulose macromolecules with solvent molecules with the same degree of exchange and polymerization is comparatively studied. The thermodynamic parameters of technical and purified Carboxymethylcellulose samples were evaluated by sorption of solvent vapors. As a result of the removal of additional salts from the technical Carboxymethylcellulose, it was found that the specific surface area of the cleaned product is slightly reduced, leading to a sharp increase in the volume and radius of the pores.*

**KEYWORDS:** *Technical, Purified Carboxymethylcellulose, Thermodynamics, Capillary-Porous Structure, Sorption, Gibbs Energy, BET Equation, Zimm-Landberg, Der Bur-Zwicker.*



## INTRODUCTION

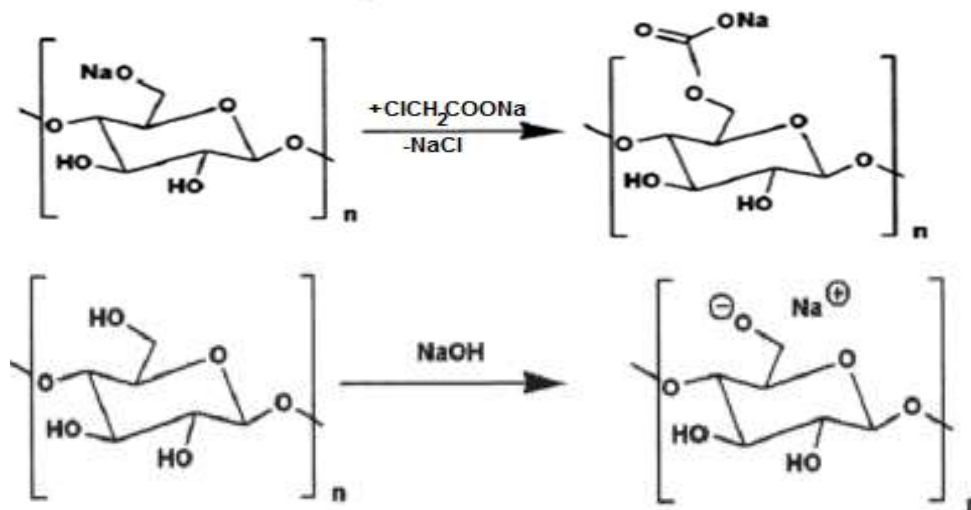
In recent years, there has been a sharp escalation of interest in the study of natural macromolecular compounds due to the expansion of the practical use of biodegradable and environmentally friendly polymers. Carboxymethylcellulose (CMC) plays an important role in its water solubility, biodegradability, suitability for the organism [1,2].

Carboxymethylcellulose is one of the most common simple ethers of cellulose compounds and are widely used in various industries today [3,4]. With the expansion of the use of Carboxymethylcellulose, the demand for it is growing [5]. Worldwide, the production of technical Carboxymethylcellulose is 580-590 thousand tons per year, which are widely utilized mainly in the oil and gas, construction, mining, metallurgy, textile, paper industries [6].

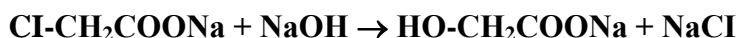
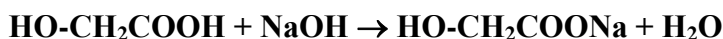
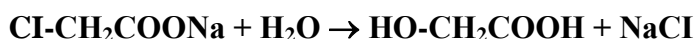
Refined Carboxymethylcellulose brands are widely used in food, pharmaceutical, medical, perfumery and cosmetics and other fields [7,8].

The process of synthesis of cellulose-based Carboxymethylcellulose consists of two stages [9]:

- ✚ **In step 1**, the process of mercerization of cellulose with an alkaline solution is carried out;
- ✚ **In step 2**, the alkaline cellulose is formed by the carboxymethylation reaction in the presence of an alkylating agent - monochloroacetic acid or its sodium salt.



During this reaction, chloride and glycolate salts are formed as supplement products [10,11].



Now days, the content of additives - organic and inorganic salts - in the composition of samples produced on an industrial scale is 40-50%, which sharply reduces the quality of the product [12].

We obtained purified samples on the basis of technical Carboxymethylcellulose obtained on an industrial scale and compared the thermodynamic parameters of these samples.

On the basis of physicochemical and thermodynamic studies, thermodynamic analysis of the water state in cellulose was performed. It was found that the effect of Gibbs energy, enthalpy and entropy mixing on the cellulose-water system on clustering and thermodynamic parameters is a light function of polar functional groups, more specifically a function of molecular packaging, submicroscopic capillary-porosity and crystal structure.

The study of the process of interaction of a polar sorbent with a polar sorbent is based on the adsorption theory of De Boer and Zwicker in a water-soluble acetylcellulose fiber-water system. [13] The water absorption of the polymer is calculated based on Zimm-Landberg's theory [14].

Thermodynamic proximity  $\Delta\mu_i$  between polymers, changes in the chemical potential of the components, Gibbs energy of mixing  $\Delta G$ , Flory - Huggins interaction parameters  $\chi_i$  were determined. The thermodynamic parameters of technical and purified Carboxymethylcellulose samples were evaluated by sorption of solvent vapors.

Research in this area is of practical importance in the study of the biodegradability of Carboxymethylcellulose samples in the body, the ability of drug substances to bind in the macromolecule, the solvent-polymer and polymer-polymer effects.

## RESEARCH METHODOLOGY

The object of research was a sample of technical Carboxymethylcellulose produced by "Promxim Impeks" LLC.

**TABLE 1 QUALITY INDICATORS OF TECHNICAL AND CLEANED CARBOXYMETHYLCELLULOSE SAMPLES**

Indicators Name	Technical Carboxymethylcellulose	Clean Carboxymethylcellulose
Water solubility, %	98,5	98,9
Amount of base substance, %	63,0	99,4
Humidity, %	9,8	9,3
Exchange rate	0,86	0,86
PH of 1.5% solution	8,7	8,1
Degree of polymerization	810	800

In determining the thermodynamic parameters of Carboxymethylcellulose samples were studied on the basis of its sorption properties. At the same time, the change in the mass of the sample was detected on high -vacuum MAK -BEN scales, quartz springs with a sensitivity of 3.69 mg/mm. In the experiments, the sorption cells were kept at  $25^{\circ}\text{C} \pm 1$ .

Measurements were performed using a catheter KM-8 with a residual pressure of  $10^{-3} - 10^{-4}$  Pa. Sorption experiments were performed at the required high vacuum, changes in quartz springs were recorded, and the catheter pressure readings at and above were determined using the following equation:

$$g_c = g_{B/I} - \left( \frac{r\Delta h_0}{1000} \right) \quad (1)$$

Here:

$g_c$ -is the polymer mass after sorption

$g_{vl}$ -is the polymer mass before sorption

$r$ -is the sensitivity of the spring mm/mg

$\Delta h_0$ -is the difference between catheter readings before and after sorption

To determine the amount of sorbate, ie water vapor sorbed into the polymer, a constant is determined during the measurement of each sample:

$$K=r/g \text{ } 1000 \quad (2)$$

$K$ -is the percentage of vapor that is sorbed to lengthen the spring by 1 mm.

The sorption percentage for each pressure is found by the following equation:

$$\%C = K\Delta h \quad (3)$$

Here:

$\Delta h$ - is the difference between the reading on the catheter at high vacuum and the reading of  $P_i / P_i^0$  at equilibrium of the sorbate used.

$P_i$ -is the vapor pressure of the sorbent in the sorption measurement

$P_i^0$ -is the saturated vapor pressure of sorbate.

To measure the vapor pressure of a solvent in a polymer solution, a graph is drawn based on the following relationship:

$$X/M=f(P_i/P_i^0) \quad (4)$$

The chemical potential of the solvent is calculated on the basis of the following relationship:

$$\Delta\mu_1 = RT/M_1 \ln(P_i/P_i^0) \quad (5)$$

$\Delta\mu_2$  is needed to determine the average critical mixing energy. Of course, the chemical potential of the polymer at the same temperature is  $\Delta\mu_2$  and the chemical potential of the polymer at the same temperature is  $\Delta\mu_1^0$ .

To determine the value of  $\Delta\mu_2$  it is sufficient to know the value of  $\Delta\mu_1^0$  of the other component in the solution (of course for two-component systems).

$$\Delta\mu_2 = \int_a^\infty \omega_1 / \omega_2 (\partial\Delta\mu_1) \quad (6)$$

$\Delta g^m$  we find the value of as follows:

$$\Delta g^m = \Delta\mu_1\omega_1 + \Delta\mu_2\omega_2 \quad (7)$$

The value of  $\Delta g^m$  is determined at all pressures and

$$\Delta g^m = f(\omega_2) \quad (8)$$

The graph is drawn on the basis of dependence. From this graph, the value of the Gibbs energy  $\Delta G_i$  is found.

Also, the Flori-Haggins thermodynamic parameter is calculated by the following equation:

$$\chi_{is} = \ln a_s - \ln \varphi_s - (1 - \varphi_s)/(1 - \varphi_s)^2 \quad (9)$$

Here

$a_s = P_i/P_i^0$  – is the activity of the solvent

$\varphi_s = x/m/(x/m + d_s/d_p)$  volume fraction of solvent

$d_s$  – is the density of the solvent

$d_p$  – is the density of the polymer

$(1 - \varphi_s) = \varphi_2$  – is the volume fraction of the polymer.

**Flori-Haggins polymer solution theory:** The mixing energy has a shape similar to a mixture of two low molecular weight liquids. Consider a solution g consisting of G solution molecules and N<sub>2</sub> polymer molecules; the total number of solvent molecules and monomer units is  $H = N + N_{ir}$ .

### Analysis and results

The following table determines that the sorption properties and capillary-porous structure of technical and purified Carboxymethylcellulose samples relative to water vapor.

**TABLE 2 SORPTION PROPERTIES OF TECHNICAL AND PURIFIED CARBOXYMETHYLCELLULOSE SAMPLES**

Sample	Technical Carboxymethylcellulose	Clean Carboxymethylcellulose
Relative humidity%	Sorption, %	
10	0,60	0,30
30	1,40	0,80
50	2,00	1,60
65	3,20	5,00
80	5,30	14,00
90	8,00	29,00
100	13,00	43,00

**TABLE 3 CAPILLARY-POROUS STRUCTURE OF SAMPLES OF TECHNICAL AND PURIFIED CARBOXYMETHYLCELLULOSE**

N <sup>o</sup>	Indicators	Technical Carboxymethylcellulose	Clean Carboxymethylcellulose
1	X/m, г/г	0,006	0,003
2	S <sub>уд</sub> m <sub>2</sub> / г	48,18	31,54
3	W <sub>o</sub> см <sup>3</sup> /г	0,13	0,43
4	r <sub>k</sub> А°	53,96 А°	272,66 А°

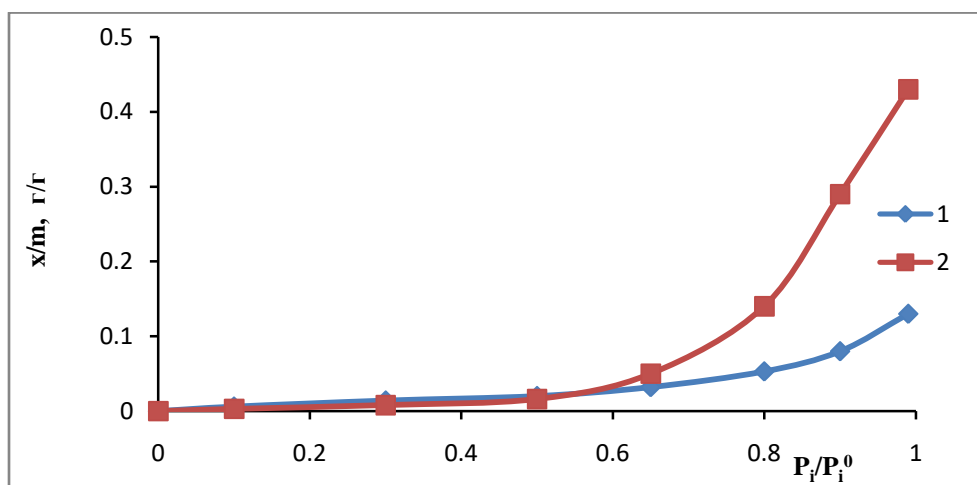
It can be seen from these tables that as a result of purification of technical Carboxymethylcellulose from additional salts, there are changes in the capillary-porous structure

of the product and its specific surface area decreases slightly, the volume sum and radius of pores increase sharply.

Based on the results of sorption, several thermodynamic parameters Gibbs energy, average free energy of mixing  $-\Delta g^m$ , chemical potentials  $-\Delta\mu_1$ ,  $\Delta\mu_2$  were determined. The following tables illustrate the thermodynamic properties of the calculated technical and purified Carboxymethylcellulose based on the sorption results.

The BET theory states that the molecules of the first layer are adsorbed on the adsorbent surface as a result of the intermolecular interaction of the adsorbent. Each adsorbed molecule of the first adsorption layer can, in turn, be the adsorption center of the molecules of the second layer, and so on. Thus, the second and subsequent sorption layers are formed. The adsorption heat in the first layer is determined by the adsorption-adsorbent interaction, in all subsequent layers by the adsorption-adsorption interaction.

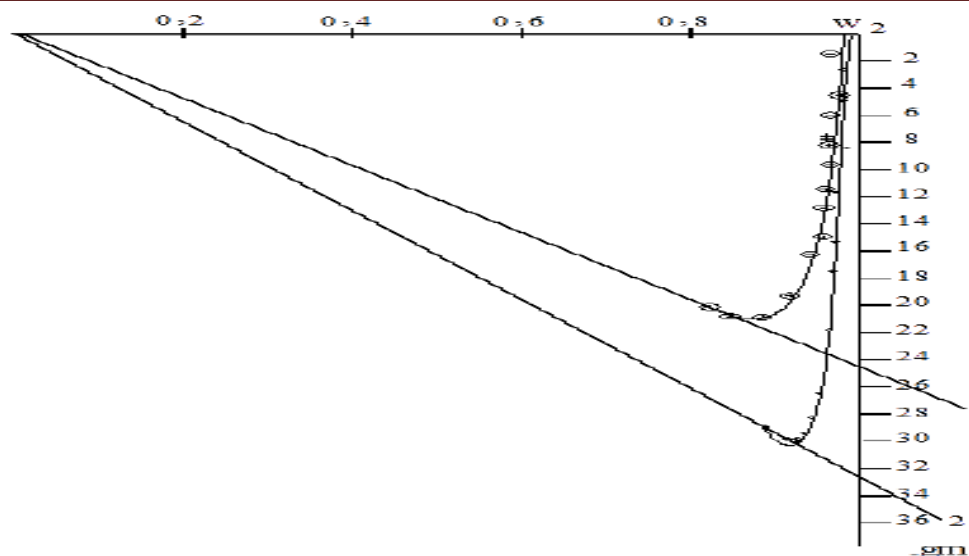
To measure the vapor pressure of a solvent in a polymer solution, a graph is drawn based on the relationship  $X/m = f(P_i/P_i^0)$ .



**Figure 1. Isotherm of water vapor sorption**

(1 technical Carboxymethylcellulose, 2 cleaned Carboxymethylcellulose)

As can be seen from this graph, the sorption properties of the technical and purified Carboxymethylcellulose samples differ from each other. The smaller S-shaped appearance for technical Carboxymethylcellulose indicates its lower water solubility and porosity compared to purified Carboxymethylcellulose. It can be seen from the figure that the removal of additional organic and inorganic salts from the sample leads to an increase in its sorption properties.

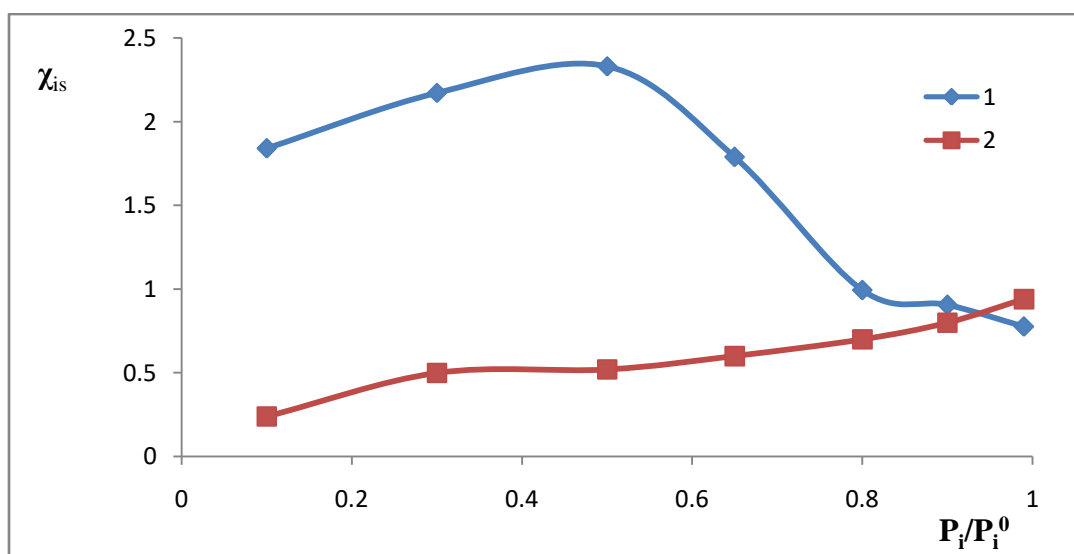


**Figure 2. Dependence of the average free energy concentration in the Carboxymethylcellulose-water system on the exchange rate**

(1-technical Carboxymethylcellulose, 2-cleaned Carboxymethylcellulose)

To quantify the thermodynamic activity of aquatic systems of technical and purified Carboxymethylcellulose, Gibbs potentials  $\Delta G_i$  were calculated based on the average free energy and concentration dependence of the polymer solvent  $\Delta g^m$  based on the chemical potential calculation of  $\Delta \mu_1$  solvent and  $\Delta \mu_2$  polymer.

As can be seen from Figure 2, the purified Carboxymethylcellulose and water system illustrate more negative Gibbs energy than the technical sample. This result can be confirmed by the polymer-solvent interaction  $\chi_{is}$  Flory-Huggins parameter.



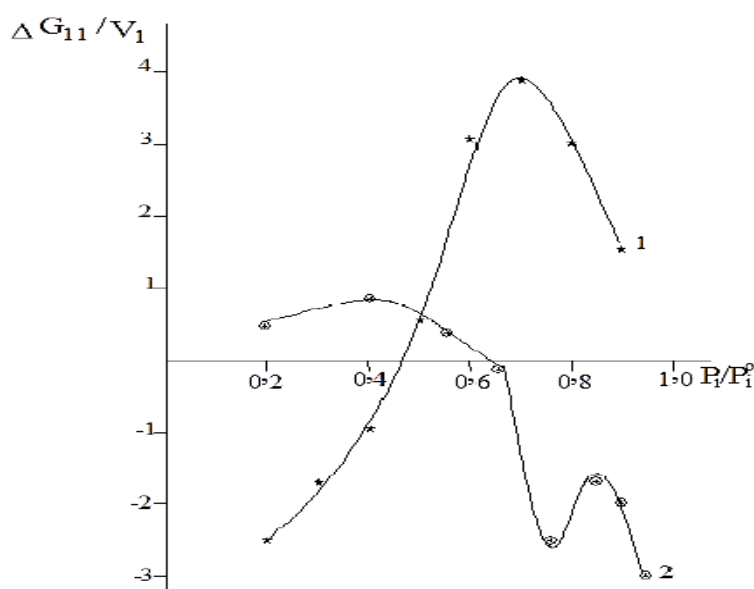
**Figure 3. Correlation of thermodynamic propensity of water vapor activity with the  $\chi_{is}$  parameter**



(1 technical Carboxymethylcellulose, 2 cleaned Carboxymethylcellulose)

As shown in Figure 3, the value of the polymer-solvent Flory-Huggins parameter of purified Carboxymethylcellulose is  $\chi_{is} < 0,5$  at the initial pressure. At relative pressure  $P_i/P_1^0 = 0,3 - 0,65$ , the Flory-Huggins parameter is  $\chi_{is} \leq 0,5$ , ie it is a thermodynamically good solvent. At high relative pressures, it is  $\chi_{is} > 0,5$ . This is explained by the solvent-solvent interaction condensation process. From this result, the value of the Flory-Huggins parameter of the polymer-solvent interaction of technical Carboxymethylcellulose differs sharply from the value of the purified sample.

This situation can be explained by the fact that the presence of various organic and inorganic additives formed as a result of additional reactions in the composition of technical Carboxymethylcellulose leads to a decrease in the force of interaction between Carboxymethylcellulose and the solvent.



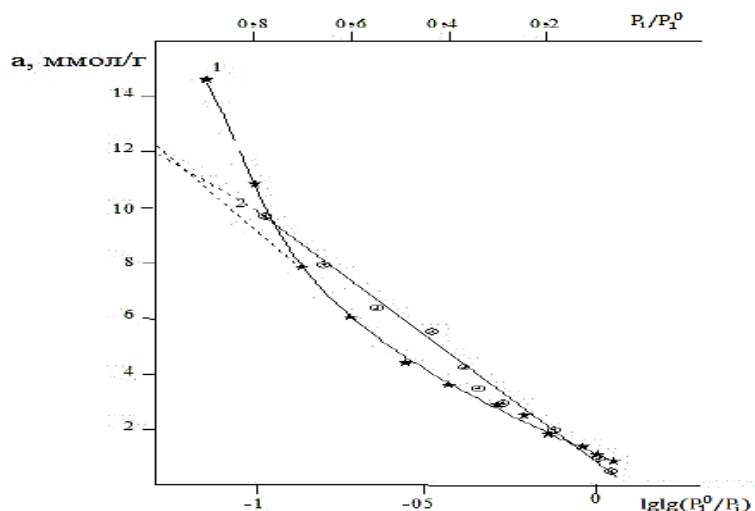
**Figure 4. Technical (1) and purified (2) cluster formation function for water vapor activity dependence for Carboxymethylcellulose-water system.**

Figure 4 illustrates the results of an integrated calculation of the dependence of cluster formation on the  $G_{11}/V_1$  sorbent volume fraction. Theoretically, when  $G_{11}/V_1 \geq -1$ , water molecules aggregate into clusters. As can be seen from this graph, the value of the cluster formation function for the technical Carboxymethylcellulose-water system indicates that the transition to a positive field when the water vapor activity is  $P_i/P_1^0 < 0,45$  indicates the beginning of cluster formation in the initial relative pressure areas.

For purified Carboxymethylcellulose-water systems, negative values of cluster formation function are observed, indicating that water molecules interact well with macromolecules at moderate relative pressures of water vapor.

The results of the study illustrate that the clustering for the studied samples is manifested in the field of high activity of water vapor and is consistent with the data in the literature on the

formation of clusters of hydrophilic polar polymers. Cluster formation in low relative pressure areas is associated with the formation of polymer-water and water-water hydrogen bonds.



**Figure 5. Water vapor sorption isotherms for Carboxymethylcellulose-water system in De Boer-Zwicker coordinate.**

(1-technical Carboxymethylcellulose, 2-cleaned Carboxymethylcellulose)

According to the ideas of De Boer-Zwicker (1929), the surface of a polar adsorbent polarizes non-polar adsorbent molecules in the first adsorption layer. In 1929, according to De Boer-Zwicker, the adsorption of a non-polar adsorbent on the first adsorbed layer excites surface dipoles, resulting in dipoles in the next layer. The second theory is based on the assumption that the same forces that cause condensation are also responsible for the binding energy of the polymolecular adsorption. This theory is called the polymolecular adsorption theory. De Boer-Zwicker pointed out that the induced dipoles in the arbitrary layer polarize the first layer and at the same time create the connecting dipoles.

De Boer and Zwicker adsorption theory, which describes the processes of interaction of polar sorbents with polar sorbents, can be applied in the case of cellulose esters-water system. This theory is suitable for both adsorption and absorption mechanisms of water binding processes. The results of the experimental study of the De Boer and Zwicker equations are shown in Figure 5, and the linearization of the water vapor sorption isotherm allows to determine the "true" sorption value, which is not complicated by capillary coding and clustering of water. As can be seen from the figures, the isotherm is linear for the technical Carboxymethylcellulose-water system in areas with a relative pressure of 0.7. Linearization occurs for the purified Carboxymethylcellulose-water system and the isotherm is linear in all areas of relative pressure. According to De Boer and Zwicker's theory, there is no "free" water in the specified activity range in the purified Carboxymethylcellulose-water system, all of the water is absorbed by the active groups of the polymer. Therefore, the Tsimm-Landberg values of the sample are negative and no cluster formation is observed in all areas of relative pressure. (Figure 4).

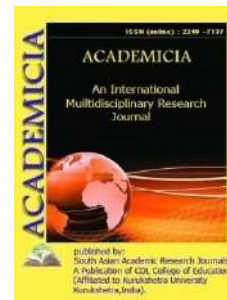
## CONCLUSION

Using thermodynamic methods, it is possible to obtain the necessary information about the intermolecular interactions of components of different natures. In this case, the sorption properties and capillary-porous structure of technical and purified Carboxymethylcellulose samples with the same quality parameters were studied. As a result of the removal of additional salts from the technical Carboxymethylcellulose, it was found that the specific surface area of the cleaned product is slightly reduced, leading to a sharp increase in the volume and radius of the pores. Based on these results, their thermodynamic parameters  $\Delta\mu_1$ ,  $\Delta\mu_2$ ,  $\Delta g^m$  and  $\Delta G_i$  were calculated and it was found that the purified Carboxymethylcellulose macromolecule interacts better with solvent molecules than the technical sample.

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## SOME THOUGHTS ABOUT HISTORICAL EVIDENCE SYSTEM AND EVIDENCE PROPERTIES

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### ABSTRACT

*In all the periods in which the science of history exists there has also been constant debate and discussion about the concept of "historical evidence". From the point of view of historiography, the concept of evidence requires a separate status, a separate definition, a specific rule. The historian must take the evidence and its specific aspects seriously. The fact that historians have been debating the essence of these concepts since the second half of the nineteenth century to the present day also shows the importance of these two concepts in the process of historical science and its research, and at the same time their complexity. An event is a situation that once happened. He argues that evidence is "a combination of a mentally shaped, character, thousands of simple and straightforward facts into a single piece of evidence." There is no objective content in the evidence and it does not correspond to the real historical reality. The content of the fact is not uniform in terms of the content of the subject and the aspect and nature of the research. It is important in the research process to be able to distinguish between factual evidence and historical reasoning, as well as factual information, from factual evidence. The ideas presented in this article are a logical continuation of the author's views on historical evidence and its interpretation in previous articles, based on the findings of specialized literature published in the field of history to date, the views of experts and the author's several years of research. The evidence will therefore be available in a separate interpretation. The selection of evidence is the result of a historian's unsubstantiated decision.*

**KEYWORDS:** *Historical Evidence, Historical Reasoning, Unsubstantiated Decision*

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## INTRODUCTION

The identification and interpretation of historical evidence is one of the key factors in modern historical research. A historian is required not only to have professional skills, but also to have his or her own scientific views on historical evidence (how it is applied, analyzed, and interpreted). In all the periods in which the science of history exists there has also been constant debate and discussion about the concept of "historical evidence". From the point of view of historiography, the concept of evidence requires a separate status, a separate definition, a specific rule. The historian must take the evidence and its specific aspects seriously. In the process of any research, the historian encounters situations in which the essence of the research, the scientific basis of which is based on the subject of historical research, depends directly on the evidence. In this case, the researcher is based on direct evidence to prove or disprove conclusions about a particular historical process, event or phenomenon, and in the third case to be able to present and prove his scientific conclusion in an undeniable way, the evidence itself is crucial in this process. So the question arises, what is the evidence itself, what is the historical evidence, how is the evidence to be understood?

Event and fact are important historical categories, and while at first glance they may seem simple, the essence and content of these concepts are somewhat complex. The fact that historians have been debating the essence of these concepts since the second half of the nineteenth century to the present day also shows the importance of these two concepts in the process of historical science and its research, and at the same time their complexity. An event is a situation that once happened. This situation is often at the center of the historian's attention in the research process. In most cases, history is understood in relation to an event. According to the English historian and philosopher Robin George Collingwood (1888-1943), since ancient times, history has been understood as a "res gestae" (a human activity of the past), i.e. the narration of the most famous political events.

In D. Kovalchenko's scientific researches the concept of fact (evidence) is defined with reference to historians and experts. Accordingly, the concept of "fact" (Latin. Factum - "work", "event", "accomplished") is used in different senses. First of all, a fact is a clear and concrete manifestation of a past reality in the present situation, that is, an objective reality, that is, the reality of the situation that has taken place, a factor that confirms it. Depending on it the fact (evidence) has a number of specific features. Second, another meaning of the concept of fact (evidence) is related to the process of scientific knowledge.

As for the evidence, the debate has not stopped for many years. The American scientist K. Becker came out in 1955 with the idea that any simple evidence represents many small and simple facts in its structure. He argues that evidence is "a combination of a mentally shaped, character, thousands of simple and straightforward facts into a single piece of evidence." There is no objective content in the evidence and it does not correspond to the real historical reality. All this collides in the mind, consciousness, imagination of the historian. K. Becker's obvious relativistic views (a methodological idea that denies the possibility of knowing reality objectively) were supported by other philosophers.

In particular, the Frenchman R. Aron believes that "evidence does not exist on its own, evidence is formed through the mind and thinking, and is for the mind and thinking." For example, the historical processes and events described by the historian are formed in his mind, in his



imagination, that is, he believes that there is no historical reality outside the consciousness of the historian. In his view, evidence (fact) is formed by the historian in a free state, while historical knowledge is of a relative nature. These views of R. Aron did not satisfy the historians, and they rejected these ideas and considered this approach to be unfounded.

Historian E. Carr points out that only historical events, not any events that have taken place in history, can be historical evidence. In his view, history is an interpretation, that the historian and the evidence must be on an equal footing, and that both must have their own judgment. The historian must have objectivity, and the evidence must be proven as the basis of reality. It then assumes that their equality and impartiality will be ensured. Commenting on the evidence, Carr argues that evidence is "a rigid body relative to the softness of interpretation." Evidence never reaches us in its purest form, it influences the historian's mind and represents the historian's views and interpretations in an untouchable state. The evidence will therefore be available in a separate interpretation. The selection of evidence is the result of a historian's unsubstantiated decision.

I. Kovalchenko divides evidence into three levels: evidence related to historical reality, evidence from historical sources (facts), historical-scientific evidence (facts). In the process of historical research, all three of these levels of evidence must be able to distinguish between them.

Polish historian Eji Topolski, studying historical evidence as a changing whole system, argues that this system is constantly changing and renewing, and as worldviews expand, new aspects of reality are inevitably revealed through evidence.

In our opinion (Z. Ilkhomov), the evidence related to the same situation can not change, the process of change of evidence to another state can not be evidence for the same situation, it is necessary to take into account the immutability and non-repetition of historical processes. In this respect, the evidence does not change and at the same time does not duplicate each other, but it is expedient to interpret it as a system of evidence similar in form and essence.

Another Russian historian, G.M. Ivanov, believes that evidence is a product of thought and represents objective reality and historical reality. Historical evidence is not exactly the same as a historical event, they do not exactly repeat each other, but it is not expedient to oppose them - it leads to subjectivity. Evidence is social in nature and manifests itself in both an objective and a subjective state. The content of the fact is not uniform in terms of the content of the subject and the aspect and nature of the research. It is important in the research process to be able to distinguish between factual evidence and historical reasoning, as well as factual information, from factual evidence. It is not advisable to accept any message and information as evidence of reality and at the same time incorporate factual circumstances into the data.

Based on this, M. Ivanov proposes to divide the evidence into groups. According to this, first of all, they can be economic, political, ideological in content, that is, if such evidence allows to study the relationship in the structure and functions of society, the second group has a content that determines the content of a historical event. Accordingly, the evidence can be simple and complex. Simple argument is unrepeatable and unique, and cannot be divided into simpler groups and parts. Complex evidences, on the other hand, are related to or simultaneously reflect whole processes (e.g., the origin and formation of peoples, the origin and formation of agriculture, the stages of development, etc.). The study of evidence requires a systematic approach. Third, the evidence can also be grouped according to its level of importance in terms

of content and substance, i.e., whether it is very important in the research process and, conversely, insignificant.

In our opinion (Z.Ilkhomov), the evidence has internal (structural) and external features.

The intrinsic nature of the argument is that no argument can fully capture the details of any historical process in its composition or reflect it in its entirety, but can reflect some aspects of it.

The external feature of the argument is that it simultaneously has objectivity in relation to historical reality and subjectivity and external influence on itself. That is, if the external influence in the process of the emergence of evidence is related to the creation, formation, interpretation, description of the evidence, etc., at the same time it is in an objective state relative to the historical reality, and its existence exists without the influence of the historian.

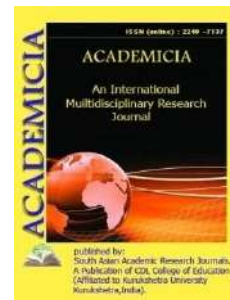
*In showing the internal (structural) nature of the evidence*, it should be noted that any evidence may not fully cover the details of historical processes related to time and space, or may not fully reflect its essence, but may reflect some specific, concrete aspects of it. *Second*, it simultaneously reflects the time in the process of occurrence of evidence, since most evidence can be of historical and scientific importance in terms of time. *Third*, at the same time, the evidence may also reflect space according to its nature. *Fourth*, the evidence can simultaneously reflect the time from its creation to the present day, but it can also reflect the attitudes towards the evidence in different socio-political periods if it was exposed to external influences during that time period.

*For example, the existing circumstances in a single jar, that is, the evidence can simultaneously reflect some aspects of a number of historical realities and processes related to domestic life, several types of handicrafts, folk arts, trade and economic life it is possible, but at the same time the same evidence or source cannot fully reflect the life of society and historical processes or crafts and trade and economic life.*

The external feature of the argument is that it simultaneously has objectivity in relation to historical reality and subjectivity and external influence on itself. That is, if the external influence in the process of the emergence of evidence is related to the creation, formation, interpretation, description of the evidence, etc., at the same time it is in an objective state relative to the historical reality, and its existence exists without the influence of the historian.

The ideas presented in this article are a logical continuation of the author's views on historical evidence and its interpretation in previous articles, based on the findings of specialized literature published in the field of history to date, the views of experts and the author's several years of research. It is natural that the author's conclusions are subject to some objections and controversial opinions by experts in the field, which, of course, will serve to achieve greater perfection in the science of history and its research.

In-depth study of sources, comprehensive analysis of evidence (facts), adherence to the principles of historicity, science, objectivity in the process of their involvement in historical research is the key to the development of historical science.



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## THE ROLE OF SOCIAL CONTROL IN THE LEGAL SOCIALIZATION OF THE INDIVIDUAL

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### ABSTRACT

*As a result of modernization and liberalization of social relations in society, a number of social sanctions have lost their significance. As a result of social tolerance and the softening of social relations, legal sanctions against children born out of wedlock are almost non-existent in the countries of the East, especially in Uzbekistan, where the institution of the family remains a strong and sacred institution. In our society, the birth of children on the basis of strict marriage operates on the basis of strong public control. Violation of this social norm entails a number of social sanctions. In the West, however, this situation has already lost its relevance as a social norm, and there are no social sanctions against such cases. The birth of children not only on the basis of marriage and family, but in a generally natural way, is also losing its significance as a social biological norm. Circumstances such as surrogate motherhood, donor fatherhood, artificial insemination are becoming the social norm. This article provides a philosophical analysis of the content of social control, its specific principles, the importance of social control in the formation of civil society and, most importantly, the role of social control in the legal socialization of the individual.*

**KEYWORDS:** *Citizen, Law, Legal Socialization, Personality, Social Control, Social Partnership, Civil Society, Legal Norm, Social Sanction, Preventive Direction.*

### INTRODUCTION

The concept of social control is one of the primary problems of such disciplines as social philosophy, psychology, pedagogy, sociology, in the control of many problems in society today, especially, antisocial phenomena, deviant behavior and the like among young people and adolescents are recognized as extremely important in finding solutions to problems. So what is

social control? Dictionaries define social control as follows: "Social control is one of the specific mechanisms of maintaining public order and represents a complex of activities by the public to identify deviant behavior, deviations from established norms, their prevention and response" [1].

## METHODS AND MATERIALS

Social control has existed since ancient times as a method and form of regulating social relations. For example, in the time of primitive society, there was a tradition of collective control over a person's behavior. If a person's behavior deviates from the norms accepted by the community, the team members have the power to change his or her behavior in the desired direction through various sanctions. Although the concept and phenomenon of social control has a long history, it was introduced to science as a scientific concept by T. Tard, one of the founders of social psychology. In his interpretation, this concept "represents a set of methods used to return the offender's behavior to the framework of normative rules" [2]. Later, the meaning of this concept expanded considerably. In addition, American sociologists E. Ross and R. Park have explored this problem in more detail in their research and uncovered new aspects. In their interpretation, "Social control is the influence exerted on an individual in order to bring his behavior in line with social norms" [3].

According to the American sociologist T. Parsons, "Social control, through the influence of deviant behavior through sanctions, normalizes it and serves to ensure social stability" [4]. This problem is being studied in detail by philosophers and scientists of our country. In particular, A. Saidov, M. Kyrgyzbaev, S. Otamurodov, O. Otamirzaev, B. Jumaniyazov, G. Kuchkorova, Z. Kodirova, M. Mirakilov and others are studying various aspects of this problem in their research. From the above descriptions of philosophers and sociologists, it can be said that social control is a way of self-regulation of the social system. This method is carried out with the help of legal norms and through the components of this system in order to ensure order and stability. The nature, content, direction of public control is determined by the nature, essence and type of this social system. Public control will have a completely different character in primitive, archaic societies than in today's developed industrial societies. While in early societies it had a simple structure, in modern societies it manifests itself as a complex system.

## RESEARCH RESULTS

An important condition for the existence and effective functioning of social connection and social system in society is the ability to anticipate, predict and draw conclusions about social activity and human behavior. It is this opportunity that allows you to properly organize the pedagogical, psychological and educational processes in society. Without this opportunity, human society would be in chaos, instability and crisis. Society has certain means of proper organization of social relations and social relations, and it is through these means that it maintains social order. One such tool is social control. "Social control is aimed at creating conditions that ensure the strength and stability of the social system, the development of specific ways to maintain social stability and social order, while creating a socially enabling environment for the emergence of new positive social changes." [5].

On the one hand, social control represents a set of mechanisms of social management, methods and means of social influence, on the other hand, it implies social activity and its implementation. In general, an individual's social behavior takes place under the control of society and the public, the social environment. They manifest themselves as agents of social

control, in addition to teaching the individual social norms of behavior in the process of socialization. Social control agents are those who monitor whether social behavior patterns and requirements are properly or incorrectly accepted by society and are properly accepted in practice. In this context, social control can be a specific form of social governance and social regulation. "Social control is manifested in the subordination of the individual to a united and organized social group, the spontaneous or conscious adherence to the norms established by this group" [6].

Social control basically consists of two elements. These are social norms and social sanctions.

A social norm is a set of socially supported or legislated standards, rules, and norms that govern and control people's behavior. Depending on the nature and characteristics of social norms, the appearance and types of sanctions applied to them, they can be divided into legal norms, moral norms, religious norms and personal norms.

"Legal norms are a set of norms enshrined in various legal acts, which are officially protected on a legal basis" [7]. Violation of legal norms is punishable in the form of criminal, administrative, disciplinary and other types of liability.

"Ethical norms are social norms of behavior, implemented in the form of public opinion, experienced and tested in the process of social relations, recognized by the public as a value [8]. Social space and time, national and ethnic identities have a direct impact on the formation of moral norms. At the same time, it is important that this norm is recognized and accepted by the majority of members of society. Violations of ethical norms can lead to both legal and social sanctions. For example, if they are brought up in legally special correctional colonies, they may be deprived of certain rights, may be subject to sanctions such as negative social acceptance, exclusion from certain social relations, and public outcry.

Social norms usually include the habits of certain social groups, (e.g., respect for adults) social traditions, (e.g., hospitality, thoughtfulness), social behavior, (etiquette rules), and so on.

Social sanction is a set of measures aimed at encouraging people to adhere to social norms or imposing penalties and restrictions on non-compliance. Sanctions are a key tool of social control. Sanctions are the main driving force behind the observance of social norms. "Sanctions are an element of public scrutiny," he said. In order to respond quickly to the behavior of individuals and social groups, society has created a system of social sanctions "[9]. Sanctions, by their very nature, are a response to the behavior of individuals and social groups, institutions and organizations. The emergence of a system of social sanctions is not accidental. While norms are designed to protect the values of a society, sanctions serve to protect and strengthen the system of social norms. If a norm is not protected by sanctions, people will ignore it. "Sanctions can be material and moral," he said. Fines and confiscation of property serve as material sanctions. Spiritual sanctions can take the form of critical thinking, harassment, harassment, pitching, harassment. "[9] Civil society institutions do not have the authority to impose administrative and legal sanctions. They can only apply moral sanctions. But the force of moral sanctions applied appropriately and correctly may not be less than the force of legal sanctions. In addition, social sanctions differ in their content and nature. They can be divided into formal and informal according to the form of manifestation. Formal and informal sanctions are further divided into positive, positive, negative and negative according to their content. Formal positive sanctions include, for example, awards for various positions and orders, orders and medals, scholarships



and diplomas, honorary titles, and informal positive sanctions include praise, approval, applause, and so on. Formal negative sanctions include fines, imprisonment, confiscation of property, and even the death penalty, while informal negative sanctions include insults, ridicule, exclusion from society, and protests.

Social norms and social sanctions form an integral whole. If no social norm is subject to the social sanction required of it, it loses its managerial and controlling, regulatory functions. For example, in nineteenth-century Europe, the birth of children in a family based solely on marriage was considered a social norm. Children born out of wedlock were subject to a number of legal and social restrictions, as well as social sanctions. Furthermore, they would not be able to claim any inheritance legally, would be deprived of social status, finding their place in society, choosing a suitable spouse, and so on.

The following mechanisms of social control are highlighted:

- “Separation (isolation) - separation of the owner of deviant behavior from society. For example, imprisonment, imprisonment, house arrest, restriction of free activity;
- incapacity for treatment - hospitalization for mental illness, strict control over behavior;
- Rehabilitation - taking comprehensive measures to return the owner of deviant behavior to normal life "[10].

The most important factors in the formation of civil society are social partnership, public control, social control, citizen self-government, coordination of activities of civil society institutions. Social control is one of the most important aspects of the proper organization of the process of citizen self-government. In addition to state control over the implementation of legal and ethical norms in society, the existence of properly organized mechanisms of social control plays an extremely important and effective role in the development of civil society. As an important factor in maintaining social order in society, social control performs the following functions:

1. Regulatory task - involves social regulation, control over social processes. Regulatory function is extremely important at every stage and at every stage of social control.

2. The function of protection, protection - this function performs the task of preserving, protecting the social values existing in society, ensuring their transmission from generation to generation. This function is extremely important in maintaining the national, ethical aspects of governance and regulation in society. For example, individualism, which is on the rise around the world today, to stop the rise of various forms of immorality, to prevent such cases from becoming the norm in our society, can be achieved through the function of protection and protection of social control. The predominance of human rights and the processes of liberalization are leading the world institution to lose its importance as a social institution and a higher social value. Only through social control can we ensure that moral vices such as same-sex marriage, gender reassignment, and the rise of different subcultures in our world enter our society and become a social norm. This is because the power of the state and legal institutions to combat these evils is being limited by human rights organizations. In such a situation, the public will have to protect and defend its national moral values through social control. Protective and protection function of social control:

- human life;



- property;
- national and universal moral values;
- means the protection of honor and dignity. Through this function, social experience is passed down from generation to generation. [20]

Stabilization function - this function allows to determine in advance that there will be a certain stability in the behavior of people in society, deviant states in their activities and eliminate it.

State control is certainly important in the management of social relations in society. But there are relationships and situations that are more normal than a measure of legal norms and may not contradict any rule of law. At the same time, it may contradict norms that have been accepted by society and that have maintained their relevance in the regulation of certain aspects of social relations in society over the centuries. Social control is extremely important in controlling and regulating this part of social relations.

“In civil society, there is a social control that regulates the connections and relations between the subjects of social processes, controls the implementation of all established social norms by individuals and social groups. At the same time, the boundaries and patterns of social activity are established, which gives order, organization and clarity to social relations” [11]. Social control contributes stability, organization, coherence, and objectivity to the behavior of individuals, social groups, and social institutions. Social control unites the subjects of social control into an organized whole, helps society to develop and maintain a system of normative values. Through social control, it is possible to determine the degree of deviation of members of society from the established social norms in society, to coordinate them in accordance with the requirements and needs of the time. A. Orlean suggests the following form of coordination of social norms: "rationality - individuality - balance - collective - normative - order" [12]. In our view, this classification and image could be more of a standard for the harmonization of social norms in the West. In our case, based on social relations and social values, we can describe the classification as follows: rationality - collective - balance - individuality - normative - order. Through this classification, it is possible to express the formation of norms that are formed on the basis of rationality, based on the principles of individual and collective implementation of social relations in society. Legal control can only assess and respond to deviant behavior in a society in one way or another, legally.

Any deviant behavior that occurs in society must become the object of not only legal control but also social control. That is, not only the legal attitude and legal assessment of the deviant behavior committed, but also the social attitude and social assessment should be given. Social control, on the other hand, refers to cases of deviation from social norms from a legal, moral, religious, and national perspective. For example, in countries such as Denmark, Sweden, Norway, Singapore, and Japan, which have achieved high results in the fight against corruption, in addition to law enforcement agencies, the public reacts to the arrest of an official with corruption. In these countries, corrupt people are treated as if they were murderers. The main emphasis here is on issues such as causing public hatred, people being ashamed of their actions. The fact that such people are distrusted and isolated from society in society is having an extremely good effect. The risk of a person losing his or her social authority causes him or her to act within the framework of social legal norms. After all, the role of man in the social space, always pays strong attention to the issues of prestige. By nature, man always strives to gain the

recognition of others, on the contrary, man always lives in fear of being exposed to public discussion and hatred. That is, the reduction of a particular defect in society, the effectiveness of the fight against it largely depends on the attitude of the public to this defect. This is a product of social control. In addition, the scope of social control includes not only illegal actions, but also the scope of socio-ethical norms. For example, in the context of Uzbekistan, social control plays an important role in ensuring family stability and preventing divorce. We can see that the neighborhood, the elders of the family, the relatives exercise social control over this issue. In doing so, social control uses methods and means such as intimidation, shame rather than punishment, arousing conscience, calling for accountability, encouraging people to be worthy of human qualities.

Social control is exercised not only by society, civil society institutions, but also through self-control. Self-control is the constant exercise by a person of his or her own behavior to ensure that his or her behavior conforms to accepted social norms. As a result of self-control, a person directs his activities based on his system of beliefs, convictions, worldviews, spiritual values, evaluates his behavior. The extent to which the ability to self-control is formed and developed depends on the socialization of people. Having a place and prestige in society causes people to exercise their self-control more strongly, because everyone is afraid of losing their prestige and status in society. This situation is extremely strong, especially in our country, in the life of the peoples of the East. The level of socialization has a direct effect on a person's level of self-control. "If a person accepts social norms as his norm in the process of socialization, then a high level of self-control is formed. This process is a complex process and involves many factors." [13] For example, the level of the rule of law and the rule of law in the social space, the extent to which social and moral values are absorbed into society, the main characteristics of public policy and ideological processes, the system of personal spiritual values and so on.

Two important areas of social control can be distinguished based on their ability to manage and regulate social relations.

"The retrospective approach is based on the analysis of existing problems of social control, to study in depth their mechanisms, solutions and results, to evaluate them, to suggest ways to resist deviations from accepted norms.

Preventive orientation is the formation in people of behavioral stereotypes based on norms that are generally accepted and important in that society. According to VA Yadov, "the formation of behavioral stereotypes in people can be effective only if it is based on individual, psychological characteristics" [14].

In the system of social relations, social control is a systemic part of the social space, which includes the following qualities:

- the existence of a clear, stable position and attitude of the person to a particular activity, as well as the belief that it benefits him;
- the presence of axiological targets in relation to certain types of activities, a sense of responsibility and accountability for the consequences of their actions and behavior;
- Ensuring that society values its value system, that is, the fact that a person is valued by society for such qualities as honesty, integrity, nationalism, increases people's confidence in their position in life;

- a sense of responsibility to society in the performance of their duties and responsibilities;
- have a clear idea of their capabilities;
- how rights and obligations, responsibilities and responsibilities are distributed among the members of the society and how their implementation is controlled;
- The existence and functioning of this process as a whole system, such as the confidence of law enforcement and government agencies to act fairly, within the law.

“Social space, as a carrier of social relations, forms a whole as a generalization of the joint activities of civil society institutions and state organizations. Together, they form a system of social thinking and a system of norms of behavior.” [15] Religion and religious organizations, family, community, education system, trade unions, political movements, political parties, public associations ensure the formation of social norms in society, their transmission from generation to generation. The reason why civil society creates opportunities for the development of public control is that only economically and politically free citizens and their associations can exercise truly effective, independent and impartial public control.

In the context of radical socio-economic reforms and modernization in our country, such changes are reflected in the content of public control. This means that each person who is a subject of activity, in addition to assuming certain obligations, can require others, public authorities to fulfill their obligations and responsibilities.

State control, which is one of the main mechanisms regulating the relationship between society and the individual, plays an important role in the sustainable development of the country. At the same time, the society, its civic institutions and all citizens control the activities of the state and government through public control using existing social norms, values, legal standards.

The concepts of social control and public control are different. Today, terms such as "public control", "social control", "civil control" are used in the press and scientific literature. The analysis shows that these terms are often used synonymously and sometimes incorrectly. The difference between the concepts of “public control” and “social control” is, first of all, that the concept of “social control” is broader in scope than the concept of “public control”. In addition to the concept of "public control", this concept also includes state control and civil control. Because they, too, are essentially manifestations of social control.

There are various definitions of public control. It would be more appropriate to use the following definition, which covers the main features of public oversight: "Public oversight is the activity of public associations to determine and assess the compliance of public authorities and administration with applicable law" [13]. He mainly performed the following tasks:

- “ensuring the observance of the rights, freedoms and legitimate interests of citizens;
- ensuring the legitimacy of the activities of government agencies and their officials;
- protection of public interests” [13].

“The tasks of public oversight are:

- Ensuring a system of checks and balances between government agencies and society;

- informing citizens about the state of observance of the law, the rights, freedoms and legitimate interests of citizens by state bodies and their officials;
- identify and inform the general public about violations of the law by government agencies and their officials, eliminate them with the help of the public, support and encourage the principle of social justice in society;
- Cooperation of civil society institutions and government agencies in ensuring the rights, freedoms and legitimate interests of citizens.

Amendments to our Constitution in 2014 gave constitutional control to public scrutiny. Article 32 of the Constitution is now worded as follows: "Citizens of the Republic of Uzbekistan have the right to participate in the management of public and state affairs directly and through their representatives. Such participation is achieved through self-government, referendums and the democratic organization of state bodies, as well as the development and improvement of public control over the activities of state bodies "[13]. The fact that the Constitution enshrines the participation of our citizens in the management of public and state affairs through the development and improvement of public control over the activities of state bodies is a sign of the great importance attached to public control in our country.

Public oversight is evolving in relation to the formation and development of civil society institutions. As civil society develops, there are broader opportunities and prospects for public scrutiny. On the other hand, the development of public control leads to the development of civil society institutions. Just as developed and widespread public control cannot be imagined without civil society, the development of civil society cannot be imagined without public control.

The reason why civil society creates opportunities for the development of public control is that truly effective, independent and impartial public control can only be exercised by economically and politically free citizens and their associations.

In our country, the legal basis of public control and civil control, which are forms of social control and its manifestation, has been strengthened. That is, the Law "On public control of the Republic of Uzbekistan" was adopted. All aspects of this activity are currently regulated and governed by this Law.

## CONCLUSION

In conclusion, we must say that social control and all its manifestations are extremely important in the management of various aspects of social relations in society:

- This factor is crucial in the formation of civil society. The point is that the system of socio-political relations of each society has its own structure and characteristics. Different methods of monitoring the implementation of social norms in each country may be more effective in their own right. This is done in close connection with the mentality, lifestyle, socio-moral, religious values of the people;
- In the regulation of social relations in our country, along with legal, state control, social control has a very effective power. This is due to the fact that the traditions of collectivism are strongly preserved in the life of our people, and public opinion is extremely important;

- An example of the program of cooperation "family - community - educational institution" developed in our education system in order to effectively use the opportunities of social control. We can say that this system, which is not found in other countries of the world, is a classic manifestation of social control. That is, the school, together with the family and the community, monitors the child's compliance with the established norms in the educational process. It is an extremely effective system that allows children's behavior and mastery, in turn, to be monitored by the public for the quality of school activities, teachers' lessons;
- One of the most effective forms of social control is the conduct of conciliation commissions in the community to ensure the stability of families and control over the reduction of divorces.

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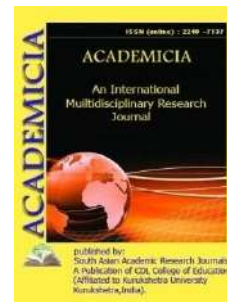
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## DIDACTIC FUNDAMENTALS OF ELECTRONIC BOOKS VISUALIZATION

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### ABSTRACT

*This article provides information on how to visualize teaching materials in higher education and how to use the visual capabilities of modern programming languages in the creation of electronic books. As a modern programming language, the features of the Java language and the visual environment of Android Studio, as well as the types of designer programs that create android applications, programs that create electronic books for working in Windows OC, their advantages and disadvantages are listed.*

**KEYWORDS:** Visualization, Android, Java applications, Java Development Kit (JDK), Java Runtime Environment JRE, IntelliJ IDEA (IDE), Android Studio, TheAppBuilder, AppsGeyser, Apps Makerstore, Net2Share, App sGeyser, TheAppBuilder, Andromo, Articulate Story Lectora, iSpring.

## INTRODUCTION

The state of development of modern technologies depends primarily on the intellectual potential of society, including the development of education. Issues of content and quality of education are considered a priority in society. In developed and developing countries of the world, special attention is paid to the informatization of education. In this regard, ways to develop education, increase its efficiency are being sought, the issue of introduction of new information technologies and effective software in education is gaining popularity. Teaching using e-textbooks on computers and mobile devices has an effective impact on all aspects of the learning process. The impact of e-textbooks on teaching content opens up many opportunities for learners. This is due to the fact that e-textbooks have a high capacity to demonstrate teaching materials, the introduction of artificial intelligence ideas, a means of conveying a lot of information to students.

The use of e-textbooks for educational purposes changes the activities of students in a positive way. That is, the student will be able to independently search for the necessary information, without having to consult a teacher, that is, to conduct independent research.

**Purpose.** The use of computers and mobile devices, as well as electronic books in the educational process requires the improvement of some theoretical foundations of didactics and pedagogical psychology. In particular, expert systems allow the student to choose the optimal solution to the problem of any complexity, and hypertext teaching systems allow the student to choose the sequence of mastering the learning materials. Only when e-textbooks are of high quality, both in terms of content and appearance, it will be possible to use them effectively in the educational process. The need to acquire knowledge, skills and competencies in an informed society always necessitates a visual representation of the knowledge base. Accordingly, “visualization” refers to the controlled presentation of data using images, graphics, tables to simplify comprehension and processing.

Visualization is the presentation of information in the form of a specific image (photos, drawings, diagrams, tables, graphs, formulas, etc.). Cave paintings of ancient people may be the simplest example of information visualization. In modern society, the effectiveness of information visualization is initially achieved through the visual representation of non-visual information (e.g., temperature change, population density in regions, the presence and intensity of electromagnetic fields, etc.).

In the information society, the possibilities of visual representation of objects of direct observation are greatly expanding. Expanding the variety of options and bases for demonstrating not only objects but also important aspects of their development and interaction, as well as understandable and permissible ways of influencing objects themselves and the events that accompany them. Accordingly, “visualization” refers to the controlled presentation of data using images, graphs, tables, tables to simplify comprehension and processing.

Visualization comes from the Latin word *visualis* - visual, visual, and in the literature the term visualization is interpreted differently. Visualization (in a general sense) is the process of presenting information in the form of an image to increase their ease of understanding. Giving any imaginary object, subject, process, etc. a visible shape, mechanically generating an image (image), using any technical means or thought formation (thought forms) directly with your mind

(mental visualization) can help you understand any complexity and originality. (Actually existing and created in the author's mind) is to create clear, stable, and vivid images<sup>1</sup>.

**Scientific novelty of the article.** At a certain stage in the development of science and technology, the emergence of new textbooks, the role of visualization in the learning process naturally changed and began to be supplemented. Clarity refers not only to images of objects, but also to models of processes or events, schematic structures that facilitate the understanding of complex information, dynamic visual aids using technical means, and then multimedia learning tools.

Computerized visualization of educational information is a visual image on the screen of an object, in general, its parts or their models, which, if necessary, has the ability to reflect different angles, details, internal parts and, if necessary, their development in space. In addition, the visualization of educational information focuses on the importance of visual perception for man, the leading role of figurative cognition in cognitive processes, the need to increase the information load of man and prepare him for the conditions of improving information activities, experience. Visualization has the following advantages:

- Visualization allows you to visualize an event or phenomenon that is difficult to reproduce directly;
- Allows efficient transfer of learning information by assembling its components into a visual image;
- Contributes to the formation of professional thinking.

At present, due to the development and compaction of information technology, part of the information exchange process is carried out using mobile devices. This, in turn, makes it necessary to create and share information in a way that is compatible with both personal computers and mobile device software. Today, personal computers and mobile devices around the world, as well as software that supports the connection, are divided into three types of separate OC (operating system). These are Windows, Linux and Macintosh for PCs and Windows Phone, Android OS and IOS OS for mobile devices. The operating systems that have the most users are the Windows OS designed for PCs, while the Android OS is designed for mobile devices. In Windows OS, apps are created in \*.exe format, while in Android OS, apps are mostly created in \*.apk format.

In order to effectively increase the theoretical and practical knowledge and skills of students in higher education institutions, it is necessary to increase the number and quality of electronic books. Given the above, it is important to focus on what you need to focus on in order to create e-textbook applications compatible with Windows OC and Android OS. Here are the processes for creating apps in \*.apk format, originally designed for Android OS for mobile devices<sup>2</sup>.

It is advisable to use the Java package when creating Android applications. The first aspect required for the development of Java applications is the Java Development Kit (JDK is a Java compiler, standard Java) created by Oracle (Oracle Corporation is a software manufacturer specializing in database management systems and business applications). class libraries are a set of Java applications distributed by Oracle Corporation, which includes various utility systems). The Java Runtime Environment (abbreviated as JRE-, is a Russian-language working

environment for Java. A virtual machine required to run Java programs without a compiler and other production tools) is used to run applications on your computer.

Based on the IDE - Integrated Development Environment, it offers the ability to create many useful visual programming tools that programmers need. Android Studio is an IDE officially developed by Google to create Android apps<sup>3</sup>.

**Results and practical applications.** Android Studio must have the necessary knowledge, skills and abilities in the Java programming language, Android APIs and Android application architecture when creating an application for the Android platform. Today, Android Studio has taken the lead with its capabilities. Google Android Studio is designed for Windows, Mac OS X and of course Linux platforms. To get acquainted with the Android development platform, you can download it from the official website of the Android studio (developer.android.com). The SDK (Software Development Kit) for Android Studio from here is a production tool that allows software developers to create software for a specific software package, basic software, hardware platform, computer system, operating systems and other platforms. package can be found. To use Android Studio, you must first install it on your computer and perform the following steps:

Set up Android Studio, in the next step we go to the next Android Virtual Device (AVD) panel by clicking Next. To install Android AVD, select Default settings, click Next again and go to the Configuration Settings section. This will clarify where Android Studio will be installed. The selected memory must have at least 500 megabytes of free space. Click Next to go to the Choose Start Menu Folder panel. Here, without touching anything, click Install and the Installing process will begin. When the installation process is complete, click Next again, and when the process is complete, the Finish button will open. With the click of the Finish button, Android Studio will start automatically and first, the app will ask you whether or not to open the project belonging to the android studio. Here, if a pre-saved project exists, the first radio button can be selected, the second option is applied, and the process continues. Android Studio Splash Screen, Finding Available SDK Components Find the required SDK and start the download process. The Android Studio Setup Wizard dialog appears when you download the required SDK for Android Studio. The settings are set when the Next button is pressed. Select the installation type, click Next, and in the next step, select the optional theme, then click Next to proceed to the next window. The final part is the process of downloading all the necessary files. The process of uploading the required files by clicking the Finish button takes some time. As a result, when the process is complete, clicking Finish will take you to the Welcome Android Studio window.

This will install Android Studio and the first Android project will be launched by clicking the Start a new Android Studio project button. One of the simplest ways to get acquainted with Android Studio is to create the simplest app and call it simply World Hello. Click on the Start a new Android Studio project button to go to this window. After that, it is given a name to save the program project in memory. Open the optional directory, display it in Project Location and click Next to allow Android projects to be stored there.

The Target devices command allows you to select the factors you need for your Android Studio project and leave it unchanged by clicking Next. Now select the type of activity required to set the activity command, continue the installation process and click Next. If you are installing Android Studio for the first time, it is advisable to download some files that belong to the Android Studio constraint layout and click Finish to create a user interface<sup>4</sup>.

As a result, when the Android Studio application is launched and the Run command is activated, the Hello World Application will appear on the screen, and it will be possible to get acquainted with the Android Studio User Interface in detail and explore its capabilities. This, of course, requires the ability to work with the Java programming language.

With the development of mobile technology, the mobile app market is evolving, including the mobile app market for Android OS. Until now, programming was done only by advanced programmers, now this opportunity is available to anyone with relevant knowledge of the concept of programming language and access to the Internet. The following are a few utilities that can be used to create Android apps without software code, and their disadvantages and advantages are analyzed:

**The App Builder.** This program is a convenient tool for creating applications, and its use does not require any additional funds. Its main drawback is that this software product does not support the Russian language. Important functions of a software product may include:

- There are a large number of options when creating Android OS apps, it is easy to choose one of the recommended options in the templates if you need to create a simple app;
- Ability to view detailed statistics on the created program;
- The created simple and clear electronic edition and google play application can be used in this application.

**Apps Geyser** is a remarkably high-quality tool that doesn't have to have software under the Android OS, as mentioned above. Everything in the program is simple and straightforward, with the ability to combine it in minutes from the "designer" part to the project. It will be possible to analyze the capabilities of the recommended software tools below, namely:

- There is a large archive of templates on various topics, restaurants, photo studios, holidays, sports, radio, shipping and many other templates, it is necessary to make the right choice for the need and edit it;
- The tools installed when promoting a new application sometimes take a lot of time and effort to promote a new application promotion, and the advertising tools installed on the designer have the ability to simplify this task;
- The program has the ability to connect to the advertising network, so you can earn extra income using the created program.

**Apps Maker store.** This app is a convenient and simple tool for creating mobile apps for Android OS, its main advantage is that it is able to create mobile apps for six types of mobile operating system at the same time, in addition, its useful features are:

- Ability to work with a simple and straightforward online designer;
- It is possible to register an account at no additional cost;
- In a large archive designed for the Android OS app, you will be able to record the required app in a simple way.

**Apps Geyser.** This app is one of the online services that does not require additional funds when creating Android apps based on web content. To get the finished program, go to any site and



select the name required for the program, describe it, select a specific category, you will be able to get the .apk file of the application in a few minutes. The service application provides distribution, advertising, statistics viewing services at no additional cost. The Russian version of AppsGeyser is available and implemented in practice. This program uses a specially created HTML code or document, DOC, DOCX, PPT or PPTX format. Apps created with AppsGeyser are placed on the Android Market, its official websites are <http://www.appsgeyser.com> and <http://www.appsgeyser.ru>.

**The App Builder.** This software service is a very efficient HTML5 software developer. Apps developed using it do not have to be placed in online stores. Because they can be sold directly. In this case, users are required to use the completed application. This service is provided via QR codes and SMS-messages. A distinctive feature of TheAppBuilder service is the wide selection of templates and settings. Data encryption based on the AES-128 standard has the ability to integrate with Microsoft SharePoint and Active Directory. Similarly, HTML5 for creating applications for Android platforms can be implemented on iPhone platforms, using Web App web design languages. The technical support service website is provided at this <http://www.theappbuilder.com> website<sup>5</sup>.

While the main advantage of the above apps is that they can be used to create e-textbook apps for any specialty without programming language skills for Android OS, the downside is that the app can't claim copyright for the app. Now it is possible to create e-textbook applications for any specialty without the skills of programming languages for Windows OC, but programs that do not require copyright, as well as their advantages and disadvantages are listed:

**Articulate Storyline** is one of the most popular programs for creating courses, it is flexible, easy to use and designed to create different purpose courses. Articulate Storyline is a three-utility package (Presenter, Quizmaker, Engage) that allows you to create training courses, presentations, tests and other forms of content in Flash and HTML5 formats that can be viewed on the iPad and integrated into distance learning systems. The feature of this program is easy to master. The rollers developed in Articulate products look more modern and dynamic than other e-learning editors. The main features of the program:

- Simple interface allows you to create courses from scratch or based on templates without requiring additional user training. The interface looks similar to Microsoft PowerPoint.
- Records screen situations and demonstrates how to work with an electronic course of recording.
- Support of HTML5 and Flash technologies, as well as mobile devices. Publish courses in a variety of formats for iPad, PCs, laptops, Android, iPad, and other devices, and support SCORM and AICC (reporting) standards.

**CourseLab** is a powerful and easy-to-use software tool for preparing interactive learning materials (e-textbooks) for use in distance learning systems, CDs, or any other storage device. The main features of CourseLab are:

- Does not require the user to know HTML or other programming languages.
- An objective approach has a mechanism for creating educational materials of any complexity and automatic creation of tests.
- Allows training courses to host files of any Rich-media type - MacromediaFlash, Shockwave, Java and any video format.



- Ability to place presentations in Microsoft PowerPoint format in the training material.
- Allows a skilled user to add JavaScript directly to the properties of program files.
- Depending on the type of application, the training materials created with CourseLab comply with the following e-learning standards: AICC and SCORM 1.2.

**Lectora** is a program that allows you to create e-learning content and create e-learning complexes in the distance learning process. The program has the following icons:

- in the creation of distance learning courses;
- when creating presentation files;
- when creating control tests;
- when converting ppt files to other learning formats (SCORM or AICC);
- Widely used in the creation of intellectual training courses. Courses created in the Lectora program can be published in SCORM and AICC, which are e-learning standards. Lectora software meets the requirements of existing LMS systems. The training courses created in the program can be conducted with the click of a button in the form of a dynamic website, HTML, CD-ROM, .exe, compiled into a single file, without knowing any programming languages in SCORM and AICC standards.

**iSpring** is usually used in preparation for a presentation, in most cases, Microsoft - PowerPoint software. It has many features that help the material presented to be better understood by those who see it. The program has options such as iSpring Free, iSpring PRO and iSpring Presenter. Today, this product is one of the best PowerPoint converters in Flash in terms of speed, conversion quality and number of options. Compared to the iSpring PRO version, the iSpring Presenter version has the following features:

- Presentation content protection: password viewing, protection of the presentation, the presentation can be opened only in the authorized domains, these features are available in the Protection version of the Publish dialog;
- Add video and sync it with animations;
- creation of SCORM / AICC compliant courses for use in distance learning system;
- Availability of Action Script API to convert presentation at application level<sup>6</sup>.

## CONCLUSIONS AND SUGGESTIONS

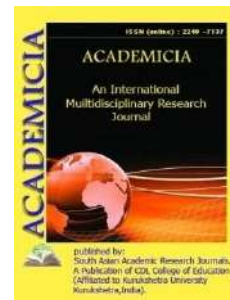
In order to ensure the effective use of modern information technologies in education, electronic books and their authoring software are widely used. Using similar programs in higher education institutions on the subjects taught, it is possible to increase the performance of students in education through the introduction of multimedia lectures.

Visualization of teaching materials in the educational process expands students' imagination and independent thinking skills in relation to science. As a result, the interdependence and continuity between science topics is further strengthened. The above methods used by online designers for android apps in creating e-textbooks and visualizing learning materials are not actually related to software development. Because, in some cases, all of these programs have their own characteristics, they cannot claim the right to be called a "real program". In the future, based on a positive approach, they can be widely used in practice. The problems of improving the quality and effectiveness of teaching in higher education institutions will be solved with the creation of e-learning manuals with e-programs and applications using modern technologies and visual

software. Because, whether he is a programmer or a designer, the software tools created by them are initially divided into the number of electronic books and thus the ability to increase their quality.

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## INFLUENCE OF INDUSTRY 4: 0 PROGRAM ON ENSURING COUNTRY COMPETITIVENESS IN THE INTERNATIONAL MARKET

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### ABSTRACT

*This study theoretically substantiates the impact of the fourth industrial revolution on the country's competitiveness and develops proposals for the inclusion of the Republic of Uzbekistan in "The Global Competitiveness Index". Significant aspects of the "Industry 4: 0" program were also studied, and the program was studied on the basis of SWOT analysis.*

**KEYWORDS:** "Industry 4: 0", The Fourth Industrial Revolution, "Global Competitiveness Index", SWOT Analysis, Artificial Intelligence, Cybersecurity, Competitiveness.

### INTRODUCTION

Countries of the world pay great attention to the development of science in achieving international competitiveness. Development of science allows the industrial industry to be equipped with modern technology, the effective use of artificial intelligence in the management of production processes.

The economy is growing and enterprises are achieving with high efficiency in countries with a focus on the development of science and the development of innovative activities. In a highly competitive environment observed in the world market, lagging behind the process of rapid development, not paying attention to the development of science can lead to a crisis in the industrial industry.

Aiming to join the ranks of developed countries, Uzbekistan is undergoing rapid reforms in the development of science. Approved by the President of the Republic of Uzbekistan Sh. Mirziyoyev "On measures to further strengthen the infrastructure of research institutions and the development of innovative activities", "On measures to further improve the activities of the Academy of Sciences, organization, management and funding of research" , Resolutions "On

Science and Scientific Activity" are among them. The resolutions provide many opportunities to support research activities, special funds, grants are allocated from the state budget.

We all know that the equipment used in some industrial enterprises in our country consists of spiritually obsolete, energy-intensive equipment. The high level of energy consumption, in turn, leads to an increase in the cost of production, creating problems associated with withstanding strong competition in world markets. In this situation, it is important to conduct research on new generations of industries used by developed economies, to study the experience and use them effectively.

## LITERATURE REVIEW

The development of science has created a new revolution in industry "Industry 4: 0". Today, Germany, the United States, the Netherlands, France, the United Kingdom, Italy, Belgium, and other developed countries are making effective use of the fourth industrial revolution.

A number of researchers have conducted research on the impact of the Fourth Industrial Revolution on the competitiveness of a country, region, industry, enterprise.

Hasan Çebi BAL, Çisil ERKAN, one of the foreign researchers, studied "Industry 4: 0" as a key factor in creating value added, bringing product quality to a new level and its competitive advantage over other industrial stages<sup>1</sup>.

The fourth industrial revolution focused on reducing the use of labor, the organization of quality management in a new way, the cycles of full coverage of the raw material-finished product process.

IP Dovbiy, NV Ionova, NS Dovbiy assessed the impact of "Industry 4: 0" on the country's competitiveness, macroeconomic indicators, GDP<sup>2</sup>.

IV Tarasov spoke about the competitive advantages of "Industry 4: 0", including the possibility of direct communication between man and machine through information technology, the transparency of information and the ability to create effective systems, the virtual view of the material world.<sup>3</sup>

Liu C. assessed the impact of Industry 4: 0 on macro and microeconomic competitiveness and proposed strategies for implementing the program.<sup>4</sup>

Renata Stasiak-Betlejewska, Luminita Parv, Wojciech Gliń have studied the most commonly used technologies in software use and their impact on enterprise competitiveness.<sup>5</sup>

A. Magrupov, one of our local researchers, stressed the need to take into account the program "Industry 4: 0" in the training of modern specialists for the national economy, the program "Digital Uzbekistan - 2030" is related to artificial intelligence, Internet, big data, genetic and biotechnology, renewable energy sources, composite materials. that it is.<sup>6</sup>

The relevance of the research is determined by the lack of in-depth analytical study of the impact of the program "Industry 4: 0" on our national economy, the effectiveness of its application.

## METHODOLOGY

The role and significance of the Fourth Industrial Revolution, ie the Industrial 4: 0 program, in ensuring the country's competitiveness have been theoretically studied, and the program has been

studied on the basis of in-depth empirical approaches based on SWOT analysis. The main purpose of the work is to determine the need for the application of the program "Industry 4: 0", to develop proposals and conclusions on the use of the program in enterprises.

### Main part

The first industrial revolution spanned 1760-1840 and was characterized by the assimilation of water and steam energy and thus the transition from manual labor to mechanized production. The second industrial revolution took place in the late 19th and early 20th centuries and was marked by an unprecedented phenomenon in the field of electricity and the conveyor belt - the beginning of mass production in industry. The third industrial revolution began in the 1960s, and as a result of electronic and digital technologies, the industry rose to the level of automation. It is well known that these changes have had a profound effect not only on industry and the economy, but on all aspects of human life. They have radically affected the way of life of the population, causing the disappearance of some very important fields and professions only yesterday, and even the emergence of new traditions and customs. At such an important juncture, nations that have not been able to quickly adapt their worldviews to the new era have failed to realize that states that have been slow to modernize have voluntarily given up their leadership positions to others.

As a result of the application of intensive scientific research in developed countries to production processes, a new generation of industry, the fourth industrial revolution, has emerged. The peculiarities of the Fourth Industrial Revolution are reflected in the emergence of new technologies that combine the achievements of digital, physical and biological technologies, the disappearance of the boundaries between digital technology and the organic, biological world.

Industry 4.0 has brought humanity into a new era. This new era has created new opportunities for billions of people, businesses and governments around the world. Human capital, innovation, technology, flexibility and agility are the most important factors in the success of Industry 4.0.

The use of new generation technologies by industry plays an important role in the competitiveness of countries in the world market. Also, for countries to improve economically, they need to use technology effectively and combine it with other factors of competitiveness.

The World Economic Forum has released the Global Competitiveness Index 4.0 report for 2019 on specific indicators of countries. It is known that the Global Competitiveness Index 4.0 evaluates countries on the basis of 103 individual indicators. The main ones are macroeconomic stability, consumer market, labor market, financial system, domestic market size, quality of institutions, infrastructure condition, level of use of information technologies and modern communications, health, education and skills, business and innovation development dynamics. The organization evaluates 141 countries annually on a 100-point scale (see Table 1).

**1-TABLE THE GLOBAL COMPETITIVENESS INDEX 4.0 IS THE TOP TEN RANKING IN 2019<sup>1</sup>**

<b>№</b>	<b>Name of countries</b>	<b>Ranking</b>
1.	<b>Singapore</b>	84,8
2.	<b>United States</b>	83,7
3.	<b>Hong Kong</b>	83,1
4.	<b>The Netherlands</b>	82,4

5.	<b>Switzerland</b>	82,3
6.	<b>Japan</b>	82,3
7.	<b>Germany</b>	81,8
8.	<b>Sweden</b>	81,2
9.	<b>United Kingdom</b>	81,2
10.	<b>Denmark</b>	81,2

Singapore, the United States and Hong Kong are in the top three among 141 countries in the competitiveness rankings.

Singapore is a country with a highly developed market economy and low tax rates. The country has a well-developed electronics, shipbuilding and financial services sector. Extensive research is also being conducted in the field of biotechnology.

The United States ranks first in the world in terms of nominal GDP and second in terms of purchasing power parity. The country's economy is highly developed. Although the population is only 4.3 percent of the world's population, Americans own 40 percent of the world's total wealth. The United States leads the world in a number of socio-economic indicators, including average wages, the Human Development Index, GDP per capita, and labor productivity.

Hong Kong is an important center of international finance and trade. The region's economy is based on a free market, low taxation, and the inadmissibility of government intervention. Hong Kong is an offshore area and does not pay customs duties on imports as a free port, no value added tax is set.

They are followed by the Netherlands, Switzerland, Japan, Germany, Sweden, Great Britain and Denmark.

The Netherlands has a highly developed post-industrial economy. The country's coastal cities of Rotterdam, as well as Eymyayden, Dordrecht, Arnhem and Naymegen, specialize in heavy industry - oil refining, chemical production, ferrous metallurgy and machinery. There are wind farm farms along the coast. The production of chocolate, cigars and beer is also developed.

Switzerland is one of the most developed and rich countries in the world. Although the country has almost no mineral resources, its industry is developed and agriculture is highly productive. Switzerland has four of the world's largest gold refineries. Accordingly, the country is also a world leader in the import and export of precious metals.

Japan is a developed country with a very high standard of living. The sunny country has the highest life expectancy in the world and the lowest infant mortality rate. Banking services, insurance, real estate, transport, retail, telecommunications and construction play an important role in the country's economy. Japan has large production facilities for automobiles, electronics, machine tools, steel, ships, chemicals, textiles and food.

Germany is one of the fastest growing economies. Global leadership in a number of industries and technologies. It ranks third in the world in terms of exports and imports. Germany is also a developed country with a very high standard of living. It supports social security, universal health care, environmental protection and free higher education.



Sweden has a diversified and competitive economy. More than 50 global companies such as ABB, Atlas Copco, Oriflame, Saab AB, Saab Automobile AB, Scania, Volvo, Volvo Trucks, Ericsson, TELE2, AB Electrolux, TetraPak, Alfa Laval, SKF, H&M operate in the country. Sweden has a highly developed infrastructure that is constantly modernized.

The UK economy ranks 10th in the world in terms of GDP and purchasing power parity. The Kingdom accounts for 10% of world exports of banking, insurance, brokerage services, as well as computer software

Denmark is a highly developed industrial and agrarian country. The share of industry in national income is more than 40 percent. The country ranks first in the world in terms of foreign trade per capita. Denmark, as the country with the most stable economy in Europe, is characterized by a balanced state budget, stable currency, low interest rates and low inflation rates.

If we look at the report, Uzbekistan is not included in the 141 rating, and one of the main reasons for this is the fact that Uzbekistan is not a member of the World Economic Forum. Resolution of the President of the Republic of Uzbekistan Sh. Mirziyoyev dated February 25, 2019 No PP-4210 "On measures to improve the position of the Republic of Uzbekistan in international rankings and indices" provides specific instructions for developing "road maps" to improve the position of the Republic of Uzbekistan in relevant international rankings.

In order to fulfill the tasks set out in the resolution, the Ministry of Finance of the Republic of Uzbekistan together with representatives of the World Economic Forum is working on the inclusion of Uzbekistan in the Competitiveness Index. It is expected that Uzbekistan will be included in the ranking from 2021, taking into account procedures such as selecting one of the non-governmental research institutes, private universities or agencies operating in Uzbekistan, conducting surveys among them, studying the results.

The application of the "Industry 4: 0" program is important in the evaluation of countries on the basis of the Global Competitiveness Index. Because the use of "Industry 4: 0" requires the development of modern science and helps enterprises to achieve high efficiency.

We will conduct a SWOT analysis to better understand the differences and effectiveness of the "Industry 4: 0" program from other industrial generations (see Table 2).

**2-TABLE SWOT ANALYSIS OF THE INDUSTRY 4: 0 PROGRAM<sup>1</sup>**

<b>Strength – S</b>	<b>Weaknesses – W</b>
<ul style="list-style-type: none"> <li>– Organization of high-level production process and continuous quality control of products;</li> <li>– Requires less manpower and human factor;</li> <li>– Market demand and flexibility;</li> <li>– Energy saving and less than other industries;</li> <li>– Ease of control of production processes and cycles.</li> </ul>	<ul style="list-style-type: none"> <li>– Complexities in data security;</li> <li>– High costs associated with the organization of the process;</li> <li>– Concerns about the use of new generation technologies, the impact of fears on entrepreneurs not to use the program;</li> <li>– High level of complexity of the processes associated with the application of the program.</li> </ul>
<b>Opportunities – O</b>	<b>Threats – T</b>
<ul style="list-style-type: none"> <li>– Effective organization of the process</li> </ul>	<ul style="list-style-type: none"> <li>– Low qualification of staff, causing</li> </ul>

<p>on the basis of established requirements affects the achievement of competitive advantage;</p> <ul style="list-style-type: none"> <li>– Further development of science will serve to increase the efficiency of industrial industry;</li> <li>– The flexibility of the program, ie the improvement of production processes to meet the demand, allows to produce a new type or range of products.</li> </ul>	<p>problems with their acceptance of the program;</p> <ul style="list-style-type: none"> <li>– Maintaining the security of information about the enterprise, the risk of their misappropriation by competing enterprises;</li> <li>– Outsourcing risk, ie the occurrence of an enterprise in the provision of certain services related to the production process.</li> </ul>
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The analysis shows that the use of the program "Industry 4: 0" is beneficial for the company, it is important that the whole process is based on information technology, the possibility of producing the required type of product, high quality control and improvement of product quality. But using the program poses an information risk. Also, the high costs associated with the organization of production processes on the basis of the program "Industry 4: 0" can create difficulties for developing industrial enterprises.

## CONCLUSION AND SUGGESTIONS

The following conclusions and recommendations were developed during the research: - In Uzbekistan, the program "Industry 4: 0" has a wide range of applications at all industrial enterprises, in this regard, it is necessary to establish manufacturing enterprises on the basis of the program;

- It is necessary to pursue a strong cyber security policy and develop measures to improve the ICT infrastructure in the use of the program "Industry 4: 0";

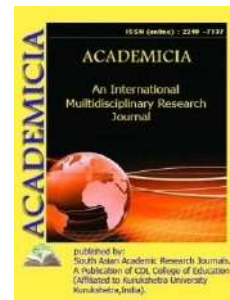
- Macroeconomic stability, consumer market, labor market, financial system, domestic market size, quality of institutions, infrastructure, level of use of information technology and modern communications, health, education and skills, business for the Republic of Uzbekistan to rank high in the Global Competitiveness Index in 2021 and ensure the growth of innovation development indicators;

It is necessary to organize training or send interns to prestigious foreign institutions in order to have high qualification in the field of ICT.

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## POSSIBILITIES OF USING WEB-TECHNOLOGIES IN THE LEARNING PROCESS

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### ABSTRACT

*The article deals with not adequately studying of the methods of teaching information and communication technologies to future teachers of computer science in higher education and the organization of lessons using Web technologies and their formation, and by this the formation of skills and abilities, in particular, not having enough skills and abilities to use Web-technologies is said that the study of this problem is one of the most pressing issues.*

**KEYWORDS:** *Computers, Modern Telecommunications, Network Technologies, Internet, Web-Technologies, Information Technology and Technologies, Web-Servers.*

### INTRODUCTION

As in all spheres of life of the republic, comprehensive reforms are being carried out in the education system. The main purpose of the reforms is to introduce new pedagogical and information technologies in the educational process, increase the effectiveness of education, improve its content, serve its socio-economic, scientific and educational development of society [1].

Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No PF-4947 "On the Strategy for further development of the Republic of Uzbekistan", dated April 20, 2017 No PK-2909 "On measures to further develop the higher education system", dated June 5, 2018 Resolution No. PK-3775 "On additional measures to improve the quality of education in higher education institutions and ensure their active participation in the ongoing comprehensive reforms in the country", February 19, 2018 "Information Technology Decree PF-5349 "On measures to further improve the field of education and communications" and other regulations related to this activity necessitated the introduction of modern technical means, in particular, computers, information technology and technology in the educational process [ 2].

Also, since the years of independence, large-scale work has been carried out to radically reform the system of higher education, dramatically improve the quality of training, training of teachers with competitive higher education in accordance with international standards. In order to develop the field of education and science, “further improve the system of continuing education, increase the capacity of quality educational services, continue the policy of training highly qualified personnel in accordance with the modern needs of the labor market; Improving the quality and efficiency of higher education on the basis of the introduction of international standards for assessing the quality of education and training, the development of modern methods of acquiring knowledge, the use of Web technologies in improving the educational process is becoming an important requirement today. Informatization of the education system requires the training of professional computer science teachers who can use Web-technologies in their professional activities. This justifies the need to improve the system of methodological training of future computer science teachers based on the use of Web-technologies [3].

## **MATERIAL AND METHOD**

In the field of pedagogy, scientific research is conducted to develop high-tech, educational competencies using modern information technology. In particular, UNESCO documents state that information and communication technologies, in particular Web-technologies, can serve as a modern technology for education, while Web-technologies should be rationally introduced into the educational process and used in conjunction with new models of education. Training of competent, competitive personnel capable of using Web technologies in professional activities, creation of a modern education system in higher education institutions (HEIs), inclusion of Web technologies in the existing forms, methods and tools of teaching subjects and creation of methods of their effective use, Web technologies The definition of the content of the competence of use, its conditions, the improvement of the content remains relevant.

At the current stage of development of society, the process of informatization is becoming more global, which will inevitably lead to the formation and establishment of a new post-industrial civilization in our world - an informed society. Today there is a new stage of informatization of various forms of human activity associated with the development of telecommunications, the Internet, Web-technologies (hypertext, hypermedia, etc.). In interactive mode, graphics, animation, photos, sound, and text create an environment in which the user has access to qualitatively new features [4].

In today's world of rapid development and improvement of information technology, the full integration of the content of lessons in the teaching of all subjects, including computer science, remains a pressing issue. A lot of research has been conducted on the application of information and communication technologies in the educational process in secondary schools and universities. At the same time, the issue of teaching methods of information and communication technologies, in particular, the organization of lessons using Web technologies and their formation, and thus the formation of skills and abilities of students is not sufficiently studied. In particular, the lack of skills and competencies of computer science teachers in the use of WEB-technologies and their application in the classroom shows that the study of this problem is one of the most pressing issues. On this basis, the problem of developing a scientific and methodological basis for the formation of professional skills and competencies of future computer science teachers in the teaching process using Web-technologies is put forward.

Informatization and large-scale communication of the society puts a new social order in the training of computer science teachers for higher pedagogical education. According to him, computer science teachers must have fundamental knowledge in the field of computer science and information and communication technologies, the ability to use the Internet, Web technologies, to use them effectively in their professional activities. Therefore, there is a need to train teachers who can effectively use new information and communication technologies in their professional activities.

The analysis of curricula and programs for the training of computer science teachers in pedagogical higher education institutions shows that not enough attention is paid to their training in network information technologies, including the global Internet and Web technologies.

Various aspects of informatization of education, in particular, the use of computers and new information technologies in education, issues of teaching methods are considered in the work of a number of pedagogical scientists in the CIS countries and the Republic.

A lot of research work has been done and is being done to improve the teaching of computer science in the education system of the Republic of Uzbekistan. However, the results of the analysis show that despite some results, the need to improve the methodology of teaching computer science using Web-technologies in the education system remains relevant today. One of the main obstacles to finding a complete solution to the problem is the low level of training of computer science teachers in the formation of professional competence on the basis of Web technologies.

Analysis of scientific and methodological research conducted in the country shows that some aspects of the theoretical and practical aspects of the problem under study and research A.A. Abdukodirov, U.Y. Yuldashev, M. Aripov, U.Sh. Begimkulov, N.I. Toylakov, R.R. Bokiev, F.M. Zakirova, R.Kh. Ayupov, S.Q. Tursinov, M.Kh. Allamberganova, M.R. Fayzieva, I.M. Boynazarov, N.S. Khaytullaeva and others reflected in his research. They have conducted research on the teaching of informatics and information technology in the system of general secondary education, higher and secondary special, vocational education, and have developed and implemented a number of textbooks and manuals. However, the issue of developing a scientific and methodological framework for the formation of professional competence of computer science teachers in the teaching process using Web-technologies has been neglected.

The skills and competencies of computer science teachers in the teaching process using Web-technologies are formed, if;

1. Analysis of the use of Web-technologies in the educational process of computer science teachers;
2. It is scientifically justified that the content of subject training of computer science teachers should be enriched with knowledge on the use of Web-technologies;
3. A special course is developed to build knowledge, skills and competencies in the use of Web technologies;
4. If the methodology of teaching a special course is developed and tested in practice.



## CONCLUSION

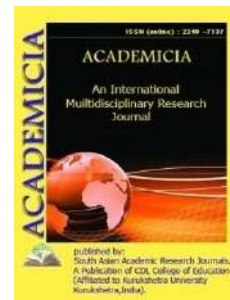
Based on the above, it can be concluded that the content and methodology of professional and subject training of computer science teachers will be improved, the effectiveness of their training will increase. The created special course can be used in higher pedagogical educational institutions, advanced training courses.

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## THE STRATEGY FOR THE IMPLEMENTATION OF THE MODERN GOVERNANCE SYSTEM IN UZBEKISTAN

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### ABSTRACT

*The Strategy of Actions for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 envisages large-scale reforms such as liberalization and modernization of all sectors of the country, raising the state and society to a new level, improving the welfare of the people. This article is devoted to the latest reforms carried out in the field of public and management within the framework of the Strategy of Actions in Uzbekistan. The article also examines the priorities in the field of public and public administration reform in Uzbekistan in the "Year 2020 of development of science, education and digital economy".*

**KEYWORDS:** *Strategy of Actions, Development, Priority, Civil Society, Government, Reforming, Public Administration, Decentralization, E-Government.*

### INTRODUCTION

In the conditions of rapidly developing reality, each state determines its firm stance and effective ways of development. In this context, the independent Uzbekistan needed to objectively assess the historical development path of the young independent state, the accumulated experience and analyze the progress made, identify measures to further enhance democratic reforms, set priorities for accelerated development of the country and clear goals.

The mentioned objectives were preceded by practical talks, discussions with the broad public, representatives of the business community, leaders and experts of state bodies. They reviewed legislative acts, information and analytical resources of local and international organizations,

recommendations and comments, as well as studied the experience of developed foreign countries. The proposals, their study and generalization built the basis for the National Strategy of Actions for Five Priority Development Areas in 2017-2021 and other programs that have mapped out the fate of the state for the near future [1].

The consistent follow up of the liberalization and reform processes in all areas of society remains a priority. Critical problems in all areas and spheres have been openly discussed with the population, and addressed. The adoption of all decisions based on the opinions and appeals of the people proved key in prompt and effective implementation of reforms.

**Main part.** New time and a new stage in the development of the state poses the need to further mainstream the system of public administration. With this in mind, main attention in the course of development of the National Strategy of Actions for Five Priority Development Areas in 2017-2021 was paid to the fundamental reformation of state and public construction. Therefore, this goal is determined as the first priority area, and fully reflects the concept “From a strong state toward a strong civil society”.

*The first direction of Strategy of Actions is dedicated to Priority Areas For Improving the system of State and Public Construction and the following priorities have been identified:*

**1.1. Further strengthening the role of Oliy Majlis, political parties in deepening the democratic reforms and modernization of the country:**

- strengthening the role of the Oliy Majlis in government system, further expansion of its powers in resolving the most important tasks of internal and foreign policy, and implementing the parliamentary control over the executive;
- improving the quality of legislative activity aimed at strengthening the influence of laws to the course of socio-political, socio-economic, legal and judicial reforms;
- development of the political system, strengthening the role of political parties in public life and society, formation of political competition among them.

**1.2. Reforming the government system:**

- reforming of public administration and public service through decentralization, skills enhancing, material and social protection of civil servants, as well as the gradual reduction of state regulation of the economy;
- introduction of modern mechanisms of state-private partnership aimed at improving the effectiveness of mutually beneficial cooperation in the implementation of tasks of socio-political and socio-economic development of the country;
- ensuring transparency of government bodies, introduction of modern forms of information concerning the rights, freedoms and lawful interests of individuals and legal entities;
- improvement of E-Government system, increasing efficiency, quality of and access to public services for the population and businesses.

**1.3. Improving public management system:**

- introduction of effective mechanisms for dialogue with the people;

- development of modern forms of public control, increasing the efficiency of social partnership;
- development of civil society institutions, enhancing their social and political activity;
- increasing the significance and effectiveness of activities of the institute of makhalla in public management;
- strengthening the role of the mass media, protection of journalists' professional activities [2].

Today, the reforms being carried out in Uzbekistan in accordance with the Strategy Actions are based on new approaches in all areas, including legislation and lawmaking. The formation of public opinion on parliamentary control in the country is becoming increasingly important. In particular, in Uzbekistan, the media is accelerating research on modern principles of public opinion on the formation of strong civic institutions and the system of governance, along with modern democratic values.

Obligations of the Republic of Uzbekistan to the UN, OSCE, CIS and other international regional organizations and alliances, agreements and agreements on information policy with other countries, strengthening parliamentary control in compliance with constitutional and international law, laws and regulations ensures the continuity of state policy on. The Strategy of Actions stipulates that for the first time, public administration reform will be carried out in connection with the development of the civil service institution.

Because it is the state that implements and finances reforms. It is impossible to successfully implement reforms in public administration without continuous improvement of the civil service.

The Concept of Administrative Reforms in the Republic of Uzbekistan, approved by the Decree of the President of the Republic of Uzbekistan dated September 8, 2017 No. PF-5185[3].

In particular, the concept includes decentralization of public administration, further improvement of the public service delivery system, increasing the initiative and strengthening the role of regional executive authorities in the formation of state and regional development programs, improving the professional training, material and social security of civil servants. Urgent tasks such as expanding the financial capacity, role and responsibility of public authorities, ensuring the implementation of the principle of separation of powers in the organization of the system of local government.

From the first years of independence of Uzbekistan, the country has been carrying out reforms to ensure the rule of law and improve the judicial system. However, the reforms carried out in recent years in this area are radically different from their predecessors in terms of scale and quality. In Uzbekistan today, the main goals of such reforms are:

**Firstly**, to ensure human rights and freedoms. In a society where human rights and freedoms are strictly observed, justice will prevail. Significant work has been done in this direction in recent years. In particular, strict liability was established for the use of illegally obtained information as evidence in the prosecution of a person. In one of his speeches, the President of the Republic of Uzbekistan Shavkat Mirziyoyev emphasized that the main purpose of punishment for those found guilty is to rehabilitate them. Therefore, it can be said that from now on torture, mental

and physical pressure, and other inhumane acts against persons arrested and prosecuted in Uzbekistan will not be allowed at all.

**Secondly**, to achieve justice. When it comes to justice, we have judges. If the judge is fair, he will not deviate from the principles of the law if its decisions and judgments are made within the framework of the law, the people's trust in such judges and, in turn, the judiciary will increase, they will believe in justice. Improving professional skills and culture, acting in accordance with the principles of law, justice and humanity in any case - should be the highest priority of every judge. Every decision made by the courts must, above all, be fair, lawful and reasonable. Only then will our people be more confident that justice will prevail in any situation. In the words of President Shavkat Mirziyoyev, "justice must prevail in the mind of a judge, truth in his language, and purity in his heart"[4].

Chapter XXII of the Constitution of the Republic of Uzbekistan is devoted to "Judicial power of the Republic of Uzbekistan". According to the Article 106 of the Constitution, "The judicial authority in the Republic of Uzbekistan shall function independently from the legislative and executive authorities, political parties, other public associations"[5]. During the years of independence, especially over the past two years, Uzbekistan has made significant changes to ensure the true independence of the judiciary, and this work is expected to continue in 2020 and beyond. To do this, it is necessary to ensure the independence of the judiciary.

**Thirdly**, improve the work of law enforcement agencies. Serious work has been done in this regard as well. Today, the Law of the Republic of Uzbekistan "On Courts", "On the Prosecutor's Office", "On Internal Affairs", "On State Security Service of the Republic of Uzbekistan" are in force. Work is underway to adopt the Law of the Republic of Uzbekistan "On Law Enforcement Bodies". The adoption of these laws provides a legal basis for further strengthening the constitutional rights and freedoms of citizens and guarantees of a prosperous life.

### **Theoretical background**

It should be noted that in Uzbekistan, as in all democracies, according to the principle of separation of state power - state power is divided into three: legislative, executive and judicial: "The principle of separation of powers into the legislative, executive and judicial shall underlie the system of state authority of the Republic of Uzbekistan". Therefore, judicial power is a structure that operates independently in the system of state power.

A number of tasks have been identified as "Priorities for Ensuring the rule of law and further reforming of the judicial system" identified as the second priority of the Strategy Actions. In particular, the tasks set under this priority include ensuring the true independence of the judiciary, enhancing the prestige of the judiciary, democratization and improvement of the judicial system.

#### ***Achieving these goals requires the effective implementation of several tasks:***

- raising the status of judges and judicial staff, the level of financial incentives and social security, strengthening the material and technical base of courts;
- to take effective measures to prevent unlawful interference with judges;
- comprehensive application of the principles of independence and impartiality of the court, adversarial proceedings and equality in court proceedings;

- Expanding the scope of the Habeas Corps, strengthening judicial control over the investigation;
- further specialization of courts, strengthening the judiciary; The activities of the courts include the introduction of modern information and communication technologies.

## Results

A number of measures have been taken in this direction in recent years. Local commissions have been set up to study the personal and professional qualities of candidates for judges.

According to the State Program on the implementation of the Strategy of Actions for the five priority areas of development of the Republic of Uzbekistan in 2017-2021 in the “Year of development of science, education and digital economy” the following tasks are set in the priorities of improving the system of state and society building:

- Enhancing the role of the Senate of the Oliy Majlis in lawmaking and parliamentary oversight;
- Further strengthening the cooperation of the Senate of the Oliy Majlis with local councils;
- Strengthening the control of the Senate over the formation and implementation of the state budget in the interests of the regions;
- Further increase the efficiency of the Legislative Chamber of the Oliy Majlis;
- Expanding the practice of directly enacting laws, increasing the level of regulation of social relations by law;
- Increasing the activity of factions in the Legislative Chamber of the Oliy Majlis;
- Improving the legal framework for the effective use of the institution of parliamentary scrutiny;
- Enhancing the initiative and responsibility of the subjects of the right of legislative initiative in the legislative process;
- Systematic work on raising public awareness of the activities of the chambers of the Oliy Majlis;
- Implementation of e-parliament projects;
- Introduction of an evaluation and rating system to increase the efficiency of the deputies of the Legislative Chamber of the Oliy Majlis within the “electronic parliament” system;
- Radical improvement of the Institute of Legislative Problems and Parliamentary Research under the Oliy Majlis;
- Further strengthening the role of parliament in developing relations with foreign countries;
- Simplification of the procedure for applying to the Constitutional Court to study the constitutionality of the law, expanding the range of its subjects;
- Strengthening the activities of The Kengashs of people’s deputies and expanding their powers in the field of control;



- Development of the concept of raising the electoral culture of the population;
- Take measures to further improve the electoral system;
- Improving the single electronic voter list and the Electoral Process Management Information System;
- Improving the activities of the Public Fund for Support of Non-Governmental Organizations and Other Civil Society Institutions under the Oliy Majlis;
- Further improvement of the “Mening fikrim” web portal;
- Further expansion of youth participation in the legislative process;
- Development of additional measures for the organization of public civil service;
- Progressive improvement of the system of organization of training of specialists abroad and introduction of a new mechanism for capacity building of civil servants;
- Radical improvement of the Academy of Public Administration under the President of the Republic of Uzbekistan;
- Formation of patriotic youth reserve by attracting young people to public service;
- Establish a system for promoting the activities, achievements and life experience of the most prestigious and respected individuals among the recipients of state awards to the general public, especially among young people;
- Further strengthening public control, establishing close cooperation between the state and society;
- Development and approval of a medium- and long-term strategy for the development of civil society in Uzbekistan;
- Improving the effectiveness of the system of communication and appeals to the public in government agencies and etc[6].

## CONCLUSION

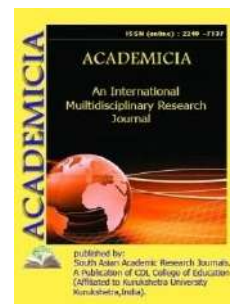
In conclusion, democratic reforms in the field of public administration in the Republic of Uzbekistan have led to significant innovations and effective changes in the country in recent years. Such measures are being taken consistently.

In general, the socio-political life of Uzbekistan will be further improved if the reforms in the field of public administration and the tasks set out in the Strategy of Actions for the further development of the Republic of Uzbekistan are fully implemented, to build a democratic state governed by the rule of law efforts will rise to a new level. The aim of the Strategy of Actions is a fundamental improvement of the effectiveness of the reforms, the creation of conditions to ensure the full and accelerated development of the state and society, the country's modernization and liberalization of all spheres of life.

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## THE REPRESENTATION OF MAKHMUD ZAMAKHSHARI AS A HISTORICAL FIGURE IN THE RAKHIMJAN OTAYEV'S NOVEL "THE WIND OF AMU"

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### ABSTRACT

*In the following article the info on the latest years of the lifespan of great Grammar scholar, one of the persons who had decent importance in the Islamic world, our Khwarizmi compatriot Abulqasim Makhmud Zamakhshari as it is given in the Rahimjan Otayev's "The wind of Amu" is presented.*

**KEYWORDS:** *Historical Story, Khwarezm, Historical Figure, Islamic World, Linguistics, Bukhara, Merv, Nishapur, Mecca, "Al-Mufasssal", "Muqaddimat-Ul-Adab".*

### INTRODUCTION

During the years of independence, our literature began to be reflected in a variety of forms and tones. In recent years, the freedom to engage in real creative activity, to tell the truth, has developed extensively in literature.

The Hero of Uzbekistan Abdulla Aripov made the following remarks: "During the Soviet period, our national values, our heroes in the maze, were almost never written about, and even when they were taken, they were analyzed and condemned from the point of view of class and partisanship. There was no singing of happiness and bliss, only the glorification of a bright future. Various sufferings, contradictions, and defeats in human life were the subject of repression and were never encouraged".[3.P.5].

### LITERATURE REVIEW

"The problem of time and literature is a very complex one. At the same time, the past years have had such a weight, such a power of change, that the psychology of the people has changed so much in terms of perception, understanding and explanation of the world that it would not have happened in the previous decades" [4.P.15] - writes the literary scholar Kazakboy Yuldashev".

Independence has opened new opportunities for all artists of our country, ways to promote their lofty literary and aesthetic ideals. Such changes in fiction are reflected in the works of artists from all regions of the country.[5.P.536].

At the same time, as the first President Islam Karimov mentioned, “No society can imagine its future without developing and strengthening its spiritual potential, spiritual and moral values in the minds of the people” [1.P.37].

During the years of independence, the tradition of a fair approach to history, the image of historical figures has prevailed. While the literature of this period was an artistic interpretation of the inner world of man, it also raised the tradition of various symbols and figurative interpretations to a high level[2.P.8].

### **Main part**

In general, if we look deeply into our history, the period from the second half of the XIX century to independence was extremely difficult and dark. They have interpreted the sources of Islam, which have been at the heart of our spirituality for centuries, for their own purposes. They published the works of our ancestors with various abbreviations. Although the works created during these periods may seem to serve the ideology of the system, in fact, the ideals expressed by the creators were sometimes presented in a transparent and sometimes in symbolic terms.

Independence gave important men of creativity to the creators of artistic literature. Now the creators have chosen their own path of creativity and set a new approach and the task of depicting it. The image between the historical figure and the reality of society and his artistic expression depended on the artist's skill. A work on the subject of historical figures imposes on the author the responsibility of a complex subtlety. Rahimjon Otayev's story “The wind of Amu” is one of such stories created after independence.

At this point, we turn to the elements of history: We know from history that in the land of ancient Khorezm grew up many great scientists who have made a worthy contribution to the development of world science and culture. Abulqasim Makhmud Zamakhshari was one of such great figures. Information about Zamakhshari is mainly given in medieval Arabic sources. Although his father was not very wealthy, he was an educated, pious and religious man, and spent most of his time reciting the Qur'an and praying, and was an imam at a mosque in Zamakhshar. Zamakhshari's mother was also considered as a pious, devout woman[8].

### **Theoretical background**

In this story, the author Rakhimjon Otayev reflects the last years of the life of Abulqasim Mahmud Zamakhshari. In the first part of the story, the episodes of sixty-five-year-old Zamakhshari's illness in exile in Makkah Mukkarama are told on the basis of realistic images:

“May he not suddenly fall into the world that has always stood on its feet for sixty-five years! Especially when you're in exile, when you're old enough to miss your homeland and you can't find a place to stay! Feel the heart pounding with the sound of volcanic eruptions! Oh, Khwarezm - the land of Zoroaster, the homeland of “Avesta”, in the old otashkade! ... Wow, the Aral Sea is a miraculous freshwater in the middle of the largest landmass in the world, a closed sea, a divine monster that creates a climate on the ancient Turan Land! ... Oh, Gurganju Qiyat,

Rabotu Oghuzu Zamakhshar - priceless gems of ancient Khwarezm like gold-diamond eyes! Wow, muddy healing Jaykhun" [6.P.54].

Zamakhshari, who was very old and lived in one place, spent his whole life in distant lands, devoting his whole life to science, especially during his lifetime, he traveled to Merv, Nishapur, Isfahan, Sham, Baghdad and Hejaz to study their linguistic features. The scholar continued his scientific work here, studied in depth the grammar and vocabulary of the Arabic language, as well as proverbs and customs in the dialect of the local tribes, and collected various information on the geography of the region. He wrote many of his works while in Mecca.

The author vividly depicts the process of imagining Zamakhshari's entire life in the imagination, based on historical events:

"For a week now, Makhmud Zamakhshari has been recounting his sixty-six years since he was bedridden. One by one he remembers his childhood, adolescence, adulthood, creative maturity, what he saw and experienced in the world. Is life so lightning? See how sixty-six years of his life were shot in the blink of an eye!"[5.P.54].

## Results

Based on this information, we can reveal that young Makhmud was interested in science from a young age, memorized the verses of the holy book "Holy Quran", but still could not speak Arabic fluently, and therefore at the age of 14 went to Gurganj to study at a madrasah. we can find out. This means that Makhmud has been interested in science since his youth, and he aspired to reach the top.

Makhmud Zamakhshari, who was lying in a dream, seemed to be overwhelmed with feelings of pride: "Thank Allah, among his peers who studied at the same madrasah today, his compatriots in Khwarezm, the Karim of the Qur'an among the wives of the Islamic world and the scholar who knows the language of the Prophet akram as well as himself, frankly, finger-numbered. Fortunately, his book on the spelling and grammar of the Arabic language is used as the most authoritative textbook in the world's largest madrassas. The book [Muqaddimatul-Adab] is also popular among all fans of literature in the Muslim world! Especially the dictionaries he created - comparative dictionaries of Arabic, Greek, Sanskrit and Turkish!..."[6.P.55].

As we read this story, we are reminded of Mahmud al-Zamakhshari's mastery of the Arabic language, and even the work on the grammar of the Arabic language, "Al-Mufasssal", which was widely studied as a textbook in the Muslim world at that time. The comparative dictionaries compiled by Mahmud al-Zamakhshari will inevitably serve as an important source in the organization of Arabic, Greek, Sanskrit and Tuki languages in the XI-XII centuries.

As we read the next parts of the story, we see the story of how Mahmud Zamakhshari met the great linguist Makhmud Kashgari. The skill of the writer is that the most interesting part of this story for the readers is also reflected in these episodes. It is possible that the author cited this incident, the episode of Zamakhshari's meeting with Kashgari, based on some source. However, in our opinion, this episode of the meeting may have been included by the author as a textual detail to make the story more vivid. Because there is no record of this meeting in historical sources. Of course, if this meeting really took place, we think that in the future, during this



conversation, Zamakhshari could become a great scientist. We can see this in the following parts of the story.

While he was ill, Zamakhshari seemed to relive all the events of his life:

“Behold, thanks be to God a thousand times over, for forty years he has followed the advice of that great fatherless man, and has strengthened the mountain of hope in the heart of his master. He also discusses Arabia, Greece, India, Iran with several scholars in Turan. Their language secrets and language knots were solved by precious power. The comparative dictionaries he created can say with confidence that they are unique in the world! He performed Hajj not once, but three times. Not only did he perform Hajj for the third time, but he also settled in a room under Kabatullah and spent the next three years of his life in Makkah Mukarramah. He spends his life in constant prayer and observation”[6.P.55].

The Arabs appreciated his services and began to call him "Jarullah", meaning “neighbor of Allah” and “teacher of Arabs and non-Arabs”. However, under the influence of these pleasant feelings, the nostalgia began to burn in his heart, as if overshadowing these feelings. I wish he could see the shores of the Amu Darya, the land of Khwarezm...

Yes, nothing is better than homesickness! He devoted his whole life to the enlightenment of religious and secular knowledge, and traveled to cities such as Merv, Nishapur, Isfahan, Damascus, Baghdad, and Hejaz to collect the particles of this knowledge and to create a vast ocean. There was no corner for the scholar that was greater than his homeland, greater than his homeland, more valuable than his homeland...

“... The next day, in a caravan of pilgrims from Makkah Mukarramah to ancient Khwarezm, two friends, Mahmud Zamakhshari and Muhammad Yaqub, accompanied each other. They were followed by the gentle wind of the Qibla behind them, and in front of them was the cool breeze of Amu”[6.P.55].

## CONCLUSION

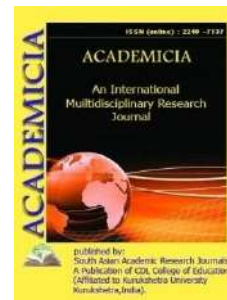
From Makhmud Zamakhshari to us, we have inherited more than 50 works in various fields of science. In particular, his work “Al-Mufasssal”, dedicated to the phonetics and morphology of the Arabic language, is dedicated to the Khorezm king Atsiz.

To this day, his works, such as “Muqaddimat-ul-Adab”, “Tog’lar, joylar va suvlar asoslari” (“Fundamentals of Mountains, Lands and Waters”) and “Aruzda o’lchov” (Me’zan) (“Measurement in Aruz”) are valuable sources in linguistics and geography. Zamakhshari’s “Al-Kashshaf”, a commentary on the Holy Qur’an, is especially popular in the Muslim world. [7.P.128]. The students of Al-Azhar religious dorilfun, who is now known to the world in Cairo, study the Quran on the basis of the work “Al-Kashshaf” also suggests that our Great Patriotic scientist of Khorezm was a great asset to the Muslim world, and left some valuable works.

Beloved writer, storywriter Rahimjon Otayev expressed his vivid and excellent image of the protagonist of the story “The wind of Amu” which belongs to the category “Makhmudlar”, Makhmud Zamakhshari, live on the basis of historical events-as we read this story, we feel in our hearts a high sense of pride and pride in relation to this great compatriot .

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**TO STUDY THE IMPACT OF CAPITAL STRENGTH & TANGIBILITY  
ON FINANCIAL PERFORMANCE OF BANKING & INSURANCE  
COMPANIES LISTED IN COLOMBO STOCK EXCHANGE IN SRI  
LANKA**

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## ABSTRACT

*Capital intensity indicates how much money is invested to produce one rupee of sales revenue. Business tangible properties or tangible assets are real things that a company has such as buildings or equipment. Capital intensity and tangibility has the vital role in the firms' financial performance. This paper addresses to explore the impact of capital intensity and tangibility on the firms' financial performance. For the purpose of analyzing data in this research, the sample was selected on the availability of data in range from 2007 to 2011, for banking and insurance companies listed in Colombo Stock Exchange (CSE). Capital intensity is represented by the capital intensity ratio which is calculated by dividing the Total assets by the sales and the Tangibility is represented by the Total Debt Ratio and Debt to Equity Ratio. The financial performance of the firm represented by the Profit Margin (PM), Return on Assets (ROA) and Return on Capital Employed (ROCE). To find out the association and impact of the variables the correlation and regression analysis has been made by using Statistical Package for Social Science (SPSS). The findings of this study revealed that there is a significant relationship between the Capital Intensity and tangibility and the financial performance. It means that the firm's capital intensity and tangibility increases it will significantly affect to increasing firm's*

*financial performance and future stability, and the financial managers always act to increase firm's value in order to maximize the shareholders wealth.*

**KEYWORDS:** *Capital Structure Decisions, Capital Intensity, Tangibility, Financial Management*

## 1.0 INTRODUCTION

In the field of financial management the capital structure decisions are the most important aspect and ongoing track to while operating businesses. Capital structure commonly refers to the mix of debt and equity used by a firm in financing its assets. The impact of capital structure decisions is related to the long term financing in the process of financial management. In the process of corporate financing, the financial manager is to ensure the lower cost of capital and thus maximize the wealth of shareholders. At the same, capital structure is one of the effective tools of management to manage the cost of capital (Prahalthan B, 2011)

For the purpose of making capital structure decisions there are important determinants are concentrated by the financial managers in order to achieve the organizational objective thereby maximizing organizational resources. In this case, Capital intensity, Utilization of fixed assets, is the way of controlling the operating leverage. In this process, top management is to desire to control over the firm due to the reason that the increased capital intensity implies increased risk of future earnings variation. Also, the creditors to limit risk of default should result in lower debt levels for firms choosing automation over labor as the primary factor of production, *ceteris paribus* (Barton and Gordon, 1988). On the other hand, the traditional argument is the more capital intensive a firm is; larger will be the need for long-term debt by the firm due to larger financial requirements and it will also have access to assets which could be collateralized. So, this study hypothesizes that *ceteris paribus*, capital intensity to be negatively related to total debt and short-term debt and positively related to long-term debt.

The tangibility is to measure the utilization of long-term assets in the process of having implemented the operations. The more tangible the firm's assets, the greater its ability to issue secured debt (Booth et al. 2001) If any business firm has higher composition of fixed assets, the assurance to get more debts at a lower rate of interest and vice versa. Originally this is a reflection to control the management of fixed assets as a durable manner and it is an indication to measure the earning power of assets in order to maximize the shareholders wealth.

The prime objective of the study is to find out the impact of capital intensity and tangibility on financial performance of the banking and insurance sector. In addition to this the following objectives also are considered to meet this study.

- To find out the association between capital intensity & tangibility and financial performance.
- To find out the possible solutions for increasing financial performance in relation with the capital intensity and tangibility.

## 2.0 LITERATURE REVIEW

There had been several empirical studies on the determinants of capital structure and had been arrived to many results to express the determinants of capital structure of firms. From these studies most of the empirical studies of the capital structure determinants indicated that the choice of the suitable determinants of the capital structure is potentially controversial (**Al-Qudah 2011**, Titman and Wessels, 1988 and Harris and Raviv, 1991). A number of empirical related studies according to the determinants of capital structure is as follows:

1. Profitability: To examine the profitability as a determinant of capital structure, most of them found a negative relationship between profitability and leverage, (Kester, 1986; Titman and Wessel, 1988; Friend and Lang, 1988; Baskin, 1989; Griner and Gordon, 1995; Booth, Aivazian, Demircug-Kunt and Maksimovic, 2001; and Huang and Song, 2002).
2. Tangibility: To examine the tangibility measured by (fixed assets/ total assets) as a determinant of capital structure. Those studies include different firms from different sectors and different countries. It has been found that there is a positive relation between tangibility and leverage such as (Rajan and Zingales, 1995; Friend and Lang, 1988; and Titman and Wessels, 1988), while (Booth, Aivazian, Demircug- Kunt and Maksimovic, 2001; and Huang and Song, 2002) found a negative relation between tangibility and leverage.
3. Myers in his pecking order theory suggests that firms prefer to make financing decisions on new investment, according to the order a. retained earnings, b. debt and 3. Issue of new equity. Because,, the less debt level should be held by more profitable firms so that the higher profits provide a high level of internal funds (Rajan & Zingales, 1995) In addition, there is a significant negative relationship between profitability and debt ratio. For tangibility and growth variables, the pecking order theory expects a positive relationship with the debt ratio.
4. Buferna F, Bangassa, and L. Hodgkinson, 2008 in their research on the capital structure of Libyan companies concentrated on these four key variables; growth, Asset tangibility, profitability and size as identified by Rajan and Zingales 1995 and it stated that a positive relationship between profitability, size and asset tangibility towards leverage.
5. In a study of Affandi Salwani, Wan Mahmood Wan Mansor and Atiqah Rashidah Abu Samah, 2007 by selecting 20 Malaysian property sector companies used five independent variables such as property asset intensity, size, growth, profitability and interest rate and they exhibited that property asset intensity and profitability are significant determinants of capital structure.
6. In a study of Affandi Salwani, Wan Mahmood Wan Mansor and Atiqah Rashidah Abu Samah, 2007 by selecting 20 Malaysian property sector companies used five independent variables such as property asset intensity, size, growth, profitability and interest rate and they exhibited that property asset intensity and profitability are significant determinants of capital structure.
7. In a research conducted by Mashar and Nasr (2010), they suggested that the asset tangibility, profitability and ROA are negatively correlated with debt.
8. Huang and Song (2002) in their study on 1,000 publicly listed companies in China from 1994 to 2000 concluded that the leverage increases with tangibility and volatility of profitability and also the static trade-off theory is better than the pecking order theory in explaining the features of capital structure for Chinese listed companies as they have compared suggested. However, Qian et. al. (2008) found the tangibility is positively correlated with the leverage,

while profitability is negatively related to the firm's leverage ratio in their research by selecting 650 publicly listed Chinese companies (1999-2004)

9. In 1995 Rajan and Zingales found significant relationship between firms' leverage and variables measuring the profitability and tangibility in a investigation on the determinants of capital structure of G7 countries (US, Japan, Germany, France, Italy, U.K, and Canada) and suggested that a positive relationship between leverage and asset tangibility.

### 3.0 METHODOLOGY

This section provides information about the data sources, size, measurements of variables, formulation of hypotheses, research model and discussion of different measures of the variables etc. The research is based on the financial data of sample firms from 2007-2011 and those have been taken from the financial statements published on the official website of the Colombo stock exchange (CSE). As this study has focused on the Commercial Banking & Insurance Sector, initially 21 no. of firms (which are listed on the Colombo Stock Exchange) in the banking & insurance sector were selected. After screening the firms with incomplete data, thirteen (13) commercial banks & insurance companies were selected and we have 65 year observations for data analysis. The research examines on two determinants; Capital intensity and Tangibility of CSE listed banking and insurance companies firms in Sri Lanka. The study uses the measures of capital structure determinants as independent variables of Capital Intensity Ratio (CIR) Total Debt Ratio (TDR) and Debt to Equity Ratio (DER). The dependent variables used in this study are Profit Margin (PM), Return on Assets (ROA) and Return on Capital Employed (ROCE). Based on the dependent variable three multiple regression models have been formulated to estimate the impact of capital intensity and tangibility on financial performance.

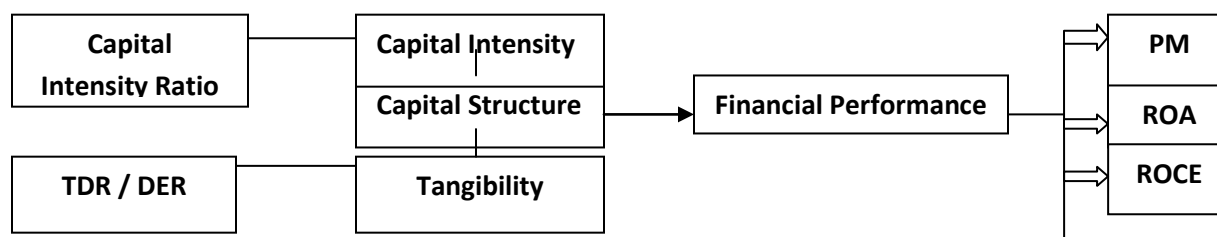
**Model – I**  $CIR = a + \beta_1 PM + \beta_2 ROA + \beta_3 ROCE + \hat{I}$

**Model – II**  $TDR = a + \beta_1 PM + \beta_2 ROA + \beta_3 ROCE + \hat{I}$

**Model – III**  $DER = a + \beta_1 PM + \beta_2 ROA + \beta_3 ROCE + \hat{I}$

Where,  $a$ , is constant,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$  are coefficients of variables,  $\hat{I}$ , is residual term.

The following conceptual model is formulated to disclose the relationship between the variables.



**Figure.1 Conceptual Framework**

As outlined in the above conceptual model, the concepts and variables used in this research are operationalized as follows:

Concept	Variable	Measurement	Calculation
Capital Structure	Capital Intensity	Capital Intensity Ratio (CIR)	Total Assets / Operating Income
	Tangibility	Total Debt Ratio (TDR)	Debt / (Equity + Debt)*100



		Debt to Equity Ratio (DER)	Debt / Equity *100
Financial Performance	Profitability	Profit Margin (PM)	PAT / Operating Income *100
		Return on Assets (ROA)	PAT / Total Assets *100
		Return on Capital Employed (ROCE)	PBT / (Equity + Reserves) * 100

**TABLE 1: CONCEPTS AND VARIABLES OF THE STUDY**

- Note 1. Banking Industry: Operating Income = Gross Interest Income  
 Note 2. Insurance Industry: Operating Income = Gross Written Premium  
 Note 3. Profit before Taxation (PBT) in the financial statement of Banking and Insurance companies

## 4.0 RESULTS & DISCUSSIONS:

### 4.1 Correlation Analysis

Correlation Analysis is a statistical method to describe the strength of relationship between two variables. This co-efficient is undertaken to find out the relationship between the capital intensity & tangibility and financial performance. The following table exhibits the relationship between capital intensity & tangibility and financial performance.

Correlations									
		Capinten	TotalDebt	DebtEquity	Indpendvar	ProfMargin	ROA	ROCE	Dependvar
Capinten	Pearson Correlation	1	-.958**	-.736**	-.943**	.642*	-.794**	-.141	-.019
	Sig. (2-tailed)		.000	.004	.000	.018	.001	.646	.951
	N	13	13	13	13	13	13	13	13
TotalDebt	Pearson Correlation	-.958**	1	.840**	.998**	-.728**	.636*	.156	-.028
	Sig. (2-tailed)	.000		.000	.000	.005	.020	.610	.929
	N	13	13	13	13	13	13	13	13
DebtEquity	Pearson Correlation	-.736**	.840**	1	.860**	-.595*	.331	.527	.277
	Sig. (2-tailed)	.004	.000		.000	.032	.269	.064	.360
	N	13	13	13	13	13	13	13	13
Indpendvar	Pearson Correlation	-.943**	.998**	.860**	1	-.730**	.601*	.171	-.022
	Sig. (2-tailed)	.000	.000	.000		.005	.030	.577	.942
	N	13	13	13	13	13	13	13	13
ProfMargin	Pearson Correlation	.642*	-.728**	-.595*	-.730**	1	-.132	.189	.503
	Sig. (2-tailed)	.018	.005	.032	.005		.666	.535	.080
	N	13	13	13	13	13	13	13	13
ROA	Pearson Correlation	-.794**	.636*	.331	.601*	-.132	1	.157	.256
	Sig. (2-tailed)	.001	.020	.269	.030	.666		.609	.399
	N	13	13	13	13	13	13	13	13
ROCE	Pearson Correlation	-.141	.156	.527	.171	.189	.157	1	.928**
	Sig. (2-tailed)	.646	.610	.064	.577	.535	.609		.000
	N	13	13	13	13	13	13	13	13
Dependvar	Pearson Correlation	-.019	-.028	.277	-.022	.503	.256	.928**	1
	Sig. (2-tailed)	.951	.929	.360	.942	.080	.399	.000	
	N	13	13	13	13	13	13	13	13

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

**TABLE 2: CORRELATION ANALYSIS (CAPITAL INTENSITY & TANGIBILITY AND FINANCIAL PERFORMANCE)**

1. The above table 1 shows the Pearson's correlations of the ratios are shown for analysis. In dependent variable PM, a positive significant relationship can be observed with CIR. In TDR and DER there is a negative significant relationship with PM.

2. In dependent variable ROA, a negative significant relationship can be observed with independent variables (CIR). But, independent variable, TDR, there is a positive significant relationship with ROA. In independent variable DER, there is a positive insignificant relationship can be observed with ROA. By considering the total relationship of TDR, there is a positive significant relationship can be observed with all dependent variables.

3. In dependent variable ROCE, a negative insignificant relationship can be observed between CIR. In LDR and DER, there is a positive relationship with ROCE. But all independent variables are not significant.

#### 4.2 Regression Analysis

Regression Analysis is a statistical tool used to calculate the impact of capital intensity & tangibility on financial performance of listed banking and insurance companies of Colombo Stock Exchange.

##### 4.2.1 Capital Intensity & Tangibility and Financial Performance

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.022 <sup>a</sup>	.001	-.090	8.36931

a. Predictors: (Constant), Indpendvar

**Table 03: Regression Analysis: (Capital Intensity & Tangibility on Financial Performance)**

The above table shows the weak negative insignificant relationship between capital intensity & tangibility and financial performance.

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.388	1	.388	.006	.942 <sup>a</sup>
	Residual	770.500	11	70.045		
	Total	770.888	12			

a. Predictors: (Constant), Indpendvar

b. Dependent Variable: Dependvar

**Table 04: F Test (Capital Intensity & Tangibility on Financial Performance)**

According to the above ANOVA (F-value), it indicates the most possible combination of demonstrated variables that could contribute to the relationship with the financial performance. In this model, 1 –F value is 0.006. It demonstrates that all of the corresponding F value is insignificant. It indicated that the model is not fit for the data.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	34.993	4.346		8.052	.000
Indpendvar	-.006	.081	-.022	-.074	.942

a. Dependent Variable: Dependvar

**TABLE 05: T TEST (CAPITAL INTENSITY & TANGIBILITY ON FINANCIAL PERFORMANCE)**

The above table indicates that if the coefficient of capital intensity & tangibility against financial performance is weekly negative, the model of regression is insignificant.

### 4.3 Descriptive Statistics

The Descriptive statistic technique demonstrates the summary statistics in univariate manner for several variables in a tabular and standardized values (z scores) Variables can be ordered by the size of their means (in ascending or descending order), alphabetically or by order in which the variables that the researchers selected.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Capinten	13	2.25	8.87	5.6654	2.88800
TotalDebt	13	.83	74.42	37.4362	30.17669
DebtEquity	13	.83	9.61	2.9223	2.75732
Indpendvar	13	9.18	85.00	45.0815	29.64708
ProfMargin	13	4.65	14.50	9.1977	2.95487
ROA	13	1.39	5.44	2.8731	1.39708
ROCE	13	10.88	38.85	22.6508	6.65549
Dependvar	13	18.05	48.35	34.7192	8.01503
Valid N (listwise)	13				

**TABLE 06: DESCRIPTIVE STATICS ANALYSIS**

According to the above table, it shows the values of the minimum, maximum, mean and standard deviation of data set. ROCE has a high mean value (22.65) than other two dependent variables. It has a maximum value of 38.85 and a deviation of 6.65549. At the same time ROA has a low mean value (2.87), and maximum and deviation are 5.44 and 1.40 too than other dependent variables. The maximum and minimum values for each performance measures indicate that the performance varies substantially among the banking and insurance sector companies listed in the Colombo Stock Exchange. In here, independent variables (capital intensity and tangibility) have a higher mean value (45.08) with compared to the mean value (34.72) of financial performance.

## 5.0 CONCLUSION

Capital intensity indicates how much money is invested to produce one rupee of sales revenue. Business tangible properties or tangible assets are real things that a company has such as

buildings or equipment. Capital intensity and tangibility has the vital role in the firms' financial performance. This paper is an attempt to find the impact of capital intensity and tangibility on financial performance of the listed banking and insurance companies in Sri Lanka. In the data analysis by using Pearson's correlation technique, there is a negative significant relationship between profit margin and capital intensity & tangibility. In regression analysis, the coefficient of capital intensity and tangibility is negatively affected with profit margin. The ROA has a positive correlation with the same independent variables whereas the coefficient of capital intensity & tangibility is negatively affected with ROA. The ROCE has a positive insignificant correlation with the capital intensity & tangibility and there is insignificant relationship between variables. In aggregate, there is a negative correlation between capital intensity & tangibility and financial performance, and the coefficient of capital intensity and profitability is negatively affected with the financial performance. It is found that banking and insurance companies depend on the short term financing without largely keeping the fixed assets that the capital intensity and tangibility is calculated according to the long term assets. Therefore, sample companies are highly liquid so that they need to circulate and utilize the funds in a way of effectively earned profits without keeping tangible assets.

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### ANNEXURES OF DATA FOR SPSS ANALYSIS

**TABLE 01 – INDEPENDENT VARIABLES – 01 & 02**

	Capital Intensity Ratio					Total Debt Ratio (TDR)				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
HNB	8.87	7.87	8.10	10.38	11.41	20.07	11.81	10.06	9.08	11.42
SAMP	8.91	7.12	7.45	10.02	11.58	-	-	-	-	-
COMB	8.78	7.56	8.97	10.65	11.72	21.82	14.63	10.76	6.00	2.15
NTB	7.16	6.27	6.03	8.38	10.42	31.27	35.57	38.37	27.33	34.01
PABC	7.89	6.63	6.82	10.30	10.55	17.31	6.51	2.46	1.76	-
SEYB	8.06	7.14	6.41	9.03	10.28	43.80	36.62	28.58	24.83	13.13
NDB	8.89	7.82	8.62	10.75	12.16	-	-	-	-	-
HASU	1.36	1.52	1.74	1.87	2.01	68.98	73.03	74.70	75.40	70.86
JINS	1.99	1.87	1.82	1.93	1.82	76.49	72.19	73.90	73.01	73.69
UAL	2.31	2.32	2.76	2.65	2.50	88.76	87.55	96.42	84.78	84.00
CTCE	2.99	3.09	3.42	2.98	3.45	87.32	88.28	88.03	88.31	88.02
CINS	1.74	1.92	2.54	2.74	3.09	83.58	81.29	82.19	83.37	82.61
AAIC	1.52	1.50	1.81	2.58	2.10	83.08	78.41	78.01	59.47	69.94



**TABLE 02 – INDEPENDENT VARIABLES – 03**

	Debt to Equity Ratio (DER)				
	2007	2008	2009	2010	2011
HNB	0.25	0.13	0.11	0.10	0.13
SAMP	-	-	-	-	-
COMB	0.28	0.17	0.12	0.06	0.02
NTB	0.45	0.55	0.62	0.38	0.52
PABC	0.21	0.07	0.03	0.02	-
SEYB	0.78	0.58	0.40	0.33	0.15
NDB	-	-	-	-	-
HASU	2.22	2.71	2.95	3.07	2.43
JINS	3.25	2.60	2.83	2.71	2.80
UAL	7.89	7.03	26.93	5.57	5.25
CTCE	6.89	7.53	7.35	7.55	7.35
CINS	5.09	4.35	4.62	5.01	4.75
AAIC	4.91	3.63	3.55	1.47	2.33

**TABLE 03 – DEPENDENT VARIABLES – 01 & 02**

	Profit Margin (PM)					Return on Assets (ROA)				
	2007	2008	2009	2010	2011	2007	2008	2009	2010	2011
HNB	11.51	9.93	12.57	14.76	16.81	1.30	1.26	1.55	1.42	1.47
SAMP	7.03	7.27	10.01	17.87	18.08	0.79	1.02	1.34	1.78	1.56
COMB	13.45	11.48	11.98	15.90	29.19	1.53	1.52	1.34	1.49	2.49
NTB	7.97	4.63	4.32	10.19	14.17	1.11	0.74	0.72	1.22	1.36
PABC	10.98	7.81	12.27	11.95	18.52	1.39	1.18	1.80	1.16	1.75
SEYB	5.18	0.72	2.62	7.41	13.77	0.64	0.10	0.41	0.82	1.34
NDB	13.41	11.35	15.75	16.15	17.74	1.51	1.45	1.83	1.50	1.46
HASU	8.38	8.94	9.53	9.96	9.15	6.14	5.88	5.49	5.32	4.55
JINS	10.76	8.37	11.52	12.51	8.93	5.40	4.48	6.35	6.49	4.90
UAL	5.11	6.02	7.36	7.18	7.97	2.21	2.60	2.67	2.71	3.19
CTCE	9.10	6.95	11.03	5.66	6.12	3.04	2.25	3.22	1.90	1.77

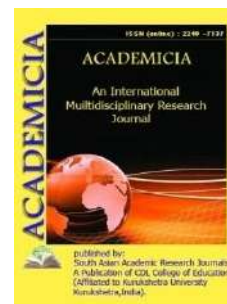
CINS	5.91	2.89	3.94	4.46	5.69	3.40	1.51	1.55	1.63	1.84
AAIC	8.89	9.47	9.61	21.99	(5.79)	5.84	6.30	5.30	8.52	(2.76)

**TABLE 03 – DEPENDENT VARIABLES – 03**

	Return on Capital Employed (ROCE)				
	2007	2008	2009	2010	2011
HNB	23.53	23.25	24.76	24.68	20.94
SAMP	25.89	26.23	33.57	29.97	29.70
COMB	28.01	29.06	25.24	27.98	24.84
NTB	31.21	21.02	25.34	30.23	25.26
PABC	21.83	26.50	33.60	24.93	32.78
SEYB	20.45	2.21	8.44	16.51	12.66
NDB	25.32	23.67	32.27	29.57	26.38
HASU	26.10	25.12	27.81	26.52	18.66
JINS	32.31	21.29	32.68	30.01	22.71
UAL	22.13	24.08	135.75	22.52	23.62
CTCE	26.39	26.34	39.09	30.80	30.08
CINS	23.35	11.56	12.03	12.28	13.45
AAIC	42.59	32.46	28.42	23.74	(9.96)

**TABLE 05 – AVERAGE TOTALS OF INDEPENDENT & DEPENDENT VARIABLES FOR SPSS ANALYSIS**

	CIR	TDR	DER	PM	ROA	ROE
HNB	9.33	12.49	0.15	13.11	1.40	23.43
SAMP	9.02	-	-	12.05	1.30	29.07
COMB	9.54	11.07	0.13	16.40	1.67	27.02
NTB	7.65	33.31	0.50	8.26	1.03	26.61
PABC	8.44	5.61	0.06	12.31	1.46	27.93
SEYB	8.19	29.39	0.45	5.94	0.66	12.06
NDB	9.65	-	-	14.88	1.55	27.44
HASU	1.70	72.60	2.68	9.19	5.47	24.84
JINS	1.89	73.86	2.84	10.42	5.52	27.80
UAL	2.50	88.30	10.53	6.73	2.68	45.62
CTCE	3.19	87.99	7.33	7.77	2.44	30.54
CINS	2.40	82.61	4.76	4.58	1.99	14.53
AAIC	1.90	73.78	3.18	8.84	4.64	23.45



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## EXPLORING THE WORK OF ALISHER NAVOI IN EUROPE

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### ABSTRACT

*The study of the problem of perception and interpretation of the works of such brilliant classics, including Emir Nizameddin Alisher Navoi, in foreign, in particular, European oriental studies becomes particularly important. As he is one of the leading representatives of the world literature, whose contribution to the general history of development and improvement of cultural relations between Central Asia and Western Europe is of great importance (as noted with deep appreciation in the science of the West and East). Of course, such relevance is also due to Navoi's wide popularity in the vaults and reviews that present the history of various literatures within the framework of the general history of the culture of human society, where his name is steadily listed alongside the names of Dante, Shakespeare, Rustaveli, Nizami, Jami and others.*

**KEYWORDS:** *Cultural Life, Manuscript, Phenomena, Process, Prose, Research.*

### INTRODUCTION

Mankind does not know any culture that develops in absolute isolation from the general cultural process or that exists outside the influence of foreign cultures. Perhaps, therefore, research and analysis of the varieties of intercultural relations that promote the mutual rapprochement of different cultures, at the same time, and their carriers, in recent years are attracting increasing attention of scientists and specialists. This interest is not accidental, as the threads connecting a certain culture with another one, especially in the last century have also become more and more objectively strengthened and continue to strengthen, fulfilling a noble mission in various areas of cultural life of the peoples of the world.

Undoubtedly, in many cases such influences on the ties can be clearly seen in the results of spiritual and ideological communication between the peoples carried out in the historical stage of development of the universal civilization.

Modern science, confirming that a special role in this is played by literary exchange, has greatly succeeded in studying the issues of such phenomena. For, as it is noted in theoretical generalizations in this direction, each certain national literature cannot appear accidentally in the foreign environment completely and completely. It consistently penetrates into it, so, as a rule, in the process of social development with its rare pearls, creations of ingenious, unique thinkers, gradually replenishing the pages of history of this process, melting and defining the dynamics of development of literary contacts of national parties with the power of influence of their creativity. And it is these factors that determine the content of national-literary relations, promote a possible scientific search for them in a "foreign" environment.

### **Main body**

The open aspiration of Western Europe to the East, mastering of ideological directions in the literary process of the East and their transfer to the literary environment of Western Europe have developed so much that they have adopted a political, intoxicating character. For from now on it has reached the consciousness of Western Europe by concrete examples that the East is one of the sources of civilization, possessing ancient cultural values. And the perception of elements of Eastern culture in Western European countries contributes to the further progressive development of society, meets their internal needs, and raises the international prestige of these states. That is why the enlighteners of Western Europe considered it possible to put an end to the superstitions spread in the last stage of feudalism as a result of the stratification of society, remnants and ignorance, based on the values of the East.

Oriental studies of Western Europe of the beginning of the XX century is characterized by close attention of researchers to the problem of influence of Alisher Navoi's works on the poetry of other Turkic-speaking national literature.

The literary debate started with E.I. Gibb, the author of works on the history of Turkic literature, famous scientist in oriental studies and literary studies of the West. His book "History of Ottoman poetry", consisting of two sections, although devoted mainly to the analysis of the works of Turkish literature, contains valuable observations on the strong influence of the works of Navoi on the traditional genres of Ottoman Turkish poetry XVI-XVII centuries and the works of Turkish poets of this era.

In his study "History of Ottoman Poetry" E. Gibb recognizes the fruitful influence of Navoi on Turkish poetry and its leading role in the poetry of that time, and especially the work of the great Azerbaijani poet, a leading classic of Azerbaijani literature, the founder of the Azerbaijani literary language. Mohammed Suleyman Fuzuli.

In Uzbek literature, this work by E.E. Gibba has been repeatedly unfairly criticized.

However, these Uzbek critics did not sufficiently comprehend the essence of the study of the English scholar, as they contradicted and incorrectly interpreted his views. Fighting against any falsification of the history of the peoples of the East, science for the first time in the world on an extensive material has shown the creative energy and ability of the peoples of the East, exposed the false anti-scientific opposition of the West to the East, refuted "theories" about the racial inferiority of the peoples of the East" and, based on these "great successes", K. Zakhidov writes: "Gibb in the work" History of Ottoman poetry ", saying ... about Uzbek and Tajik literature of XV century, wrote: "Mysticism and Sufism are the soul of this literature. They see the all-

consuming theme of Uzbek literature in the mystical unearthly love and believe that Navoi went further than anyone else in the development of this theme".

However, the power and scale of the impact of Eastern civilization should not be exaggerated. It was, of course, considerably intensive on the intellectual layers of the society of the Western European guards. The world-renowned enlighteners Johann Gottfried Herder and Johann Wolfgang Goethe were at the origin of this process that began in Western Europe. Thanks to the initiative and hard work of these great enlighteners, three schools were established in Germany, France and England in the first half of the 19th century.

From this point of view, the study of the problem of perception and interpretation of the works of such brilliant classics, including Emir Nizamiddin Alisher Navoi, in the foreign, in particular, Western European Oriental Studies becomes particularly important. As he is one of the leading representatives of the world literature, whose contribution to the common history of development and improvement of cultural relations between Central Asia and Western Europe is of great importance (as noted with deep appreciation in the science of the West and East). Of course, such relevance is also due to Navoi's wide popularity in the vaults and reviews that present the history of various literatures within the framework of the general history of the culture of human society, where his name is steadily listed alongside the names of Dante, Shakespeare, Rustaveli, Nizami, Jami and others.

As the poet's bibliographers testify, more than a thousand books, dissertations and articles (1, p. 64) have been created on a world scale, in particular, in Western Europe, about Navoi's life and creative biography. Naturally, and nowadays, not only in Uzbekistan, but also beyond its borders, the interest in research of his life and creative work is constantly growing, the range and range of translations of his works into many languages are expanding. Of course, all this suggests that Navoi, along with such classics of world literature as Homer, Dante, Shakespeare, Firdausi, Nizami and others, continues to provide rich material for science and literature of the present day.

The facts confirm that since XVII century up to the second half of XIX century about 100 copies of the rarest manuscripts of his scientific, prose works and, certainly, poetic works containing more than 240 thousand lines of poetry created as a result of grandiose and laborious work and more than 5 centuries serving the cause of human perfection, integrity of his faith are collected in the libraries of Western Europe. In addition, many valuable manuscripts of this great thinker were also in the personal collections of some of his Western admirers (Hammer-Purgstahl, F.A. Belen, J.J. Rousseau, X. Vambery, L. Avetarianian, M. Hartmann, K. Brockelmann, E. Brownbaum, etc.).

Now the National Library of Paris, the Royal Library of Vienna, the Library of the Hungarian Academy of Sciences, the British Museum, libraries of the universities of Oxford, Berlin, Venice (even in the libraries of the universities of Toronto, Washington) hold the heritage of Navoi in ancient manuscripts, namely, five poems from the series "Hamse" ("The Five"), The summary of his lyrics "Hazayin ul-Maoni" ("The Treasury of Thoughts") is completely and in the form of 4 separate devons ("Wonders of Childhood", "Rarities of Youth", "Wonders of Middle Age"), "His poems, "Hairat ul-Abrar", "Farhad and Shirin", "Leyli and Majnun", "Saba'ai Sayer" and "Saddi Iskandari", each of them individually.

In the cultural centres of the region, one can also see selected poems and "Kuliyat" written at different times by devons. (complete collection of manuscripts) and manuscripts of major works "Lisan ut-tayr" ("Language of birds"), "Khamsat ul-mutahayirin" ("The Five Men of confusion"), "Mahbub ul-kulub" ("Beloved of Hearts"), "Majalis un-nafayis" ("Collection of Poets"), "Nasaim ul-muhabbat" ("Winds from the Garden of Love"), "Tarihi muluki Ajam". (History of the Persian Kings), Muhokamat ul Lughatain (The dispute between two languages), Mezan ul-avzan (The measure of poetry), Devani Fani (Collection of Persian poems) and other rare manuscripts of the poet's works.

In addition, the libraries of the West are decorated with rare manuscripts of lexicographical works of Oriental authors, in particular, "Ma'bani lugat" by Mirz, Mehdikhan, based on the works of Navoi 60 years after the death of the poet, specially for the interpretation of his works, dictionaries of works of this type of poet "Abushka", "Badoye ul-lugat", "Sangloh". "Chigatoycha-usmoncha lugat", "Chigataycha-forscha lugat", "Lugati chigatoyi va usmoni Turks", also "Kitob ul-lugat fi lisoni chigatoyi" Fath-Alihan-Kozhara, "Chigatoycha lugat" by Alibek Muhibi and other dictionaries. To this day, 28 manuscripts of independent works of Navoi kept in such cultural centers of Western Europe as Paris, Berlin, London, Gotha, Tübingen, Munich, Pest, Milan, Weimar, Amsterdam, Stockholm, Mainz, Wiesbaden serve as a reliable source for the Western European scientific community. Among them are manuscripts transcribed during Navoi's lifetime, which have the greatest historical value.

Moreover, already at the beginning of the last century the libraries of Western Europe collected manuscripts of the famous Oriental memoirs Davletshah Samarkandi ("Tazkirat ush-shuaro") and Khandemir ("Makarim ul-Ahlak"), "Habib us-siyar, Hulosat ul-ahbar), Babura (Baburname), Zainittina Wasifi (Badoye ul-wacoye), Lutf-Alibek-Azara (Otashkada), Riza-Kulikhan Hidayata (Majma ul-fusakho), Som Mirzo (Tuhfai Somi), Mirzo Haidar-Duglati (Tarikhi Rashidi), Fahri Khjravi (Lataifnama), Hasanhaji Nasiri (Muzakkiri Ajbab) and others.

## DISCUSSION AND CONCLUSION

The study revealed that more than 100 scientists and writers, translators and publishers, travelers and library owners took part in the study of Navoi's life and creative work in Western European Oriental Studies and Literature Studies. And if many of them created special works on the life and creative work of Navoi (monographs, essays, articles, reviews, etc.), it is noteworthy that the work of Navoi has been published in the literature. ), then some were engaged in translations, publications, comments and textological studies of his heritage, some of them polemized about him in connection with the research of various oriental themes, and the other part was related to the work of Navoi through lexicography, that is, the compilation of special dictionaries of his works, some of them used the work of his Yari, and scientific topics related to current issues of history and culture of Central Asia, they were also engaged in the collection of Oriental written information about the poet and the rarest.

Certainly, the above mentioned separate facts confirm the fact that in the history of spiritual communication between the people of Western Europe and Central Asia and the development of interrelationship of the literature of these regions, a truly significant role was played by Emir Nizameddin Alisher Navoi, whose works have been published, translated, republished in the countries of Western Europe for a long time, about one hundred copies of manuscripts of three tens of works accumulated in Germany, France, England, Italy, Austria, contributing to possible



humanitarian searches in various spheres of their culture. The importance of the said above is determined, first of all, by the fact that the study of the creative heritage and vital activity of this great classic, a prominent statesman (the last period of the Timurid era), who attracted the attention of researchers and writers of these countries for almost four and a half centuries, objectively ensured the formation of a kind of warfare in this continent of the world.

However, the evolution and dynamics of this broad historical process, which is characterized by long and tumultuous debates, has never been fully considered with sufficient detail and depth, even though the interest of Western European specialists to Navoi - "the plenipotentiary representative of the Renaissance line in the vast area of the Central zone of the Old World is gradually expanding, and new research topics are being introduced. In addition, the extraordinary excerpt of information about this weighty material in general, as well as the experience and coverage of analytical approaches to its study constantly indicate the lack of special promising monographic works, which allows to justify the undisputed relevance of this study.

Obviously, this weighty cultural heritage, which, by the will of fate, did not find its place in the homeland, ensured the assertion of the broad glory of Emir Nizameddin Alisher Navoi in the European continents. Accordingly, the poet's legacy of ancient times was in the focus of attention of scholars, philologists and historians of the West. A huge number of Navoi works are known, representing the long history and position of the Western European perception of the poet. The works of German, French, English, Italian, Hungarian, Spanish, and Czech, Bulgarian, Polish, and Romanian creative intellectuals occupy a special place in the historical development of Western European Navoiology during the past period.

Obviously, the problem of studying the life and work of Alisher Navoi in Western European Oriental Studies is very complex and the study of more than 400 years of history of his work with Western Europe is also quite multifaceted. Moreover, the Navoi established in Western Europe has gone through a long evolutionary path through turbulent multi-faceted debates to this day, and its duality and contradictions are its characteristic features. That is, the studied sources show that especially since the second half of the XIX century to date, the study of scientific and artistic heritage of Navoi in Western Europe in one direction or another continues in the form divided into positive and negative poles. The facts undoubtedly confirm that in numerous Western European Navoi research first clearly traced that Western Europe was not a fan of Alisher Navoi as well as our other eastern ancestors, although he made a huge original contribution to the treasury of world classical literature with the pearls of his thinking as Dante, Shakespeare, Hafiz and many other geniuses of the past. On the other hand, in some achievements of Western European science, Navoi was recognized as "the Turkic ruler of verbal wealth" (Ya.Ekman) and declared "the eighth lord of the East" (A.Kurella), deserving attention of researchers. Obviously, the main layer of questions and problems related to the perception and interpretation of Navoi in Western Europe and the reasons for the contradictory interpretation of his work in Western European Navoi has not yet been studied in science. There is no generalizing work in the analytical poster, the implementation of which is currently an important problem and is of great theoretical and practical interest.

Thus, the objective study of the themes "Study of Alisher Navoi's life and work in the West" will certainly provide an opportunity to identify the causes of dual perception, contradictory

interpretation, to trace the essence of the process of denial and recognition in Western Europe of the poet's work, which enriched the worldview of humanity, who raised the artistic world of the Turkic peoples to the highest level. Therefore, the main purpose and task of this work is to present more than four centuries of history of the discussed problem, to generalize, as far as possible, in the historical and comparative aspect the factual material, which will later allow to trace the essence of the development and ways of perception in the Western European environment of the artistic and scientific heritage of Navoi, to create a complete scientific understanding of it; to analyze the specific dynamics of the formation of Western European Navoi and outline its contours by means of critical analysis of Opus.

The study of Alisher Navoi's life and work by foreign (also domestic) scientists naturally has different degrees of objectivity. Only the presence of a proper methodology appropriate to the subject of the study can provide a proper explanation of the essence of the study of approaches in different historical periods. Therefore, the author of the dissertation used the historical-comparative method of research dictated by the specifics of the chosen theme, which combined scientific analysis and philosophical and artistic interpretation of the poet's work and included the study of specific experiences in the monographic plane in the IX historical sequence.

Researchers of the works of Navoi unanimously agree that this thinker from ancient times deserves the attention of foreign experts. Some facets of this problem have been investigated in one aspect or another by Russian scientists, some domestic and Western European orientalist - literary scholars.

V.V. Bartold's article "The World of Ali Shire and Political Life" touches upon the issues of incomplete disclosure in L. Bouva's essay "Civilization of the Timurid period" of the factors that contributed to the flourishing of culture in the Timurid period and the reasons for its decline due to the fact that his work did not use available rich historical manuscript sources, except for the famous works of Mirkhand, Babur, Navoi and Khandemir. The article substantiates the confusion and confusion made by M. Belenov and E. Brown used the works of Mirkhand and Khandemir, which is why they outlined and presented the appearance of Navoi as dervish.

The bibliography of A.A. Semenov, in accordance with the nature of the work, provides the most complete list of publishing sources for the works of Navoi and literature about him in various (including Western) languages, along with a brief content of the main points of the works of Western European authors about Navoi .

In the section of his monograph about Navoi, E. E. Bertels, analyzing the translation made by Christopher Armeno, Alisher Navoi's poem "Sabaai Sayer", expressed his critical attitude to the views of F. A. Belin, E. Bloshe, E. Brown, T. Benfei and informed about the publication of some works of Navoi in the West.

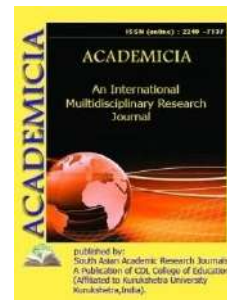
Thus, the Western European perception of Navoi in a long (XV-XX centuries) historical section was carried out through translation, publication, textological study, collection, lexicography and description in the catalogues of manuscripts of his works, teaching his work at the level of the university and academic institutions, the involvement of samples from his work in the philological use in a comparative comparison of the Turkic languages, the use of his scientific heritage in the development of different oriental themes as reliable sources and, finally, in the development of a number of other sources. The accelerated development of the East by Western Europe, which began with the advent of the XIX century, had a beneficial effect on navigation.

In the history of Navigation Western Europe of the XIX century has a special place. It is rightly considered a period of large-scale research on the life and work of Navoi and a period of wide popularization of Navoi in Western Europe.

Evolution of popularization of Alisher Navoi in the first half of XIX century in Western Europe was directly connected with activity of representatives of above-mentioned three schools, which were persistently engaged in scientific development of civilization of the East in the field of human sciences.

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## ASYNCHRONOUS MODES AND SELF-EXCITATION OF SYNCHRONOUS MACHINES

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### ABSTRACT

*In the practice of synchronous machines, there are cases where individual machines fall out of sync and their rotors begin to rotate relative to the field of the armature (stator) asynchronous, with some sliding s. This is due to overloading of machines, a significant drop in voltage in the network and loss of excitation as a result of any faults in the excitation system or erroneous operation of the field blanking machine. Although a non-excited explicit pole machine can develop a certain power in synchronous mode due to the reactive moment, this power is usually insufficient to cover the load, and so clearly pole machines most often also fall out of sync when the excitation is lost.*

**KEYWORDS:** *Operation of Synchronous Machines, Two-Phase Winding, Asynchronous Mode, Equivalent Two-Phase Winding,*

### INTRODUCTION

When falling out of synchronism, the synchronous machine behaves like an asynchronous machine, but due to the difference in rotor design and the presence of excitation current in general, the asynchronous mode of the synchronous machine has several features.

Since synchronous machines fall out of synchronism in case of accidents in power systems often occur, detection of features of asynchronous mode and clarification of rational ways of restoration of normal modes of operation are essentially practical.

Asynchronous start-up of synchronous motors and compensators is widely used when a non-excited machine is turned on to the grid and its speed reaches almost synchronous speed like an asynchronous motor.

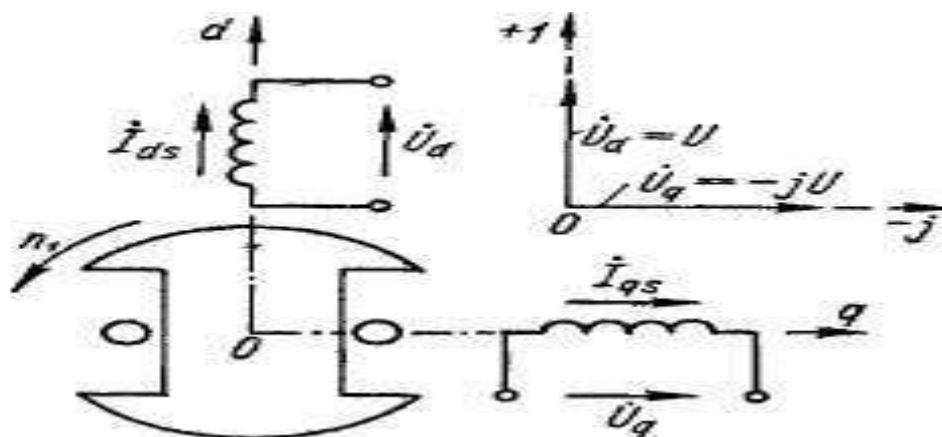
## MATERIALS AND METHODS

Asynchronous modes of operation of the non-excited and excited synchronous machine differ significantly from each other. The asynchronous mode of the excited synchronous machine is more complex and can be seen as superimposing the asynchronous mode of the non-excited asynchronous machine and the steady-state short-circuit mode of the synchronous generator.

Consider first the steady-state asynchronous mode of operation of the non-excited synchronous machine.[1]

Substitution schemes and their parameters. If the rotor of the synchronous machine had magnetic and electrical symmetry, the operation of this machine in asynchronous mode without excitation would be no different from that of a normal asynchronous machine. In general, however, there is no such symmetry, and therefore independent consideration of the issue is required.[2.3]

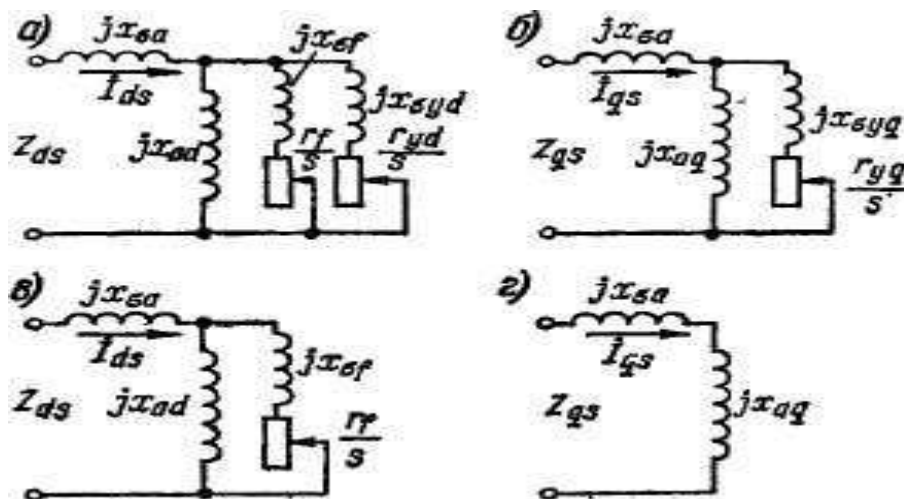
Let the winding of the stator (armature) of the three-phase synchronous machine be connected to the network.[4] Armature currents thus create a rotating field moving relative to the unsymmetrical rotor at sliding speed. For analysis of phenomena in case of unsymmetrical rotor we will spread the field rotating relative to it into two pulsating fields, one of which acts along with longitudinal (d) and the other - along transverse (q) axis of the rotor. These fields pulsate with a phase shift of  $90^\circ$ , and their pulsation frequency  $f_2 = s f_1$ . In addition, as with an asynchronous machine, the synchronous machine's asynchronous workflow can result in an equivalent process with a fixed rotor. Further, it can be imagined that such a fixed rotor machine has an equivalent two-phase winding instead of a three-phase winding, one phase of the winding generating a magnetic flux pulsing along the longitudinal axis and the other phase producing a flux pulsing along the transverse axis of the rotor (Fig. 1), the voltages of these phases  $U$  and  $jU$  being shifted in phase by  $90^\circ$ .



**Fig. 1.**Diagram of the equivalent two-phase synchronous machine in asynchronous mode with a stalled rotor

In such a two-phase system, there is no mutual induction between the phases and the phenomena on the d and q axes can be considered independently of each other. As a result, instead of one substitution scheme for an asymmetric asynchronous machine for a synchronous machine, we obtain two substitution schemes (Figure 2) - one for a longitudinal axis and the other for a transverse axis.[5.6] If there is damping or starting winding (Fig. 2, a and b), there are two secondary circuits in the circuit for the longitudinal axis, as in two cell induction motors, and one

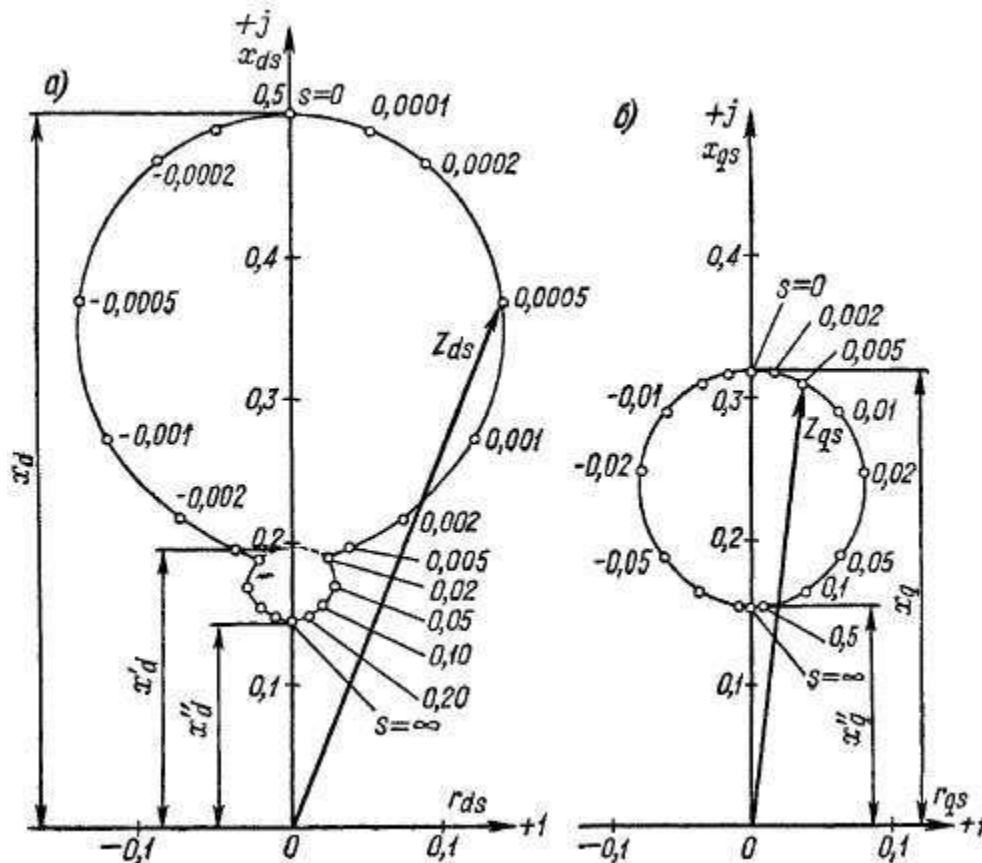
secondary circuit in the circuit for the transverse axis. If there are no specified windings (Fig. 2, v and d), the number of secondary circuits is reduced by one. In the diagrams of Fig. 2,  $h_a = 0$  is accepted and losses in stator steel are not taken into account. If there is additional resistance (for example, field damping resistance) in the excitation circuit, its value must be included in  $r_f$ . [7] The consideration of phenomena according to Figures 1 and 2 is based on the concept of a two-phase machine. Therefore, the resistances of the circuits of Figure 2 should also be considered equivalent resistances of the two-phase machine. However, in order to avoid introducing new parameters, we will assume that the resistances in the schemes of Figure 2 are the parameters of the 1-phase machine as defined and used in the previous chapters.



**Fig. 2.** Synchronous machine replacement circuits in asynchronous mode with (a, b) and no (v, g) sedative winding: a, v - along longitudinal axis; B, g - in transverse axis.

However, we will also consider that the voltages  $U$  applied to the two-phase winding (Fig. 1) and the circuits of Fig. 2 are the phase voltages of the actual  $m$ -phase winding (usually  $t = 3$ ). At that currents  $I_{ds}$ ,  $I_{qs}$  will correspond to currents/1-phase winding. For example, if at a certain point in time the axis of one of the phases of the armature winding coincides with the axis  $d$ , current  $I_{ds}$  will flow in that phase.





**Fig. 3.** Equivalent resistances of explicit pole synchronous machine in asynchronous mode along longitudinal (b) and transverse (b) axes.

To a circumstance that the analysis of the phenomena on the basis of fig. 1 and 2 contacts idea of the two-phase car, an  $U$ ,  $I$  and  $Z$  correspond to phases / the p-phase car, is considered properly below at calculation of the moments and capacities.

The resistance of the synchronous car on axes  $d$  and  $q$  in the asynchronous  $Z_{ds}$  mode,  $Z_{qs}$  represent the resistance of schemes of fig. 2 and are functions of sliding of  $s$ . [8] At  $s = 1$  for the definition of modules of resistance of  $Z_{ds}$ ,  $Z_{qs}$  it is usually possible to put  $r_f = r_{yd} = r_{yq} = 0$ , and then instead of schemes fig. 2 we will receive schemes. Therefore, at  $s = 1$  in case of existence of a soothing winding of  $z_{ds}$  "x"  $d$ ,  $z_{qs}$  in  $x_q$ , and at its absence  $z_{ds} = x_d$ ,  $z_{qs} = x_q$ . [9.10] Follows from fig. 2 that at  $s = 0$  we have  $z_{ds} = x_d$  and  $z_{qs} = x_q$ . By way of illustration in fig. 3 for the car of the big power having a soothing winding locus of the ends of vectors of complex resistance are represented also values of sliding of  $s$  are specified. This drawing corresponds to the car with the following values of parameters in relative units of a  $x_{na}^* = 0,41$ ;  $x_{aq}^* = 0,23$ ;  $x_{aa}^* = 0,09$ ;  $x_{afif} = 0,14$ ;  $x_{aydi} = 0,11$ ;  $\Delta_{ay} = 0,09$ ;  $x_d^* = 0,5$ ;  $\Delta_{dHC} = 0,20$ ;  $x_{ds}'' = 0,143$ ;  $\Delta_{ds} = \Delta_{d}^* = 0,32$ ;  $x_{qif} = 0,155$ ;  $r^* = 0,00032$ ;  $r_{yrfH} = 0,01$ ;  $r_{yqif} = 0,0075$ .

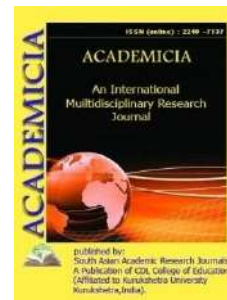
From fig. 3. follows that in the large car already at  $s = 0.1 - 0.2$  will be  $z_{ds}^*$  and  $z_{qs}^*$ .

According to fig. 3, the end of a vector of complex resistance of  $Z_{qs}$  moves on a circle which corresponds to a circle of the current of the circular chart of the asynchronous car with one

secondary chain. The curve in fig. 3, and consists of pieces of two circles corresponding to circles of a locus of currents two the cellular asynchronous car for areas of normal operating modes and start-up.

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## SCIENTIFIC - PROPOSAL PROJECTS ON DESIGNING AGRO INDUSTRIALIZED SMALL CITIES IN THE TERRITORY OF UZBEKISTAN

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### ABSTRACT

*In our research, we have reflected agro industrialized small city's self-peculiarities, which positive sides to being reflecting developed rural agriculture for servicing to increase people's living conditions. Agro industrialized small cities advanced modern directions have looked in this research. Have been analyzed, have been specialized most important methods and trends. In this condition have learned agro industrialized small city's self-peculiarities, then will be given concerning conclusions. At the first complex, invitations have been found about agro industrialized small city projecting trends in Uzbekistan's watering earthly territory.*

**KEYWORDS:** Agriculture, Town – Planning, Agro Industrialized Small Cities, Designing Agro Industrialized Small Cities

### INTRODUCTION

“The modernization of agriculture and its development” is the third task of the “Most priorities of liberalization and development of the economy”. “Most priorities of liberalization and development of the economy” is the third direction in “The strategy of tactics in development of Uzbekistan during 2017-2021 on five main directions” adopted by Shavkat Mirziyoyev, the President of Republic of Uzbekistan on February 7, 2017 [1]. To organize agro industrialized small cities make service be peculiar implement to developing agriculture.

Republic of Uzbekistan's President Shavkat Miromonovich Mirziyoyev said his selfly speech in Higher meeting chambers' jointly meeting in was being devoted solemn ceremony to entering the position Republic of Uzbekistan's President:

“We must increase 2 together with our country's entirely insidely products till 2030. Renovating agriculture, bring up food products are a very important problem for us. At first, to significance, to developing farmer households. Because farmer households are the moving strength agricultural complex.

One of our important problem - supporting small business and discretion. Grow up our country's economical powers, strengthening countries peace, social friendly. Discrete gives products selfing family and country. I say again, if people rich, the country is rich” [2].

Agriculture reform and development of the first task - the development of diversified farming, the farm economy, economic efficiency and financial stability. This issue, we believe that the key to the country's food safety. Our President Sh. Mirziyoyev has done extremely high important works to supply people with houses in rural places. Correspond to time's demands of today, cheap costly houses give beauty to our rural. October 21, 2016, the President of the Republic of Uzbekistan "model projects in rural areas in 2017-2021 updated on affordable housing construction program" On the decision. Each one will think positive about the happiness of their children, family, build a comfortable house to live in you. Human happiness for their hardly critical to prosperity and stability. In this sense, the Program is national architectural traditions and modern trends in architecture and construction, bravery, Uzbek rural's provides the continuity of the work to create a modern image of the service [3].

A new type of model houses all modern requirements gives. The best primarily characterized by the efficient use of land. Agroindustrialized small cities project in the same houses uses. Earth is one of the most important factors in ‘people’s life and activity. People live differently territory in the world. Every country differently using earth according to selfly possibilities and intended people's abundance. Our Republic of Uzbekistan has done many weighty works this matter, attach importance separate important matter what cleverly using watering earthly territory. Because watering earthly territory is a very necessary factor for effectively activity agriculture. Agriculture is importantly implementing to satisfy people's very necessary cares. Nature's all things for people. People must use things economically. That time we obtain what our first President Islam Karimov said in “Conception deepen democratic reforms more and developing citizenship's society” “People's abundance” [4].

## **MATERIALS AND METHODS**

“It is known that 60 per cent of people live in rural areas. That is why we want to build a comfortable life for as long as we the people must be taken in order to improve the lives of our economic reform, particularly in agriculture, as well as the need to start” [5].

“First of all, providing jobs in rural areas, those who are unemployed and effectively employed happened sector involvement, their social protection. This solution chosen should remain the same: people working in agriculture production, and the rest in other sectors - industry, the services sector should be involved “[6].

You should bring to the village for the development of the rural industry. Therefore, the land at the expense of labor is empty of people employed in the industrial, construction and service



sectors, creating the foundation for the further development of the activities of the farmers. "To do this, first of all, the formation of market relations in agriculture. This task, which is agricultural wider market introduction of the "sustainable use of the Earth, its performance and to implement a science-based crop rotation (que) should help scientists closer to them" [7]. Agroindustrialized small cities - agriculture-related activities intended small city. If these towns, townships, and agriculture-related activities. Here, more than the work of agricultural machinery is used. Agricultural products grown, processed, and presented to the public, part of the increase in consumption will be exported. Today, the global market for our fruit and vegetables taking into account the high level of demand, the need to increase exports of agricultural products as much as possible. (Figure 1)



**Figure 1. Agroindustry complex**

Part of the agro industrialized small city of agriculture and primary processing enterprises, networks and facilities.

District planning structures and projects in the agro - small city-regional and district lines are considered. The lower the regional level, the agro industrialized small cities structure will be much simpler. Administrative district to the district planning project will only complex of the district and the district's joint elements:

- Agriculture (farms of all categories, to help enterprises in the industrial economy, private economy, collective gardens and vegetable plots);
- Agriculture service provider networks (agricultural engineering, agricultural chemical, agricultural, construction, transport, etc.);
- Agriculture products processing and storage activating networks;
- Agro industrialized small cities in rural areas and social infrastructure sectors (cultural and community services and housing construction).

Agriculture, the agro industrialized small city is one of the most important parts of the rural economy, so all production of goods on the main set, designed by the organization of the territory and land owned by the district to ensure the efficient and effective use of planning structures and projects one of the tasks.

The formation of agro industrialized small city residential, small city of production as a form of the progressive development of their production regions of the functional adherence to the principles envisages the use of which will be allocated as follows:

- Manufacturing plants, warehouses and auxiliary economy;
- Municipal facilities, transportation facilities, administrative, cultural and community services and other facilities;
- Sanitary protection areas and reserves.

Agroindustrialized small city, primarily in the real owners of the land, making the life of farmers, as well as entrepreneurs, owners and the combination of characteristics. Farmers, entrepreneurs, owners of their business processes closely with the organization worthy of support. This town of farmers, entrepreneurs, owners and their workers and their families live and work effectively with the activity of form.

Particular attention should be paid to the next most important priority is aimed at radically improving the living standards, and a long-term closely associated with one of the large-scale implementations of measures to improve the social and accelerate the development infrastructure, manufacturing, entrepreneurship and small business owner review the status, role and importance of farms, the development of all-round support.

These priority areas for the implementation of the program, future prospects important is considered the head of this word is very significant:

According to the structure of the agro industrialized small cities and performs the function directly above the guidelines of the program is to provide a combination of expression and the development of these directions.

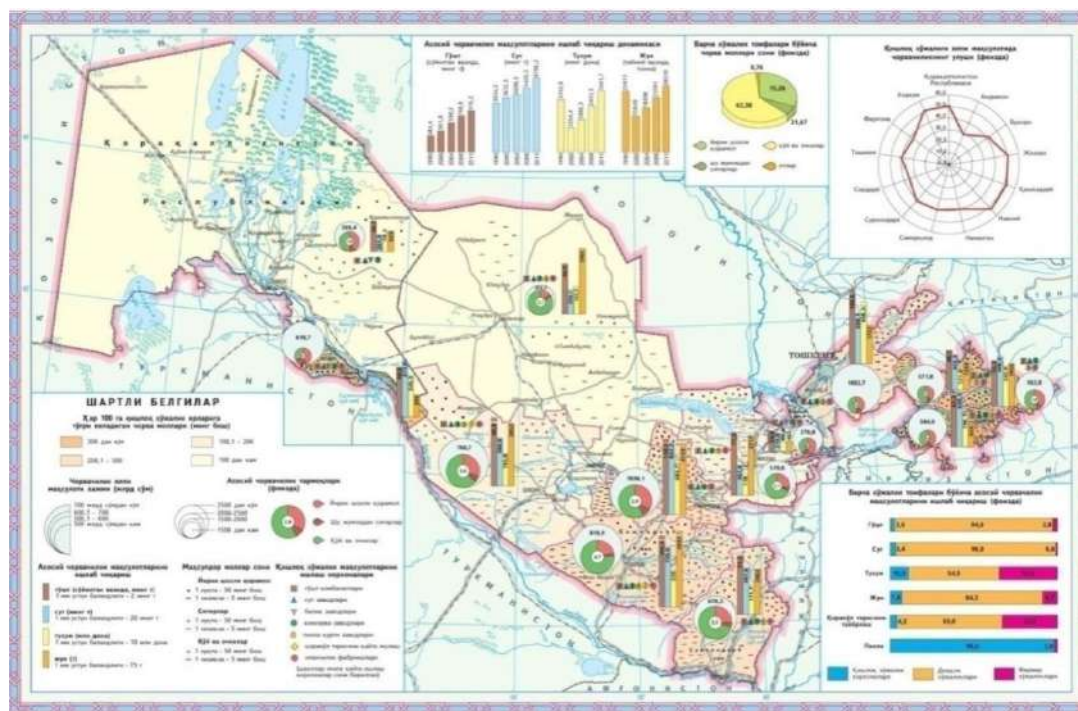
Agriculture to a new level, the flip cotton fields to reduce the size of the increase at the expense of food production, farms, processing optimization of the existing reserves held that it was important. In general, demand in the domestic and foreign markets, which stressed the need for the production of products with a higher value [8].

Modern agro industrialized small city planning and construction of the project and description of the scale and the economic development of the place of residence of the population of the town is connected with the development of the district's total.

The residence of the population of the town planning zones in the structure, function and construction, architectural - planning structure of the population, cultural and community service systems, industrial facilities and complexes to be resolved: the establishment of communications, engineering equipment, wide and improvement of the system is charged. Also, the project with social, economic, architectural, artistic or other issues is resolved.

Planning and spatial structure refer to the place of residence of the population, in all its parts and elements accordingly unit, they understood the principles and laws of the organization. (Figure 2)





**Figure 2. Cattle - raising agroindustry complex**

The following parts of the city - is subdivided into zones:

- Residential zone - where housing, public buildings and institutions, streets and squares, gardens, parks, sports grounds and stadiums;
- Industry zone - where production includes agriculture, energy, transport, utilities and other facilities are located.

Building elements of its functional areas, other elements of his compositions of the community centre, and the main street. The importance of the public centre of town with all areas of the city and its structural elements depends on favorable terms. Advanced planning factors include the following elements of the structure of natural water bodies, clearly an element of relief.

The basis of the structure of the town planning of its territory to separate functional zones. These functional areas of mutual regulation, including inserting a convenient pedestrian and transportation provided.

Economically, bars, residential and industrial areas, including the establishment of friendly relations is desirable.

Located in the zone of the population, which is easy to the health of people, the natural conditions are good, the relief and the flow of the river, which is located on higher agricultural production facilities on the territory of the wind blowing recommended. Population located in the zone of production and storage area with a slice of sanitary protection. The size of the sanitary protection zone on the regulatory documents. This zone is desirable for plantly zones and improvement.

Proximity zone browns ventilation in the production of transport is linked closely with the local roads, and farms situated in areas linked with land use [9].

The use of regional zones is not correct to use other types of settlements, cemeteries, Les burial places, household removed from the waste dump and other facilities for special purpose zones. At the age of technology revolution in reverse, namely, conservation, restoration and improvement of the human need for life.

Agroindustrialized small city planning projects and enterprises of the town to determine the costs of all aspects of the impact of factors and conditions, which must be assessed. In addition, population and labour resources, water, land, fuel - energy, transport, building a database, which can be the effect of sintering and others. Agroindustrialized small city is several different microclimates with a full assessment of the conditions required. Working factor requirement of the population and labour growth estimates should take into account, such as the availability of qualified personnel.

High demand solutions, agreed on the construction of centralized engineering facilities with limited or all of the recommended or permitted by the rules of state enterprises, companies, private companies and other private entities and citizens of certain objects projected by the order applied. [10]

Agricultural enterprises of the Republic of the historical district in accordance with the drawings of plans and projects, as well as the design based on the location of the sectors of the economy and the prospects for development without depending on the design [11; 12].

Agricultural enterprises and private ownership of the following:

1. the livestock, poultry, animal and worm farms;
2. veterinary treatment;
3. Greenhouse and greenhouse economy;
4. Food manufacturing companies;
5. primary processing of agricultural products and processing plants - plants, canned milk, sausages, wine shops, factories, sugar production plants and others;
1. Specialized in agricultural products, filing and storage companies;
2. Agriculture Machinery Repair and store base (agriculture);
3. Construction materials and structures manufacturing facility;
4. economic yards, construction, manufacturing and agricultural centres

Area-wide service on its classification (Classification) divided the territory of the activity and location. Plants, depending on the position of the city in the outskirts of the city, in front of public buildings and buildings, structures or recreational areas may be. Depending on the activities of the plants is subdivided into the following groups:

1. All people use plants, national parks, leisure parks (parks), city, and neighbourhood parks, squares Square, in front of the houses in the way of plants and the streets of the between the cities (boulevard), shore's pedestrian alleys around passage plants.

2. Restricted people use plants. Nursery school, school children, the Technical High academy, cultural and consumer services, health care organizations, sanatory, industrial warehouses and other plants in the yard.
3. Special-purpose plants around the main street and road use, for the protection of water for curtailing the wind to sever the city, cemetery and also between the industrial enterprises of the city with smoke, dust, gas and noise protection is intended for the plants

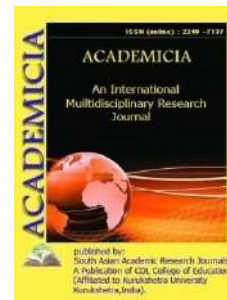
## CONCLUSION

1. The production of the formation of the agro industrialized small city residential small city to use as a form of the progressive development of their production regions of the functional envisage the adherence to the principles of which will be allocated as follows:
  - Manufacturing plants, warehouses and auxiliary economy;
  - municipal facilities, transportation facilities, administrative, cultural and community services and other facilities;
  - Sanitary protection areas and reserves.
2. The future development of the rural areas of the Republic of Uzbekistan to bind production. Uzbekistan has a variety of small cities, depending on the climatic zone was designed. Regional projects - taking into account the capacity of the region, taking into account the future of the region, referring to the development of futural designed.
3. Everyone in the project before going to work in areas engineering improvement work is carried out.
4. At the time of our life in the future for use to watering areas of construction, houses a small design, the expansion of residential areas would not be supplied without planning compactly. If we don't keep us to watering earth today, lest the lands face enormous challenges in the future. In some countries like soggy land to build housing, growing in faith.
5. Projects of agro industrialized small cities of the rural settlements should be linked with the development of future production. Uzbekistan has a variety of small cities, depending on the climatic zone was designed. Regional projects - taking into account the capacity of the region, taking into account the future of the region, the projects envisaged for the development of the future.

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## **DIGITAL CONTROLLED SYNCHRONOUS ELECTRIC DRIVES**

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### **ABSTRACT**

*The article focuses on improving the performance of chemical enterprises with the use of electric drives with mental potential. This allows the system to be controlled and monitored by replacing existing electrical drives in chemical plants with new digital controllable intelligent electrical drives. Unlike other systems, which have the ability to view and change parameters using the installed control device, and reflect high energy efficiency.*

**KEYWORDS:** *Electric Drive, Inverter, Microprocessor, Voltage Frequency, Spatial Vector, Mathematical Model, Rotation Frequency, Signal Filter And Sensitivity Field.*

### **INTRODUCTION**

In recent years, the chemical industry has had electric drives that are coordinated by frequency of use, but consumer demand cannot ensure the smooth operation of the system. On the basis of new elements of mental electric drives IGBT - transistors are installed, and in power models IPM and control-systems of microcontrollers with digital vision. Frequency-lubricated electric guides will not see an excessively high dynamic state, so the range indicator will not exceed 50/1.[1] At present, a small proportion of electric drives, which are part of the energy demand of the chemical industry, have been developed in our country by "hand tools," which are "unknown" software.

All versions of converters are implemented on a single hardware platform in terms of power and control and differ from each other in software, as well as in hardware and software complex of interface functions and modes of operation.



## MATERIALS AND METHODS

One of the current trends in the development of converter equipment for controlled smart drives is the constant expansion of its functionality, modes of operation and intellectual features. Modes such as Auto Adjustment of Electric Brake with Synchronous Frequency Control, Energy Saving Mode, Spinning Part with Acceleration, Motor Start, Constant Braking, Auto Brake Out and Real Time Cyclogram Monitoring can be considered.[2] A number of inverters are equipped with a computer interface, exchange contacts with different angular displacement sensors, user programming functions, standard communication channels and microprocessor-based devices. In this case, it will work in two different modes: mode "self-support" and mode "synchronization".

Homing mode ensures that the drive will operate in the event of a brief drop or power failure. The implementation of the mode is based on the kinetic energy stored by the moving mechanical weights of the load and returned to the inverter during the frequency braking.[3; 9] One of the ways to implement this mode is to control the input voltage of external motion, and the control of internal active components is to transfer looped electrical movements into the control structure.

This concept mainly applies to vector motion control systems in which control schemes of active and reactive components of a flow are included in the basic structure of speed control. When switching to "homing" mode instead of speed control, the inverter input voltage is adjusted. When the power is restored, the speed control is reversed. The adjustment of the proportional integral voltage is set symmetrically to the optimum one. The main advantages of the considered "homing" mode are high dynamic and static voltage control accuracy, no low-frequency voltage and current fluctuations, the motor operation mode is characterized by proximity to the fault and low energy loss.[4]

In frequency control systems without the considered speed control sensor in the "self-sustainment" mode, the problem of "soft" transition between structures arises without an active current regulator in its main structures. The solution to the problem is to create a frequency counter for "self-sustainment" when returning to the main control structure or developing a "self-disconnect" option (smooth start in a rotating engine with quick search function).[5; 6; 10] However, algorithms for implementing "self-sustainment" in a frequency control system are more complex and require more change in the underlying software than in vector systems. Another method of implementing the "stand-alone power supply" mode is to construct a relay circuit for controlling the external voltage of an inverter in a rate (frequency) control circuit. In this mode, the operation algorithm of the device is implemented as follows.

1. The activation of the mode is performed when the "self-control" option is set and the condition  $U_{\pi} < U_{\pi 0}$  is fulfilled. It starts to slow down the movement with a certain intensity.
2. The braking of the motion stops in the positions  $(U_{\pi} > U_{\pi 1})$  or  $(U_{\pi} < -U_{\pi 0})$  and continues in the states  $(U_{\pi} < U_{\pi 0})$  and  $(I_{\pi} > 0)$ .

where  $U_{\pi 0}$ ,  $U_{\pi 1}$ ,  $U_{\pi 0}$  - programmable values of the input voltage and current of the inverter;  $I_{\pi}$  is the inverter input current calculated by phase current and voltage. In an uncontrolled orthogonal coordinate system (x, y), the inverter input current is expressed as follows:

$$U_o = (3/2) [(U_x I_x + U_y I_y) / U_o] (4)$$



3. When braking stops, the set speed (frequency) for engine failure is adjusted according to the actual value.

Providing "off-line power supply" mode with "poor network" parameters and automatic restart significantly increases stability of movement under conditions of low voltage quality.

In "Synchronization" mode, smooth switching of motor between networks is performed by synchronizing output voltage of inverter with voltage of network and generation of control signals for contactors that connect motor to network and inverter.[7; 8] This allows the inverter to operate in parallel for a short time in parallel with the network. Synchronization is performed by monitoring instantaneous values of the network phase voltages using sensors installed on the eC4 expansion board installed on the converter. Based on the data obtained from the sensors, frequency, amplitude and phase angle of rotation of the network voltage vector are calculated. These values are used as a function to generate the output voltage of the inverter. The control system is consistent with frequency, amplitude and phase voltage.

## CONCLUSION

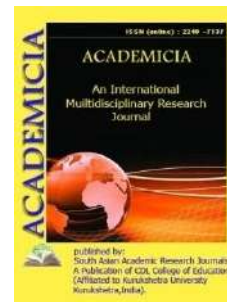
Logic signals from their unit contacts are transmitted to the converter to prevent occurrence of emergency situations due to mismatch between actual state of KM1 contactors and KM2 specified by the converter and electrical contacts. The use of these signals made it possible to implement a control algorithm that was not proportional to contactor response time, and to minimize switching time.

The conductivity current is limited by the active state of the contactor between the inverter output and the network due to the 50 Hz drop in the nominal voltage of the network by 5... 9% in a 3-phase excitation reactor.

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## **NEGATIVE IMPACT OF THE TAX SYSTEM ON POLITICAL LIFE - ON THE EXAMPLE OF THE HISTORY OF THE KOKAND KHANATE (1850-1865)**

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### **ABSTRACT**

*The article covers information about the history of the Kokand Khanate, what scientists can study in their research, and what taxes formed the basis of the administrative management system in the Khanate, and that they were raised at the request of the head of state, which, in turn, had a negative impact on the life of the country's population, resulting in revolts against the tax policy of the Khan in various regions.*

**KEYWORDS:** *Historical Literature, Taxes, Khudoyorkhon, Rebellion, Sarkor, Khokim, Social, Political.*

### **INTRODUCTION**

In the long history of Uzbekistan, the Kokand Khanate was considered a state of special importance. If you look at the history of the Khanate, you can see that from the time the Khanate was founded until the last days, complex political processes and acute social and economic situations reigned. Nevertheless, the Khanate was considered a state with special authority and strategic position in relation to other khanates of Central Asia.

In the 50-60s of the XIX century, a difficult political situation developed in the Kokand Khanate. This political tension had a huge impact on the economic life of the Khanate, especially on its domestic and foreign policy. In the 1950s, the Kipchak uprising and their massacre, the uprisings in different parts of the Khanate against rising taxes and fees, caused by various reasons, and their violent suppression, especially in the palace, led to increased tension in political life.

## MATERIALS AND METHODS

We can find valuable information on the history of the Kokand khanate from books, research sources and articles of our historians, such as S.Nurken, V.Grigorev, A.Kun, A. Xoroshxin, A. Geyns, N. Pantusov, A. Middendorf, V. Nalivkin, A. Zimin, N. Ostroumov, S. Abdugaffarov, V. Nalivkin, A. Juvonmardiev, A. A. Troitskaya, R. N. Nabiev, A. P. Qayumov, F. G'afforov, E. Xurshut, H. N. Bobobekov, A. Xasanov, Sh. Vohidov, Sh. Yusupov, G.Agzamova, D.Sangirova, V.Ishquvvatov, Z. Ilhomov, B. Tursunov, Muhammad Yahyoxon, Sh. Makhmudov. In addition, scientists from Kazakhstan, Kyrgyzstan and Russia - S. Sudanbekov, T. Beisembiev, Yu. Lunev, N. Terletsky, Japanese researcher Yaoyi Kawahara, also conducted research on the history of the Khanate. One of them is T. Beisembiev, who published the facsimile "The Stories of Alikuli Amirlashkar" by Muhammad Yunus Taib in English in London. We see that the information about the tax system of the Khanate was partially covered in the research of scientists such as M. Zhuvonmardiyev, R. Nabiyeu, A. Krinboyev, K. Bobobekov, Sh. Makhmudov. [1, p. 75]

The 50 years of the 19th century marked the most violent processes of domestic political upheaval for the Kokand Khanate. First, Sayyid Muhammad Khudoyerhan could not fully take power in his own hands, even though he had been heir to the throne since 1844. But to say that Khudoyarhan was an unworthy Khan will be wrong. While in the early years the strong influence of Muslim thousands and Kipchak officials in the palace prevented him from ruling the throne on his own, in later years strife and growing general discontent led to the destruction of these opportunities. This circumstance could also be observed in the revolts, protests that took place in different years of his reign in different parts of the Khanate. [2, p. 42]

Secondly, by the 50s of the XIX century, insufficient attention was paid to the struggle of the Russian Empire against attacks on the Khanate, and political and military weakness led to expansion and serious obstacles to the invasion, which eventually led to the destruction of the Khanate. Since the Russian Empire focused on conquering Central Asia and turning it into a colony, in submission to the Kokand Khanate, which has become a great obstacle and a serious opponent in the full conquest of the territories of today's Kazakhstan. However, the economic situation was aggravated, on the one hand, by the internal wars in the Khanate and, on the other hand, by the military invasions of Tsarist Russia with a colonial purpose, which led, first of all, to the strengthening of general discontent of Khudoyar Khan as head of state and ruler. If a Khanate citizen was dissatisfied with the excessive increase in taxes in the following years, the representatives of the upper classes of nobility and the palace were dissatisfied with the fact that Khudojerkhan could not fully take the political situation into his own hands. Assessing the political situation in the Kokand Khanate in 40-60 - years of XIX century, N. Ziyoyev emphasizes - "quot;... As a result of continuous internecine wars and sitting on the throne of noblemen, the Khanate was experiencing a deep crisis in all respects.

People's uprisings against the difficult situation have risen." [3, p. 33]

By the 1950s, taxes were increased in nomadic Kazakh areas of Kokand Khanate, as well as in Turkistan, Shymkent and other localities. For example, Z. Hatamova studied the tax system and types of taxes in Kokand Khanate as follows: "The types of taxes levied on the population in Kokand Khanate can be divided into official and special types of taxes. There were official taxes such as rent, sunset, sales tax, animal tax, balance tax, river crossing tax, the salt tax, tithe tax. Tanobona, wedding taxes, inheritance taxes are special taxes... Due to the fact that the Kokand

Khanate was separated from the Bukhara Khanate, the tax system and types of taxes were formed on the basis of the tax system of the Bukhara Khanate. However, in recent years many changes have been made to the tax system during the Khudoyorhan 's rule, "he said. [1, pp. 75-84]

One of the protests against the tax policy of the Khanate took place in 1858 on the territory of the Tashkent Bekt. In the Kokand Khanate, the Hakims of the province also have the right to levy taxes on Hiraj and Tanabon. [1, p. 78]

During the period of Khudoyarkhan's reign (1865-1875), every year the governors were paid taxes to the Khan's treasury for the amount of 150000 rubles. In common people's language, the taxpayer was called tanabchi (land measurer and taxpayer from each land), the officials collecting Zakatka tax were called zakats. When Tashkent's Hakim Mirzo Ahmad Kushbegi said that everyone except residents of Chimkent, Turkestan and sacred areas is taxed on livestock, and a tax of one tilla(gold coin) was introduced for each married girl, a disgruntled crowd uprising ensued. In addition, according to the sources, Mirzo Ahmed Kushbegi, who is the Hakim of Tashkent, actually runs his own government, suffering cruelty and violence.

It's especially brutal in tax policy. Even those who cannot pay taxes when collecting small taxes, such as bird money, blue money, force their young son or daughter to pay as tax.

Despite the fact that taxes were to be collected strictly in due time and on time, at the discretion of the khan and officials all this changed. During the war, in particular, the types and amounts of taxes were increased. [1, p. 82]

This, as noted above, led to an increase in General discontent not only on the part of Mirzo Ahmed Kushbegi but also on the part of Khudoyarkhan, as the head of state. The reasons for this uprising, the historian Muhammad Yunus Tuib points out that the people patiently followed the policy of the authorities, in particular, the brutality of Muhammad parvonachi and Mirzo Ahmad kushbegi, as well as the neglect of Khudoerkhan and disregard for citizens. [7, pp. 110-111] Abu Ubaydullo Toshkandi, a historian and government official, writes that people's discontent is growing every day as a result of numerous taxes and excessive harassment by Mirzo Ahmad Kushbegi. Even the taxmen went out with an army to collect zakat and girozh. In 1857, Abu Ubaydullah himself participated in the collection of taxes from the population living in the vicinity of Avliot. This revolt was led by Ibn Khudoybergan Bayit Bakhodur. [4, p. 261] "The steppe Kipchak," writes Muhammad Salih, " the tribes and tribes living in different regions United and declared their withdrawal from the subordination of the Kokand khanate and at the same time the Tashkent Khanate. They didn't pay the tax authorities any dirhams or fulus. On the contrary, the territories of the Steppe Kipchak before Turkestan remained on the verge of revolts and riots. "[5, p. 202] About the reasons for this situation in other sources there is information in a completely different interpretation. For example, L. Sobolev points out that after Okmach was released, Khudoyarkhan introduced separate administration in the Northern regions of the khanate and appointed one of his closest officials, Mirzo Ahmed Kushbegi, as Governor. When presenting him with power, God specifically assigns "robberies and murders of all nomads under the influence and power of the Russians". As a result, "all the Northern regions of the khanate were left in ruins of revolts".[6, p. 152]

Mirza Ahmad's cousin stopped in Alma-Ata with his army to suppress the uprising, at which time he sent an army under the command of Besh Ponsot against Sufitoy Biya, one of the great

rebels standing in Pishpak. However, the sent army was defeated. Encouraged by the victory, the rebels imprisoned and besieged Mirza Ahmad, who had returned to his Holy Father at the time. The siege includes an argument, duglat, barlos, bell, pentathlon, fork, earring, black hat and other seeds. The army, led by Mirzabi, Minister of the Tashkent Government, was sent to the outskirts of Shymkent to collect the sunset and was defeated by earrings, bells and other seeds. Mirzabi himself and his close officials were killed in the clashes. [2, p. 58]

The situation in the northern parts of the Khanate was such that no general wanted to come here. Khudojorhan immediately sent an army led by commander Shodmonhoja and his brother Mallabek to suppress the uprising and save Mirza Ahmad, who had been imprisoned by the rebels in Avliat. The uprising was suppressed as a result of Mallabek's entrepreneurial behaviour, that is, his commitment to meeting the conditions set by the rebels, and peace was restored in the country. The commander of Shodmonkhoja will be appointed governor of Tashkent. [3, p. 212]

After the above events, mistrust of Khudojorkhan and his government will increase. At this time, the Emir of Bukhara besieged Nasrullo Uratapa, smashed the Kokands and moved towards Khojand. However, Mayor Yakubbek Badavlat stopped the Emir's march and the Emir was forced to retreat. After these events, Brother Mallabek Khan, one of the most influential officials, Mirzo Ahmad Koshbegi and Dostmuhammad, considered tablecloths the main culprits of Khudoyarkhan's ignorance and ignorance towards the country and its citizens and tried to execute them. However, after the intervention of other officials, he changed his mind and went from Kokand with his men to Andijan. [8, p. 55]

The Mallabek ' s case sparked protests in Khudoyorhan, and he was sentenced to death by the intervention of the Prime Minister. It is for this reason that senior government officials and a number of Kyrgyz-Kypchak communities and tribal leaders have increased their sympathy for Mallabek. In Andijan, a group led by Mallabek overthrew Khudoyorhan and embarked on a plan to capture the throne. From here Mallabek comes to Osh on the advice of Mullo Alikuli, who became one of his most trusted people. He says he intends to make an alliance with Olimbek Dodhoch, Saidbek Dodhoch and other influential people in Osh to seize power and restore order in the country. After receiving several colleagues here, Mallabek returned to Andijan, in the district of Toshlock, where he rose to the rank of khan in the yard of Alikuli. They stand here and begin to prepare for the seizure of power. The Mallahan movement can be seen as a political crime against the state or a political conspiracy incompatible with Islam and the law and not permitted by Sharia, but the above information shows that Mallahan is trying to bring order to the country, put an end to the riots in the palace, and put an end to the plots. Fought for power to prevent an invasion of the growing Russian Empire. His goal was supported by many officials and statesmen, as well as religious leaders. However, it would be wrong to assume that Mallahan's struggle for the throne and his accession to the throne were based on the goals of the Kyrgyz-Kypchak aristocracy, which had previously been in power and had a huge influence on the political governance of the state. [9, 10, 11, 12]

Although the Kyrgyz-Kypchak aristocracy, which had great military power and standing, provided close assistance to Mallahan, this struggle was marked by clashes between forces seeking power in the palace, conspiracy, disobedience to the throne and the inability of Khudoyorhan to pursue policies for the benefit of all segments of the population. It should also be assumed that this was based on the personal interests of Mallahan, who was trying to capture.



In 1858, with the help of Mallabek Alikuli, he took advantage of the absence of Sufibek and Shah Murad, who was now fighting against the Emir of Bukhara and captured Andijan and Margilan, who were under their rule. Subsequent marches will focus on the conquest of Kokand, and the battle between the brothers will take place in the Samonchi area. Mallahan wins this battle and after several days of siege takes over Kokand. Mallahan's victory and accession to the throne were congratulated by the Governor of Tashkent, Sultan Murodbek, a cousin of Otambaya, Sufibek, the Governor of Andijan and the kuramals, who recognized his legitimate ownership of the throne and declared their loyalty to Mallahan. Khudoyorhan, on the other hand, sought refuge from the Bukhara's emir due to lack of support.

When Mallahan ascended to the throne, he first proceeded to establish order in the Khanate and to strengthen Khan's power. Such measures are taken by Mallahan, as well as his domestic policy actions, subsequently do not justify themselves and lead to a crisis of Mallahan rule.

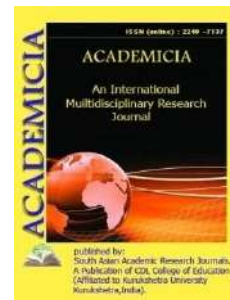
## CONCLUSION

Summing up the above, it can be said that in the 1950s-1960s a difficult political situation arose in Kokand Khanate. These political tensions have had a huge negative impact on the economic life of the Khanate, especially its domestic and foreign policy. The Kipchak rebellion and its destruction in the Khanate in the 1950s for various reasons, the rebellion in various parts of the Khanate against raising taxes and fees and their violent suppression, especially the rise of chaos and intrigues in the palace, caused tensions in political life. As a result of the plots of the inner palace Khudoyorhan was overthrown, Mallakhon and Shohmurodhan were killed, disobedience to the central government and increased partisanship. This political situation created conditions for the emergence of military power, not the power of the Han dynasty. As a result of the struggle of such domestic political forces, Aliguli took the reins as patron of Sultan Said Khan. Nevertheless, the Alikuli government should not be seen as a government that puts Kipchaks in high office. Based on the course of events, it can be concluded that Alikuli came to power not to restore the position of the Kyrgyz-Kipchak aristocracy in the palace, but in the process of the political situation created by internal riots and conspiracy in the palace.

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## USE IN SYSTEMS WITH SUNNY BATTERIES OF FOUR-STAGE LIFTLY WIDE PULSE CONVERTERS

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### ABSTRACT

*Solar energy (or solar technology) is rapidly occupying the global energy market as an environmentally friendly type of energy. Along with low-power 0.1-10 kW solar devices for providing energy to local objects, solar power plants are being formed that are connected to industrial power networks with a capacity of 1 MW or more. The article discusses the issues of increasing the efficiency of using devices using non-traditional types of energy, in particular low-power solar power plants, where the results are presented on providing constant high powers in four-stroke lifting wide pulses solar power plants of low power. In the course of the work, the types and elements of low power, solar power stations were analyzed. Based on these data, computer and mathematical models have been developed. The results of changes in the output voltage of the solar power plant depending on the position of the sun, the current-voltage characteristic of the solar module of the MCW series with a power of 120 watts are presented. Some results of experiments and calculations are given in graphical and tabular forms.*

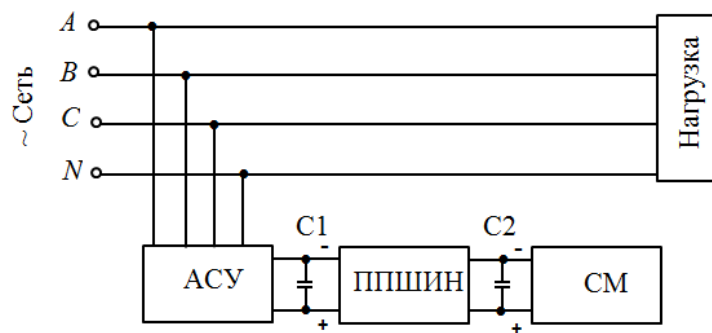
**KEYWORDS:** *Solar energy, low-power solar devices, energy supply, local objects, increased efficiency, low-power solar power plants, computer model, mathematical model, the position of the sun, experimental results.*

## INTRODUCTION

Due to the low energy density of solar radiation, it is desirable to use an optical concentrator of solar radiation in almost many types of solar installations. Possibilities of solar radiation concentration are caused by features of the Sun, as a source of radiation - a small angular radius, which determines the possibility of obtaining high concentrations. Now the problem of application of concentrators consists of the decision of problems of increase of their optical efficiency and maintenance of economic profitability in operation. One of the technical tasks with the use of hubs is to ensure its rotation following the visible movement of the Sun during the day, continuously or discretely. The difficulty of solving the problem is due to the fact that due to the low energy density of solar radiation near the Earth to obtain any noticeable power requires a significant area of solar installations, including concentrators, whose size is proportional to the power of the solar plant. The above-mentioned leads to the necessity to solve complex technical problems of the creation of large-size concentrators, creation for concentrators of bearing and turning devices and control systems providing movement of such objects following the visible movement of the Sun. Research on concentrator tracking and control systems has been underway since the beginning of concentrator development. In this regard, as well as the objectives of increasing the efficiency of existing concentrators and heliostats, this article contains aspects of increasing tracking systems, in particular, a mathematical model of a solar element taking into account the dependence of natural illumination characteristics has been developed, a model - Matlab of the system of electric supply of a local object containing an active load and lift wide pulses of the solar station has been built. The reduction of traditional fuel reserves and the pollution of the environment during their combustion are considered to be the main disadvantages of traditional energy sources. In this regard, energy programs aimed at alternative energy development have been developed in recent decades. Solar energy (or solar engineering) is rapidly occupying the global energy market as an ecological clean type of energy. Along with low-power 0.1-10 kW Helio devices to provide power to local objects, solar electric stations are currently being formed connected to industrial electricity networks with a capacity of 1MW or more [1].

## MATERIALS AND METHODS

Special converter devices are needed to ensure the overall operation of the solar power plant and industrial electrical networks. In many cases, such devices use actively controlled converters. The output characteristics of such converters for the quality of electric energy should comply with modern standards. Actively controlled rectifiers are made according to three-phase bridge circuit of IGBT transistors with reverse diodes. The voltage from solar cells is supplied to its input from the DC voltage converter of lift wide pulses. (Fig. 1).



**Figure 1.** Circuit of actively controlled rectifier

A solar power station block diagram having a DC voltage converter of lift wide pulses and an actively controlled rectifier.

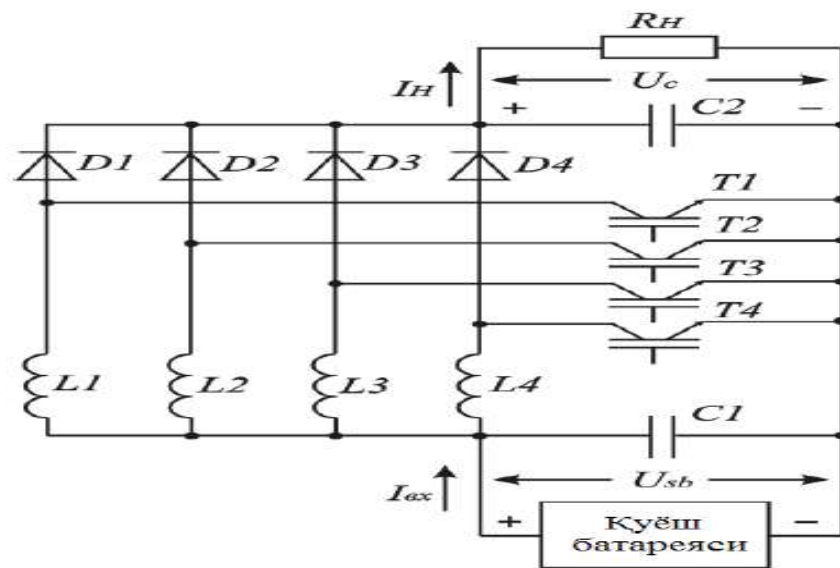
Capacitors with low  $C1$  capacity are connected to the solar battery output. Connected capacitor  $C2$  is selected for the input of actively controlled rectifier by the high voltage of amplitude values of supply line voltage.

$$U_c > kU_{am} \quad (1)$$

Where  $k=1.25 \div 1.5$ .

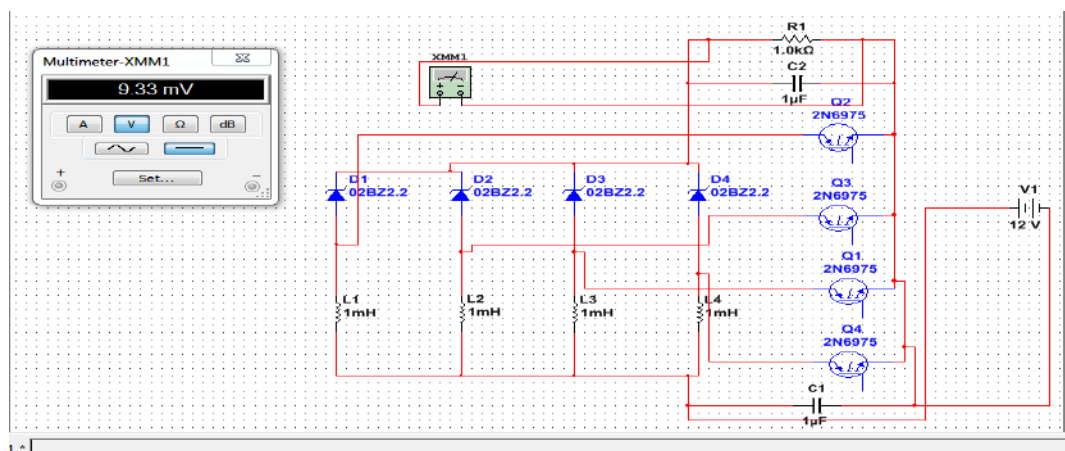
For stable operation of the converter, it is necessary that  $C2 \gg C1$ .

In a 100 kW solar power station, the use of a lift-wide DC voltage pulse converter makes it possible to reduce the number of solar cells connected in series, and as a result, the overall efficiency of the solar power station is increased. The diagram of the connection of the converter of lifting wide pulses of DC voltage to the output of the solar battery is shown in Figure 2.



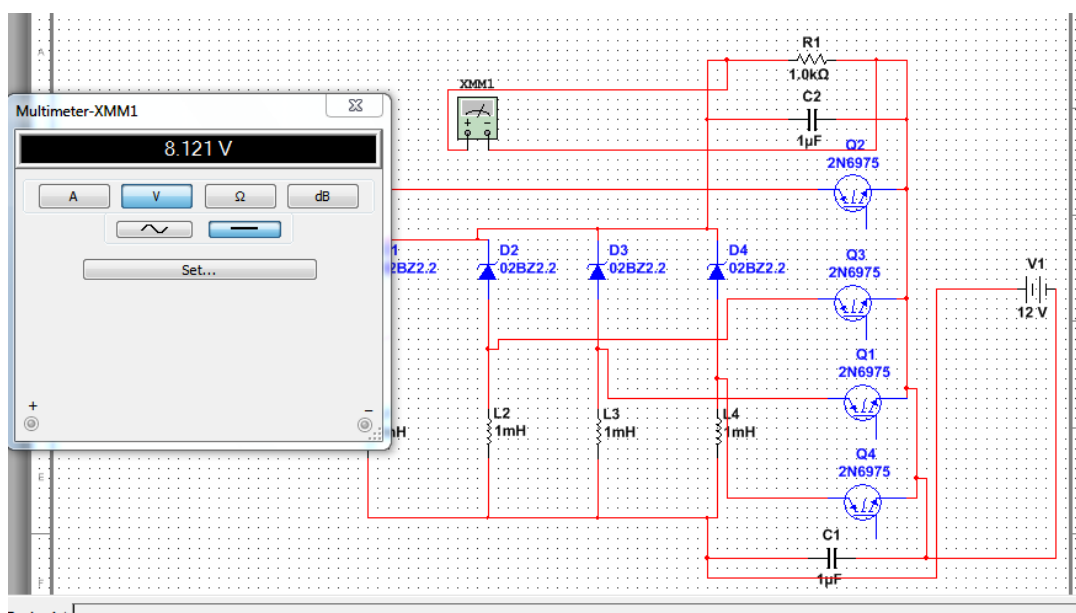
**Figure2.** Diagram of connection of PPSHIN to solar battery output [2]

The PPSHIN model shown in Figure 3 is constructed as Figure 3:



**Figure. 3.** PPSHIN model.

Here, during sunrise, the multimeter shows 9.33 mV. Accordingly, the angle of the lift will change as the sun changes position. In the model below, you can see an increase in voltage due to a change in the angle of the PPSHIN. It follows that with the change in the angular value of the PPSHIN depending on the position of the sun, the value of the stress will change accordingly.



**Figure. 4.** Change the output voltage PPSHIN depending on the sun position

The output voltage PPSHIN will be greater than the input voltage. This is achieved by separating from each other in time the processes of energy transfer to the capacity in the output and the process of energy accumulation in inductive cells [3] For example, the results of changing the position of the solar module power 120 W relative to the sun are given in Table 1.



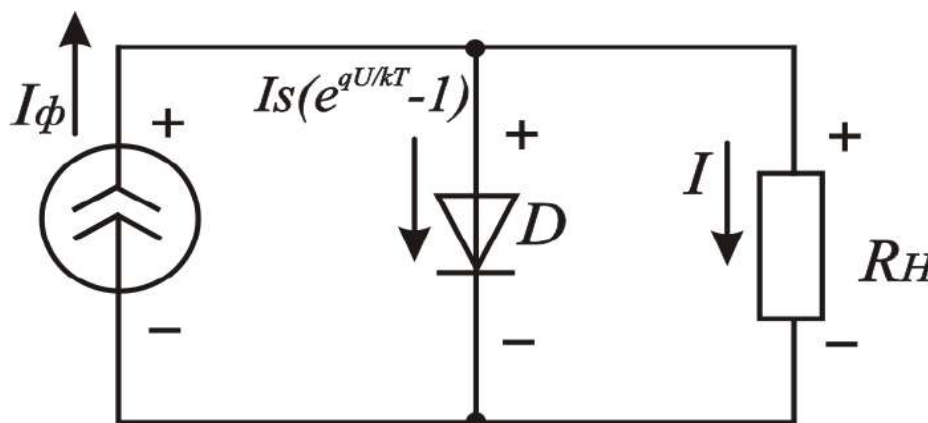
**TABLE 1. RESULTS OF THE CHANGE OF POSITION OF THE SOLAR MODULE WITH A POWER OF 120 W RELATIVE TO THE SUN.**

V	A	V	A	V	A	V	A	V	A	V	A	V	A	V	A	V	A
0.68	3.47	0.49	7.6	0.4	7.87	0.41	7.71	0.44	7.22	0.73	5.33	0.54	8.39	0.5	8.25	0.4	7.6
0.6	2.92	1.3	7.6	1.5	7.31	1.2	7.63	1.1	7.4	1.5	6.97	1.6	7.42	1.7	6	15	7.4
18.5	2.83	19.5	2.9	18.5	4.19	18.7	3.7	19	2.58	18.7	3.28	19.2	3.38	19.1	2.08	19	2.4
20.5	1.84	20.2	1.5	19.9	1.2	19.6	2.01	19.2	2.41	19.7	1.17	19.6	2.02	19.5	1.35	19.6	1.48
21	0.93	20.4	0.96	20.1	0.75	19.8	1.48	20.1	1.12	19.9	0.94	19.8	1.47	19.7	0.96	19.8	0.97
21.1	0.54	20.7	0.34	20.3	0.49	19.9	1.12	20	0.92	20.2	0.53	20.1	0.96	19.8	0.54	20	0.63
21.3	0.38	20.8	0.28	20.4	0.43	20.4	0.35	20.4	0.45	20.2	0.45	20.2	0.47	20.1	0.32	20	0.43
800		900		1000		1100		1200		1300		1400		1500		1600	

The lifting converter is four-stroke, that is, four single-stroke wide pulse converters are connected in parallel and operate by moving in time equal to  $T/4$ , here  $T$  - a period of wide pulse modulator.

#### Solar Cell Mathematical Model

The equivalent active load solar cell diagram is shown in Figure 5. By viewing the currents resulting from the internal photo effect, it is possible to estimate the maximum power of the solar battery [4]. Under the influence of light of wavelength  $\gamma = 0.2-2 \mu\text{m}$  the solar cell is irradiated and its p-n transition current appears (Fig.5.)



**Figure 5.** Solar Cell Equivalent Diagram

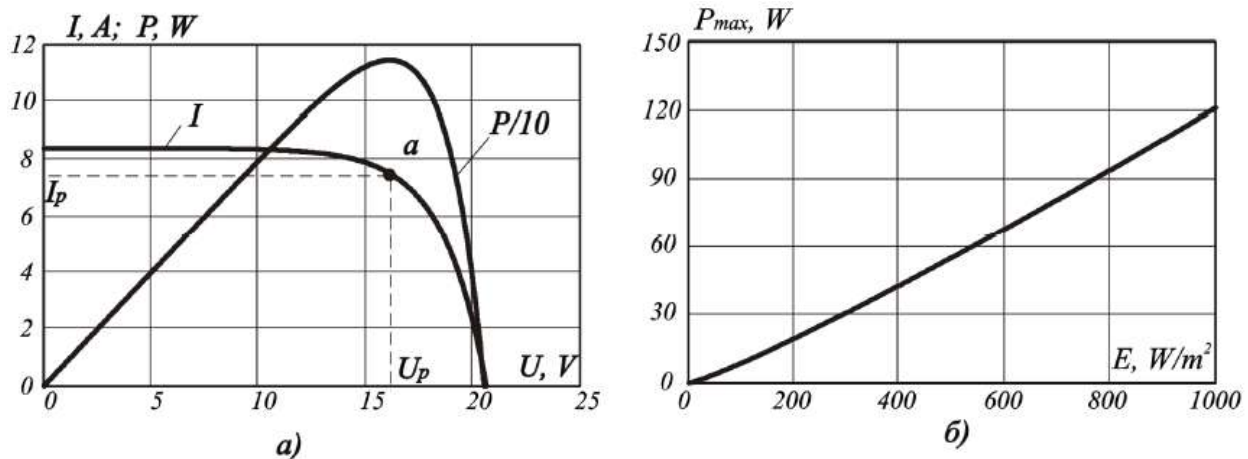
$$I = I_s \left[ e^{\frac{qU}{kt}} - 1 \right] - I_\phi \quad (2)$$

Where:  $I_s$  - current of non-basic carriers (current of development);  $I_{\text{sexp}} (qU/(kT))$  - main carrier current;  $I_f$  is the primary photocurrent;  $Q$  - electron charge, modulo;  $U$  is the shift of transition in the right direction;  $T$  – temperature. The volt-amp characteristic of an ideal solar cell is characterized by the ratio (2). [4. 6]

Volt-ampere characteristic of MCW series solar module with the power of 120 W and voltage of 12 V (curve I) and graph of voltage dependence on dissipation power in the load at the illumination of solar element  $E = 1050 \text{ W/m}^2$  (curve -  $P/10$ ) are shown in Figure 4. The maximum power supplied from the solar cell corresponds to the BAX point an ( $I_p = 7.06 \text{ A}$ ;  $U_p = 17 \text{ V}$ ). If the operating point of the control system algorithm is constructed according to the BAX point the output power of the BUS will depend only on two parameters - primary photocurrent and load resistance. In turn, the photocurrent ( $I_f$ ) depends on the illumination of the solar cell ( $E$ ).

$$I_{\phi} = \frac{E}{\alpha} \quad (3)$$

Where  $\alpha$  is the percentage of proportionally depending on the kind of solar cell



**Figure 6.** Characteristics of the solar module (a-CAB, b-dependence of power dissipated in the load from illumination) [5]

The maximum possible solar cell power (fig. 6) and corresponding to expressions (2), (3), can be determined by examining:

$$\frac{dP}{dU} = I_s \left[ e^{\frac{qU_p}{kT} * \left[ \frac{qU_p}{kT} + 1 \right]} - 1 \right] - \frac{E}{\alpha} = 0 \quad (4)$$

Where -  $U_r$  - output power of the module

To obtain the relationship between power and illumination and expressions (4), define  $U_p$  and insert into expression (2).

The link between lighting and maximum power for solar module MCW12060-12 is shown in Figure 6 b.

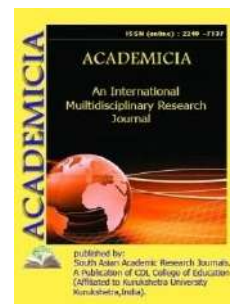
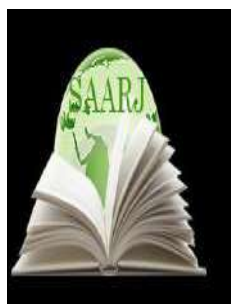
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## CONCLUSION

In this regard, the objective of this article to study and provide constant high power when using solar cells through the use of four-stroke lift wide pulses in solar cells is relevant and of scientific and practical interest.

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## IMPORTANT SOURCES IN STUDYING THE TAX SYSTEM OF THE KOKAND KHANATE

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### ABSTRACT

*In the article, it is informed about sources of learning tax system the khanate of Kokand which had a significant role in Central Asia from 1709 to 1920. The author describes the peculiarities of studying the system of taxation in Kokand Khanate. This information is very important for researchers and a wide range of interests about the tax system in Kokand Khanate.*

**KEYWORDS:** *Kokand Khanate, Finance, Tax, Administrative Development, Source, Social-Political.*

### INTRODUCTION

29 years have passed since Uzbekistan gained independence, and during this time the study of the history of Uzbek national statehood was formed based on new innovative projects. It is necessary to deeply study our national history, not to mention the fact that we have achieved the goal, but to study the field of history in order to form in the minds of the younger generation respect for domestic history and traditions, devotion to the motherland, respect for the memory of our ancestors. In his book “Yuksak ma'naviyat – yengilmas kuch”, the first President of the Republic of Uzbekistan I. A. Karimov focused on the issue of educating young people spiritually mature and not influenced by foreign ideas in the process of globalization. Young people who know their history well have a strong sense of pride and patriotism and are not influenced by any foreign ideas.[1]

### MATERIALS AND METHODS

Among the Central Asian Khanates, the Kokand Khanate was formed with some features in political, social and cultural life, and the system of taxation, types of taxes and the way taxes

were collected, which were of great importance in its administration, also developed slightly differently. The tax system is the source of the state treasury, the basis of the budget, and it is difficult to imagine the stage of development of states without this system. In studying the history of the tax system of the Kokand Khanate, it would probably be a mistake to analyze sources in the field of taxation and to highlight sources related to the political, administrative and social spheres of the Khanate. Let's look at sources on the history of the Kokand Khanate, based on the conclusion that when studying each source you can find something new related to the subject.

The works of the Russian orientalist V. Nalivkin, who researched the history of the Kokand khanate in the second half of the 19th century, are of great importance. The scientist, who wrote the "Brief History of the Kokand Khanate" based on the works of local historians, expressed important views on some aspects of the problem under study. In particular, he gives very clear information about the administrative division of the khanate. [4. 12]]

It is noteworthy that among the studies created during this period, A. Kuhn and A. Khoroshkin provided accurate information about the financial and tax system, which plays an important role in the administrative management of the state in the khanate. [7.13] However, it should be noted that there are sharp differences between these authors in the views on taxes in the works of local historians. In particular, A. Khoroshkin wrote in the 1870s that "the population was subject to incredible taxes," while 19th-century historian Mohammed Aziz Margilani noted that taxes only increased after the Russians invaded the khanate. [8, p. 89]

One of the studies of the tax system, which is an integral part of the system of administrative management ensuring the financial condition of the state, was carried out by the orientalist N. Pantusov. It is important that the author created his scientific studies "Податные сборы в Коканде" and "Сборники и пошлины в бывшем Кокандском ханстве" on the basis of local tax documents.

In the 60-80s of the XX century, such scientists as A.Djuvonmardiev, A.A. Troitskaya, R.N. Nabiev, F. Gafforov, E. Khurshut, T.K. Beisembiev, H.N. Bobobekov, based on written sources, researched various issues of the history of the Kokand Khanate.

The studies of these scholars also provide some information about the administrative system of the khanate. In particular, the work of A. Djuvonmardiev is different in that it contains information specifying the types of taxes in the khanate and state measures in the field of social protection. [2, p.p. 70-71]

It should be noted that one of the researchers who studied in detail the history of the Kokand Khanate was A.A. Troitskaya [6, p.p. 120-129]

The scientist who compiled the catalogue of archives of the Kokand khans and created articles and works on the basis of the documents included in this catalogue contains valuable information about the financial system of the Khanate, the tax sphere, as well as information about the activities of commanders and leaders.

In studying the history of the Kokand Khanate in the 1950s and 70s, R.N. Nabiyeu 's works also play an important role. [5, p.p. 147-203]

In his work, the author focuses on the feudal economy of the last ruler of Kokand, Khudoyorhan, and shows the economic power of the supreme ruler, its sources based on documentary materials, written sources. In his work, he described not only the political processes that took place during the reign of Khudoyorhan, but also Sheralihan (1842-1845), Mallakhon (1858-1862), Sultan Sayidhan (1863-1865), but also one of the important features of the administrative system of the khanate in the 1950s-1970s. He also detailed the essence of the Sarkar Institute.

After the independence of the Republic of Uzbekistan among various problems of historical science, special attention was paid to the issues of the history of Uzbek statehood and it began to be studied on the basis of new approaches and modern requirements. During this period, a millennial history of Uzbek statehood was founded on a theoretical and scientific basis. Such works as “Essays on the History of Statehood of Uzbekistan”, “Abstract of the Bibliography (1991-2001)” and “History of Uzbek Statehood”, prepared by the Institute of History of the Academy of Sciences of the Republic of Uzbekistan, are published. Also, scientific conferences were held on the activities of political figures who played an important role in the development of Uzbek statehood - Amir Temur, Mirzo Ulugbek, Jaloliddin Manguberdi, prominent figures of the Islamic world - Imam Bukhari, Burkhoniddin Margilani, Imam Moturudi, Bakhovuddin Naqshrabandi, an important role in the political, socio-economic and cultural life of the state of the Timurids - Khodja Ahror Vali, conducted research and primary sources related to the period of their life and published. During the years of independence, various periods of the history of Uzbekistan, in particular the history of the Khanate, began to be studied on the basis of new approaches. The Institute of History of the Academy of Sciences of the Republic of Uzbekistan published "History of Uzbekistan" (third volume) on the history of this period. The works and articles of Kh. Ziovuiddinov, X. Bobobekov, Sh. Vohidov, Sh. Yusupov, G. Agzamova, D. Sangirova, V. Ishkuvvatov, Z. Ilkhomov, B. Tursunov, Muxammad Yayokhon, Sh. Makhmudov were published on some aspects political, socio-economic and cultural processes that took place in the Kokand Khanate, an integral part of national statehood, formed and developing in Uzbekistan since ancient times. [7, p. 275.] They cover various issues of the history of the Khanate, including the struggle of the peoples of Turkestan against Russian aggression and domination, popular movements in the Kokand Khanate and their socio-political foundations, the role of various historical figures, including Alikuli Amirlashkar, in the political life of the country. Some problems of the administrative system, issues of source studies of the Kokand Khanate were raised and found their scientific interpretation. At the same time, the authors of these works cite some ideas that shed light on some issues of statehood in the khanate.

For example, in his work on the occupation of the Kokand Khanate by the Russian Empire, H. Zieev not only highlights important aspects of this process but also draws attention to some aspects of the khanate.

The great expert on the history of the Kokand Khanate, Kh. N. Bobobekov, in his work “The History of Kokand” published during this period, analyzes many problems of the history of the Khanate, provides information on some positions in the Khanate and the tax system. [7, p.p. 275-276.]

Sh. Vokhidov, who conducted the source study of the history of the Khanate created by representatives of the Kokand historiographic school, in his studies cites historical facts that allow scientific analysis of the state of Uzbek statehood during the Kokand khanate. His



pamphlet "Titles and Positions in the Kokand Khanate and the Bukhara Emirate" is especially important when studying the subject. In addition, G. Agzamova's research on the history of the khanates of Central Asia, in particular, the Kokand khanate, gives certain ideas about the life of cities, their existing administrative system and the activities of officials occupying various parts of this system, in particular the chairman (mukhtasib). During the years of independence, a number of dissertations on some issues of the history of Kokand were prepared and defended. They include the doctoral dissertation of Sh. Vokhidov, the candidate dissertations of D. Sangirova, O. Masalieva, V. Ishkuvatov, Z. Ilkhomov and Sh. Makhmudov. These studies are mainly devoted to some issues of the history of the Khanate, such as historiography, source studies, the role of some historical figures in the political life of the country. In particular, Sh. Vokhidov's doctoral dissertation is devoted to the development of historiography in the Kokand khanate in the 19th and early 20th centuries, which widely analyzes the stages of development, representatives of the Kokand school of historiography and their scientific views.

The study of O. Masalieva is devoted to the history of the Bukhara, Khiva and Kokand khanates in the 20th century Anglo-American historiography. In it, the author also quotes the views of English-speaking scholars on public administration in the Kokand Khanate. V. Ishkuvatov's dissertation analyzes the study of Kokand-Russian diplomatic relations in the historiography of the second half of the 20th century. In the dissertation, D. Sangirova analyzes an important source on the history of Kokand - "Tarihi Aziziy" from the point of view of source studies, and the study of Z. Ilkhomov analyzes the role of Khan Alikili Amirlashkar in the political history of the Kokand Khanate from 1863 to 1865. B. Tursunov's dissertation is devoted to the state of the army and military activity in the Kokand khanate. In the scientific research of Sh. Makhmudov, the positions in the administrative department of the khanate, tax system employees, and social protection of the population are analyzed.

During this period, Kazakhstani, Kyrgyz and Russian scientists - S. Sudanbekov, T. Beisembiev, Yu. Lunev, N. Terletsky - also conducted research on the history of the Khanate. [7, p.p. 274-277.]

S. Sudanbekov and Yu. Lunev used in their research only the work of Russian researchers and did not pay attention to the information in the work of local historians. In our opinion, studying the history of the khanate without the work of local historians, it is impossible to give an objective assessment of the historical processes that took place during this period. This situation often leads to erroneous scientific conclusions. In particular, the Kyrgyz scientist S. Sudanbekov, writing about the Supreme Council of the Kokand Khanate, admits that this important central government body was created during the reign of Umar Khan (1810 - 1822). In the writings of local historians, there is information about the activities of the Council under the first rulers of Kokand. It should be noted that in the republics of Central Asia there are scientists who are actively engaged in the study of medieval history on the basis of primary sources, the introduction of new sources in scientific circulation. One of them was T. Beysembiev, who published a facsimile of the story "The History of Alikuli Amirlashkar" by Muhammad Yunus Taib in English in London. He also commented on the positions available in the Khanate, based on the information presented in the work. Foreign researchers also contributed, although in part, to the study of the history of the Kokand khanate.

They include English, Japanese, and Turkish scientists. Their work contains information that sheds light on certain aspects of the subject. Special attention should be paid to the work of Yaoi Kawahara, a Japanese researcher of the history of the Kokand khanate. In his work, the researcher pays special attention to the analysis of the life and activities of the rulers of Kokand and Khojas and their role in the internal and foreign policy of the khanate. The works on the history of Kokand, published in English by A. Holdsworth and B. Mance, reflect the political, socio-economic life of the khanate, the administrative system and try to draw appropriate conclusions. However, their comments on this topic are not without some drawbacks. In particular, M. Holdsworth mistakenly believes that the Kokand khanate was in the hands of the khans of the "Ming dynasty" only from 1798 to 1876 and that the khanate included the Margilan, Kokand and Namangan regions. [7, p. 275.]

B. Mans repeats the same mistake in his work. Some English language researchers, including Yu. Bregel and E. Allworth paid close attention to this problem and tried to correctly analyze historical processes. In particular, these researchers, in contrast to M. Holdsworth and B. Man, correctly indicate that the formation of the khanate occurred in 1710.

Turkish scientists have also made a great contribution to the study of the history of the khanate. In particular, the Turkish historian M. Rabots of the Palace is devoted to relations between the rulers of the Kokand Khanate and Turkish Sultans, in particular, political, socio-economic, diplomatic relations, in which manuscripts and archives stored in Turkey, unavailable in Central Asia, play an important role. In this regard, the work of the Turkish scientist is important. However, in this work, the tax system, which occupied a special place in economic life and administrative-management system of Kokand Khanate, was not considered as the object of research. From scientific data of A. A. Semenova, M. Yuldasheva, M. Abduraimov, Yu Bregel, Anke von Kügelgen, R. Holikov, S. Saburov and I. Avezova it is better to use it in comparative analysis with activity

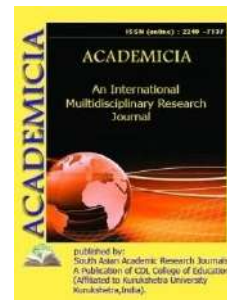
## CONCLUSION

In conclusion, studying the above sources, young historians pay attention not only to the sources of the tax system of the Kokand Khanate but also to the sphere of management, agriculture and social life of the population.

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## EFFECT OF CHEMICAL ADDITIVES ON THE CONSTRUCTION - TECHNICAL PROPERTIES OF CONCRETE MIXTURE

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### ABSTRACT

*The article describes a method for determining various chemical additives are widely used in modern concrete technology. They allow us to direct the formation of the cement composition and improve concrete technologies at all stages of the production of concrete and reinforced concrete products and structures. Chemical additives are obtained from additional products or are specially designed synthesized substances.*

**KEYWORDS:** Concrete, Modifier, Testing, Dry Hot Climate, Concrete Solution, Frost Resistance, Corrosion Resistance, Insufficient Weather Resistance.

### INTRODUCTION

Despite the economy of pozzolanic and slag-Portland cement, they are characterized by a number of disadvantages which reduce the efficiency of their practical application. Such characteristic disadvantages as delayed initial hardening, relatively high capillary suction water demand, unstable frost resistance, corrosion resistance, insufficient atmospheric resistance, increased shrinkage and creep, relatively high cement consumption to obtain a marking strength comparable to Portland cement in a significant sea can be eliminated by the use of chemical additives surfactants (CHAS). [2,3,4,5]

### MATERIALS AND METHODS

One of the most effective ways of intensification of manufacture, improvement of quality, decrease in the cost price and material consumption of ferroconcrete designs - application of chemical additives for concrete mixes. In modern concrete technology, various types of chemical additives are widely used.[1,6,7,8] They allow directional adjustment of structure formation of cement compositions and improvement of concrete technology at all stages of production of

concrete and reinforced concrete products and structures. Chemical additives are derived from by-products or are specially synthesized substances for their intended use. They are used as intensifiers of grinding and giving special properties to cement, for obtaining activated mineral aggregates, for surface treatment of aggregates, organic components of polymer cement concrete and as additives to concrete mixtures. According to the basic concrete admixtures, the concrete mixture is divided into 9 classes: on regulators of rheological properties of concrete mixtures (plasticizers), plasticizers, air-reflecting, gas-forming, sealing, setting retarders, curing accelerators, antifreeze, steel corrosion inhibitors, additives for special concretes and cement retarders. [3,4,9,10]

The following additives are recommended for the preparation of lightweight concrete: plasticizing, ducting, foaming, gas-forming and curing accelerators. Depending on individual qualities, additives are used from a thousandth to 1-2% of cement mass in terms of dry matter and their dosage is specified based on specific requirements, the type of binder, the composition of the concrete mixture, the quality of aggregates and curing conditions. The main class of additives that increase the efficiency of production of reinforced concrete products and structures are plasticizers. Fundamental works of scientists promoted the open mechanism of action of additives on processes of hydration and hardening of cement, and also on structural formation of solutions and concretes. Technical calcium lignosulfonates (LST) are the most widely used plasticizer for concrete. Aqueous solutions or LST concentrates are large tonnage waste from pulp and paper mills. [2,11,12].

The plasticizing effect of unmodified LST additives is expressed in the reduction of water consumption of concrete mixture at normal temperature by 5-10%.

When the temperature of the ambient air and concrete mixture increases, the plasticizing effect of LST decreases sharply. Deceleration of cement hydration in the presence of LST additives leads to a decrease in the strength of cement stone in the initial curing time. At the same time, the stabilizing effect of the additive promotes the formation of a finer dispersion crystal structure, resulting in an intensive increase in strength at a later stage of curing.

A significant factor that increases the strength of concrete in the late curing period is the reduced water consumption of cement. In concretes on dense aggregates hardening effect from the introduction of LST in an amount of 0.1-0.15% is 15-20% or is expressed by saving cement by 5-10%. [2,3,13,14,15]

Recently there have been intensive developments in the field of modification of lignosulphonate additives for concrete. The use of concrete fillers is dictated by theoretical prerequisites and practical necessity. Theoretical prerequisites for filling a cement test are based on providing incomplete hydration of clinker minerals and long-term preservation of the remaining cement grain nuclei (30 % and above) in the cement stone, acting as fillers as a result.

This makes it advisable to replace clinker fillers with cheaper and less.

On the basis of the performed studies on LST modification, additives are developed: UBB, NSDB, CDSC = 1, M = 4, NL = 10, NL = 20, NL = 21, etc., the use of which in the amount of 0.2-0.7% increases the plasticizing effect of the additive without reducing concrete strength and allows saving cement consumption up to 10%. [2,3,16]

Hydrophobizing surfactants are characterized by polyfunctional action of plasticizing concrete mixtures with simultaneous volume hydrophobization of the material, which increases water resistance and frost resistance of concrete. Hydrophobizing surfactants are divided into single-component and complex surfactants. The single components include additives obtained from natural raw materials, petrochemical raw materials and shallow oil processing and modified substances [2, 3].

Single-component hydrophilizing surfactants are characterized by low plasticizing capacity, and some of them are also insoluble in water, which complicates their direct use for the concrete mixture.

Therefore, complex additives prepared from hydrophobizing and hydrophilizing components are considered more promising, which also complicates their practical use.

Concrete hardening accelerators not only reduce the duration or temperature of isothermal heating during heat treatment of articles by 20-30% but also positively affect the dispersion of cement stone hydration products and its pore structure, strength and frost resistance of concrete.

The range of chemical additives in concrete technology is constantly expanding. Recently, new varieties of chemical additives of various effects have been proposed. Individual and complex additives based on scrubber paste of synthetic detergents and one-off post-yeast mash (UPB) can reduce the water demand of the concrete mixture to 10%, involve an additional 3-4% of air, increase the total porosity by 1.5-2 times, shorten the heat treatment cycle by 20-25%, increase frost resistance by 2-2.5 times. A number of proposed new additives exhibit the same plasticizing effect as SDB, but at the same time, they do not inhibit the hardening of concrete.

## CONCLUSION

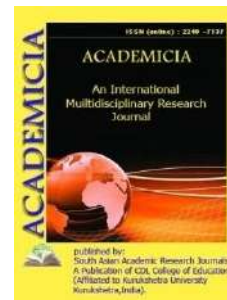
So, the addition of SPD in an amount of 0.005-0.02% helps to increase the air content in the concrete mixture by 3-6%, which leads to an increase in workability, frost resistance and water resistance by 1.5-2.0 times, reduces cement consumption by 1 m<sup>3</sup> concrete on average 10-15 kg. The plasticizing additive P = 1 by-product of caprolactam production provides concrete with water resistance B6-BIO and frost resistance of MPC 200 and higher, with a reduction of cement consumption by 15-20 kg, per 1 m<sup>3</sup> of concrete.

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## ERADICATION OF KARUVELAM USING A BIO ECONOMIC MODEL

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### ABSTRACT

*This project gives the effects of karuvelam at Attayampatti village situated in Salem District, TamilNadu. A bio economic model is used to eradicate the Karuvelam trees. This model is divided into two components as ecology and economics. Numerical simulation and scenario analysis are obtained to eradicate them and finally a simple fuzzy logic based Mamdani model is used to view the proportionality between the growth of karuvelam trees and the ground water level.*

**KEYWORDS:** *Mathematical Modelling, Numerical Simulation, Scenario analysis, Fuzzy Logic, Fuzzy Rules.*

### 1. INTRODUCTION

The Karuvelam tree, or *Prosopis juliflora* as it is known biologically, is a species native to West Africa and was brought to TamilNadu in 1960s as fuel wood. Slowly, these started drifting into dams and rivers, causing problems. Karuvelam is a major threat to water conservation. The ground water level has depleted since the Karuvelam trees rapidly absorb the ground water

thereby causing ground water scarcity. Here, our aim is to control its growth and increase the ground water level.

Vikram Dayal [11] studied the effect of *Prosopis juliflora* an exotic tree on diverse agents in Ranthambore National Park, situated in Rajasthan, India using Lotka-Volterra Equations. The effects of *Prosopis juliflora* on the users has been modelled by drawing on mathematical ecology by Gurney and Nisbet [3]. The bio economic model that studies the economics of developing country protected areas and the usage of different modelling approaches was studied by Chopra and Adhikari [2]. The most common fuzzy methodology is Mamdani's fuzzy inference method which was built using fuzzy set theory. This method was proposed in 1975 by Ebrahim Mamdani [9] as an attempt to control a steam engine and boiler combination. Fuzzy Mamdani Model on Air Pollution was studied by Amudhambigai and Neeraja [1]. After getting various details, Fuzzy Mamdani model is used to find the conclusion.

The area taken for study is Attayampatti town panchayat, Salem. Attayampatti is the town panchayat, with population of about 14 thousand. It is the second most populous town panchayat in Salem district. There are 3649 households. Total geographical area of Attayampatti town panchayat is 2.4 km<sup>2</sup>. Out of 240 hectares, 4.36 hectares are under karuvelam.

People planted karuvelam for fuel wood. Apart from the purpose of planting them for fuel wood, they served the additional purpose of protecting the agricultural lands from goats. Now this shrub has proliferated like a virus in Attayampatti.

## 2. Preliminaries

### Definition 2.1 [4]

**Carrying capacity** is defined as the environment's maximal load. Carrying capacity was originally used to determine the number of animals that could graze on a segment of land without destroying it.

### Definition 2.2 [5]

A **functional response** in ecology is the intake rate of a consumer as a function of food density. It is associated with the numerical response, which is the reproduction rate of a consumer as a function of food density. Functional responses are generally classified into three types, which are called **Holling's type I, II, and III**.

### Definition 2.3 [5]

**Holling's Type II** functional response is characterized by a decelerating intake rate, which follows from the assumption that the consumer is limited by its capacity to process food. Type II functional response is often modelled by a rectangular hyperbola.

### Definition 2.4 [10]

A function that occurs as the result of the division of two exponential functions is called a **logistic function**. Logistic function is also known as the logistic curve.

### Definition 2.5 [6]

The **Lotka-Volterra equations**, also known as the predator-prey equations are a pair of first-order, nonlinear, differential equations frequently used to describe the dynamics of biological systems in which two species interact, one as a predator and the other as prey. The populations change through time according to the pair of equations.

$$\frac{dx}{dt} = \alpha x - \beta xy \quad ; \quad \frac{dy}{dt} = \delta xy - \gamma y$$

where,  $x$  is the number of prey;  $y$  is the number of some predator;  $\frac{dx}{dt}$  and  $\frac{dy}{dt}$  represents the growth rates of the two populations over time;  $t$  represents time and  $\alpha, \beta, \gamma, \delta$  are positive real parameters describing the interaction of the two species.

**Definition 2.6 [12]**

A fuzzy set is a pair  $(U, m)$  where  $U$  is a set and  $m: U \rightarrow [0, 1]$ .

**Definition 2.7 [12]**

A membership function (MF) for a fuzzy set  $A$  on the universe of discourse  $X$  is defined as  $\mu_A: X \rightarrow [0,1]$ . This value, quantifies the grade of membership of the element in  $X$  to the fuzzy set  $A$ .

**Definition 2.8 [7]**

A fuzzy number  $A=(a, b,c)$  is said to be a triangular fuzzy number if its membership function is given by

$$\mu_A(x) = \begin{cases} 0 & x \leq a \\ \frac{x-a}{b-a} & a \leq x \leq b \\ \frac{c-x}{c-b} & b \leq x \leq c \\ 0 & c \leq x \end{cases}$$

### 3. Eradication of Karuvelam Using a Bio - Economic Model

In this section, a bioeconomic model is used to eradicate the growth of the Karuvelam trees. Numerical simulation is obtained to eradicate the Karuvelam trees. Since there is considerable uncertainty about the ecology-economy interactions, alternative scenarios are also examined.

#### 3.1 Model Overview and Equations

The study was undertaken at Attayampatti village situated in Salem District, TamilNadu, India. The entire area is divided as the area covered by 'Karuvelam' and remaining areas. If land under Karuvelam can be cleared, then the area moves into the category 'other area' (Area without Karuvelam). It is observed that out of 40 trees in an area one is Karuvelam.

Both 'Karuvelam' and trees on 'other area' produce wood. In addition, Karuvelam also produces pods, which are eaten by goats. Cattle compete for grass that grows in 'other area'. Cattle and goats are assumed to follow a logistic growth function, with carrying capacity determined by the availability of feed.

We can divide the model into two components, ecology and economics. The ecology component of the model is discussed now.

#### 3.2 Ecology

The effect of Karuvelam on the users of village, lake and river has been modelled by drawing on mathematical ecology. To study the effect of Karuvelam on Attayampatti, a weed control model is used.

**TABLE 1-KARUVELAM AND ATTAYAMPATTI AREA COMPOSITION**

Variable	Symbol	Values (Attayampatti)
Total Area	A	240 ha
Area under Karuvelam	$A_K$	4.36364 ha
Rate of growth of Karuvelam per unit area	$r_K$	1.85657
Cost of Nutrients	CNu	Rs. 50,000 (app)
Cost for maintaining the ground water	CG <sub>W</sub>	Rs. 1,00,000(app)
Rate of pod growth per unit area	$g_K$	700-1000
Stock of goats surviving on Karuvelam	X	250
Parameters for estimating goat and cattle carrying capacity	K	0.34
Initial carrying cost	$K_K$	Rs. 5,00,000(app)
Fraction of area under karuvelam	$f_{KC}$	0.004/4.36364
Number of factors	N	4
Goats that browse in land has not been invaded by karuvelam	$X_4$	150
Goats that browse in land that has been invaded by karuvelam	$X_5$	250
Number of cattle	M	60
Price of cattle	$p_C$	Rs. 25,000
Price of milk	$p_M$	Rs. 34
Price of wood	$p_W$	Rs. 15
Production of wood in Karuvelam area	$w_K$	120 kg
Production of wood in other area	w	80 kg
Fraction of cattle that were milk bearing	$m_F$	30/60 (total cattle = 60)
Milk yield per milk bearing cattle	$m_C$	8 litres
Price of goat	$p_G$	Rs. 5000
Cattle removal fraction	$O_C$	20/60
Goat removal fraction	$O_G$	200/250(total cattle =250)

The area of Attayampatti ( $A_A$ ) consists of area under Karuvelam ( $A_K$ ), and the other area (A) as given in (3.1)

$$A_A = A_K + A \quad (3.1)$$

The characteristics of Karuvelam in terms of spread, effects and control are discussed. This influenced the assumptions used in the following equations related to it. The spread of

Karuvelam is assumed to follow a logistic function. When Karuvelam is cleared in the land, it moves from the category  $A_K$  to the category A.

However, this is only partially successful as the tree will again grow back. Hence, we use the following formula (3.2) to reduce the growth of Karuvelam with respect to the various parameters:  $ir_K$  -the intrinsic rate of growth of Karuvelam;  $A_k$ -area under Karuvelam; N-the cost of nutrients;  $k_K$  -the initial carrying cost of land;  $f_{kc}$  -the fraction of area under Karuvelam is cleared; t- time and G-the cost of maintaining ground water level.

$$\frac{dA_k}{dt} = ir_K A_k \left[ 1 - \frac{A_k}{k_K - (C_{Nu} + C_{G_w})} \right] - 0.9 A_k f_{kc} \quad (3.2)$$

where,  $ir_K A_K$  is the rate of growth of Karuvelam for the total land  $A_K$  ;

$k_K - (C_{Nu} + C_{G_w})$  is the carrying cost of area occupied by Karuvelamat a point in time.

The intrinsic rate of growth of Karuvelam  $ir_K$  given in (3.3) is equal to a base rate of growth and an additional rate of growth that depends on the abundance of goats surviving in the Karuvelam area.

$$ir_K = 0.025 + (0.025 \times X / A_K g_K k) \quad (3.3)$$

where, X is the stock of goats surviving on Karuvelam area;  $g_K$  is the rate of growth per unit area; k is the parameters for estimating goat and cattle carrying capacity;  $A_K g_K k$  is the carrying capacity of goats surviving on karuvelam.

For Attayampatti village,

$$ir_K = 0.025 + (0.025 \times 250 / (4.36364)(800)(0.34)) = 0.0303$$

$$\frac{dA_K}{dt} = ir_K A_k \left[ 1 - \frac{A_k}{K_k - (N + C_{G_w})} \right] - 0.9 A_k f_{kc}$$

Thus we have from Table 1

$$\frac{dA_K}{dt} = (0.0303)(4.36364) \left[ 1 - \frac{4.36364}{5,00,000 - 1,50,000} \right] - (0.9)(4.36364) \left( \frac{0.04}{4.36364} \right)$$

and hence

$$\frac{dA_K}{dt} = 0.0950 \quad (3.4)$$

Equation (3.4) gives the rate of change in the growth of Karuvelam trees in the area taken for study. It can be seen that, there is a significant decrease in the growth rate of Karuvelam. This was accomplished due to the significant increase in the growth of pods and increase in the number of cattles that feed on Karuvelam. Thus, larger the rate of growth of pods per unit area and larger the number of cattles in the area covered by Karuvelam, lesser the growth of Karuvelam in that area. This rate of growth can be calculated using the Lotka – Volterra Model.

### 3.3 The Effects of the Growth of Karuvelam

It is stated in the report of the newspaper “The Hindu” that cattle tied to the Karuvelam trees suffer from problems such as infertility and giving birth to offspring with physical deformities.



**I. Hence the increase in the number of cattle, number of birds and the amount of ground water level interrupted by the growth of Karuvelam trees is as follows:**

$$\frac{dC}{dt} = nA_k; \frac{dB}{dt} = nA_k; \frac{dG_w}{dt} = nA_k \quad (3.5)$$

where, C refers Cattle, B refers Birds and  $G_w$  refers Ground Water Level and n is the number of parameters which causes the reduction in the amount of Cattle, Birds and Ground Water Level by the Karuvelam trees.

### **3.3.1 The effect of Karuvelam on the growth of other trees:**

The differential equation (3.6) shows how the growth of other trees is affected by the growth of Karuvelam.

$$\frac{dY}{dt} = \text{growth of other trees} - \text{death of other trees} = [R_k R_T Y] - [U Y] \quad (3.6)$$

Where,  $R_k$  is the number of Karuvelam trees removed;  $R_T$  is the coefficient of rate of rainfall; Y is the number of other trees; U is the number of other trees grazed by animals. There are six categories of ingestion that causes the death of trees in an area:  $X_1$  - herbivores that graze the other trees;  $X_2$  - wild herbivores that browse the other trees;  $X_3$  - cattle;  $X_4$  - Goats that browse in land that has not been invaded by Karuvelam;  $X_5$  - Goats that browse in land that has been invaded by Karuvelam.

The destruction of other trees is high, availability of nutrients and other basic essential needs are low, which is directly proportional to its abundance. Hence no other plants or shrubs would grow next to the Karuvelam trees.

### **3.3.2 Effects of Karuvelam in Lakes and River**

The availability of water in lakes, ponds and river is proportional to the difference between the amount of rainfall and the growth of Karuvelam in that area as shown in (3.8)

$$\begin{aligned} \frac{dW}{dt} &= \text{standard water level} - \text{scarcity of water level} \\ &= [W R_1 Y] - [R_2 W] \end{aligned} \quad (3.8)$$

Where, W is the standard water level in lakes and ponds;  $R_1$  is the coefficient of removal of Karuvelam trees;  $R_2$  is the coefficient of growth of Karuvelam trees; Y is the number of other trees. Thus, the Karuvelam trees are harmful to the ecology as they turn the land dry by sucking too much of ground water besides poisoning them.

## **3.4 Economics**

The benefits of the categories of villagers over the period of time simulated is given by

$$\int B_i e^{-\rho t} dt, i=C, G, W \text{ and } \rho \text{ is the discount rate}$$

The cattle owner gets benefits from selling (1) the cattle offtake (removal of cattle from stock for sale) and (2) milk from the cattle.

**I.** The benefits to the cattle owner,  $B_C$ , are given by:

$$\int B_C e^{-\rho t} dt; \text{ where } B_C = p_M m_F m_c m + P_C O_C m$$

Here  $p_M$  is the price of milk;  $m$  is the number of cattle;  $m_F$  is the fraction of cattle that are milk bearing;  $m_c$  is the milk yield per milk-bearing cattle;  $P_C$  is the price of cattle &  $O_C$  is the off take fraction of cattle. From Table 1,

$$p_M = \text{Rs. } 34, m_F = \frac{30}{60}, m = 60, m_c = 8 \text{ litres}, p_C = \text{Rs. } 25,000, O_C = \frac{20}{60}, \rho = 12\%$$

$$B_C = (34) \left( \frac{30}{60} \right) (60) (8) + (25,000) \left( \frac{20}{60} \right) (60) = 5,08,160$$

$$\int B_C e^{-\rho t} dt = 508160 \int e^{-12t} dt$$

Hence depending on various time factors the cattle owner is benefited by removing the Karuvelam trees.

**II.** The goat owner gets benefits from selling goats. Revenues from selling goats are taken as a measure of benefits to the goat owner as shown in (3.9)

$$B_G = P_G O_G (X_4 + X_5) \quad (3.9)$$

Where,  $O_G$  is the goat removal fraction;  $P_G$  is the price of goat;  $X_4$  is goats that browse in land has not been invaded by Karuvelam &  $X_5$  is goats that browse in land has been invaded by Karuvelam

From the data table 1,

$$P_G = \text{Rs. } 5000, O_G = \frac{200}{250}, X_4 = 150, X_5 = 250$$

$$B_G = 16,00,000, \rho = 30\%$$

$$\int B_G e^{-\rho t} dt = 160000 \int e^{-30t} dt$$

**III.** The wood gatherer is assumed to gather wood equal to the growth of wood stock. The model abstracts from the possibility that too much extraction could affect the stock of wood. Revenues from sale of this wood are taken as a measure of the benefits to the wood gatherer and it is given in (3.10)

$$B_W = P_W (wA + w_K A_K) \quad (3.10)$$

Where,  $w$  and  $w_K$  are the productivity of wood in land under non-Karuvelam and Karuvelam.

From the data table 1

$$P_W = \text{Rs. } 15, w = 80 \text{ kg}, w_K = 120 \text{ kg}; B_W = 290618.17 \text{ and } \rho = 1\%$$

$$\int B_W e^{-\rho t} dt = 290618.17 \int e^{-t} dt$$

Thus, the increase in the profit on the removal of Karuvelam trees for cattle owners proves the need for eradication of the trees.

#### 4. Application of Various Scenarios in Fuzzy Mamdani Model

In this section four scenarios are given to show the depletion of water in the study area by applying the Fuzzy Mamdani model. Thus, after giving the rules in the rule editor if the number of trees in an area is entered in the input, the level of water and the amount of nitrogen is given

as output based on the data given. In this model, the antecedent (if – part of the rule) and the consequent (then-part of the rule) are fuzzy propositions:

$R_i$  : if  $x$  is  $A_i$  then  $y$  is  $B_i$ ,  $i = 1, 2, \dots, K$ .

Here  $A_i$  and  $B_i$  are linguistic terms represented by fuzzy sets and  $K$  denotes the number of rules in the model.

#### 4.1 Scenarios:

**Scenario 1:** If Karuvelam trees are removed then water level in lakes, tanks and ponds will be increased.

**Scenario 2:** If Karuvelam trees are not removed then the benefits of cattle and goat owner will be maximized

**Scenario 3:** If Karuvelam trees are not removed then water level will be decreased.

**Scenario 4:** If Karuvelam trees are removed then the benefits of cattle and goat owner will be minimized.

Fuzzy Mamdani model is applied to all the scenarios as follows:

The membership function is given based on the number of trees and the level of water in tanks and ponds and the amount of Nitrogen in the soil. Though there are many nutrients, Nitrogen is a Macronutrient and plays a vital role in enriching the soil. The membership function for these factors is given below.

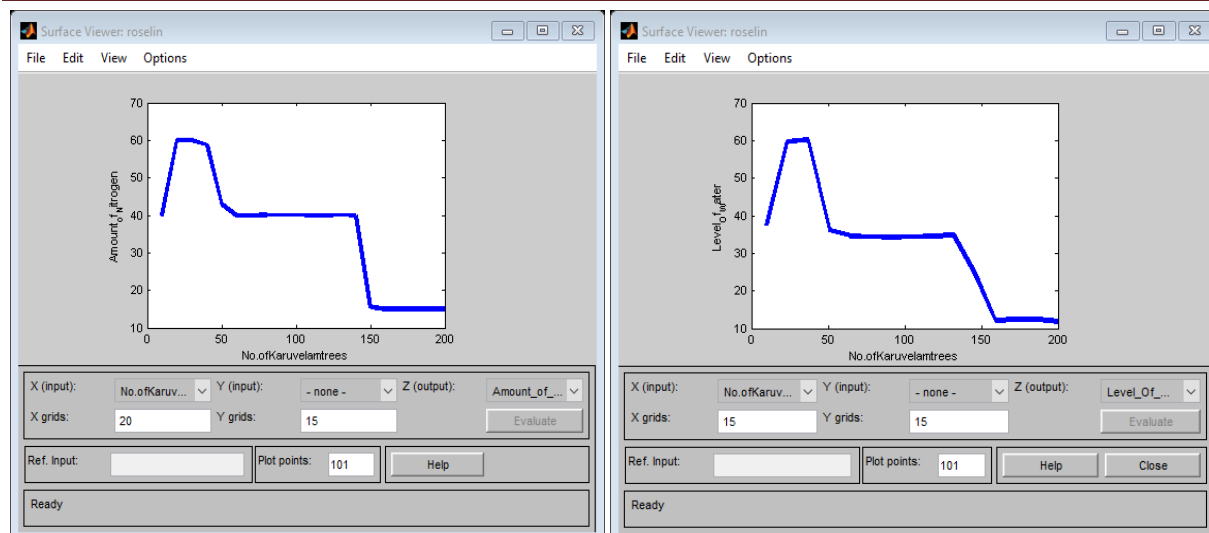
**TABLE 2: RANGE OF EACH FACTORS**

Range	No. of Karuvelam Trees	Level of Water (tmc)	Amount of Nitrogen(mg)
Low	0-50	0-20	0-25
Medium	50-150	20-50	25-50
High	>150	>50	50-75

#### Fuzzy Rules:

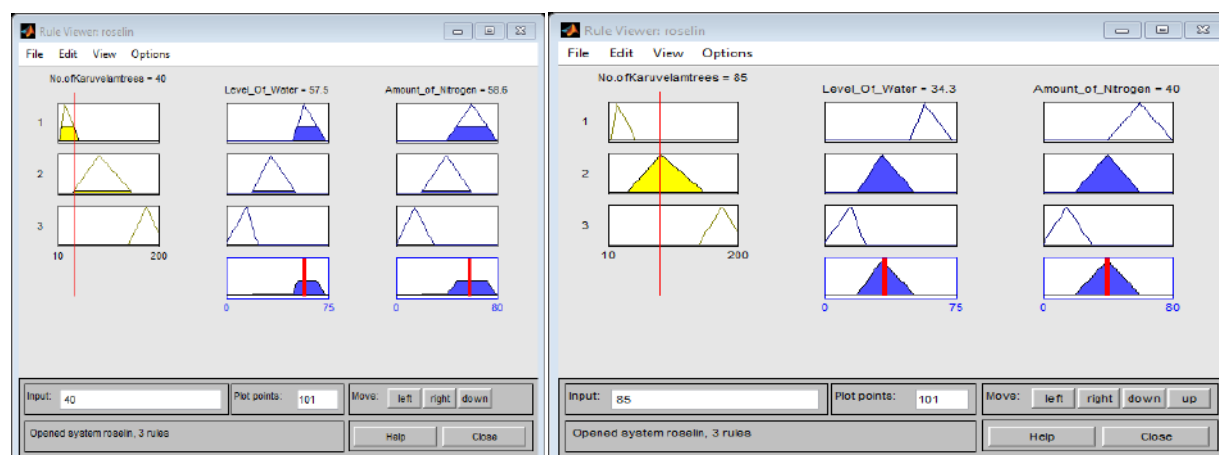
The fuzzy rules are

- 1) If (No. of Karuvelam trees is Low) then (Level of Water is High) and (Amount of Nitrogen is High).
- 2) If (No. of Karuvelam Trees is Medium) then (Level of Water is Medium) and (Amount of Nitrogen is Medium).
- 3) If (No. of Karuvelam Trees is High) then (Level of Water is Low) and (Amount of Nitrogen is Low). The FIS editor for the input and output variables are given below:

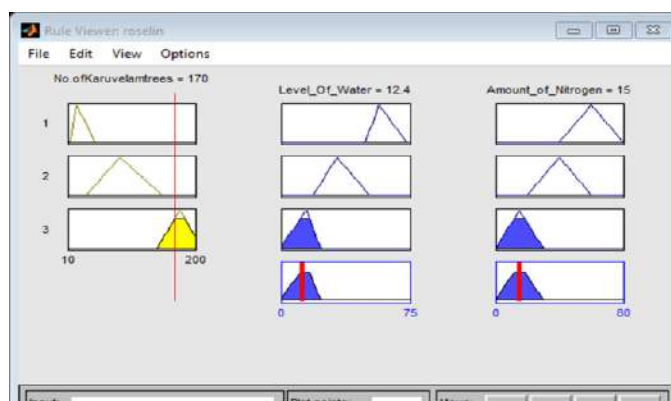


water and the amount of Nitrogen based on the data given as shown below:

**Range: Low, No. of Karuvelam – 45** **Range: Medium, No. of Karuvelam –**



**Range: High, No. of Karuvelam - 170**



Thus, if the Number of Karuvelam trees are entered in the input column, the water level and the amount of Nitrogen can be found out using the Fuzzy editor.

## 5. CONCLUSION

The government must take necessary steps in the eradication of seemai karuvelam. So far only 15% of the trees had been removed and they are still abundant in number. Eradication can be done under natural resource management programme of PWD.

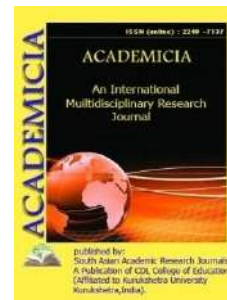
The rapid invasion of karuvelam trees in Attayampatti village has depleted the level of water in lakes and river and also the ground water level. Earth can be protected only if these trees are destroyed forever. Hence the only lasting solution is to dig out the trees and roots entirely, using machines. There are biological as well as chemical methods to destroy the tree. The Agriculture and Horticulture departments are taking several measures to identify trees that harm the ecosystem and destroy them. Also, it is the responsibility of every citizen to destroy atleast one Karuvelam, thereby preventing the earth from many hazardous effects.

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## **INSTALLING POWER COLLECTORS IN REPAIR OF EFFECTIVE BUILDINGS**

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### **ABSTRACT**

*In the article, the idea is to create a moderate amount of air in the house by installing solar panels in the home using natural solar energy.*

**KEYWORDS:** *Solar Collector, Windows, Cold Air, Reconstruction, Air Conditioning.*

### **INTRODUCTION**

Since the formation of the earth, people have used sunlight. Archaeological evidence shows that people decided to live in the sun, protected from the cold, cold winds and sunlight. Myths about the sun were fabricated, and they were a goddess. In ancient Egypt, Ra was the god of the sun.

The first known solar system is the 15th century BC. Amenhotep III. The air and water chambers inside the sculpture acted as a musical instrument, hidden under the influence of sunlight. In ancient Greece, Helios was worshipped. This name is based on many terms related to solar energy today. Among the ancient Slavs, Doydbog is a divine source of sun, heat and light. In the past, there were such mysterious structures that now we can assume that they were used as solar collectors [1].

Central Asia, in particular, the beginning of the architectural architecture of Uzbekistan, dates back to the third century AD. Many buildings and structures built in the IX-X centuries and preserved to this day are rightly considered the culmination of building art. indoor and outdoor environment, taking into account the harmony of form and spatial composition, climatic and urban conditions [4].



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## MATERIALS AND METHODS

It is known that when converting fuel to energy, more or less harmful emissions are harmful to the environment. Intensive use of land, extraction of raw materials, reduction of agricultural land, reduction of the natural environment for human survival. It is known that 90% of primary energy is lost during the extraction, production, transportation, storage and consumption of energy resources [4].

It is known that when converting fuel to energy, more or less harmful emissions are harmful to the environment. Intensive use of land, extraction of raw materials, reduction of agricultural land, reduction of the natural environment for human survival. It is known that 90% of primary energy is lost during the extraction, production, transportation, storage and consumption of energy resources.

The light emitted by the sun is great, and its energy is 100% (340 watts per 1 kWh). Currently, the problem is how much solar energy is utilized for human needs. and radiation (each heated surface radiates heat). Each of these three situations depends on the surface temperature, as well as on the temperature of the surface and the environment, which is taken into account when climate changes. The results of many studies show that by 2020, fossil fuels will partially meet global energy demand.

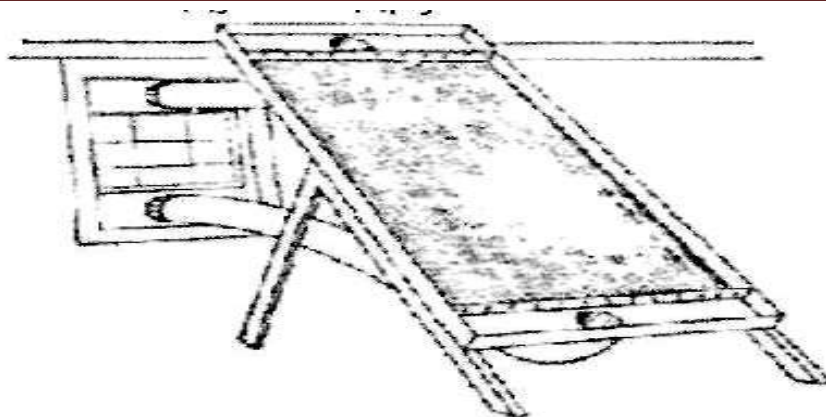
The rest of the energy demand is met through the use of alternative and other renewable energy sources. Other renewable energy sources are energy flows that are constantly present or occur in the environment. The difference is that a newly created force is not a product of human activity.

Nuclear fuel, coal, oil and gas are examples of such energy sources. Unlike newly formed sources, unproductive energy sources are interconnected in nature and are separated by human intervention. The equipment is similar to window air conditioning. A high level of adjustment is achieved when cold air is supplied from one window to the collector and transferred to the second window with hot air. As a result of the economic difficulties of the 1990s, the development of unconventional forms of energy in our country was stopped [3].

The environmental situation requires architects and builders to think again: modern energy is becoming more traditional and has a negative impact on the environment in the energy supply of buildings and cities in general. As you know, solar energy is mainly used by low-power communal water heaters and heaters. The production of thermal energy in the world in the near future will be  $5 \cdot 10^6$  Gcal.

Photoelectric devices have a total capacity of 500 MW. The conclusion is that collectors can be placed in separate structures outside the building. Cold air in the house is supplied from the bottom of the window to the solar collector, back to the room through the top of the window, usually, it looks like a window air conditioner. When restoring existing buildings, it is possible to quickly and relatively cheaply install simple airborne solar collectors in a window.

Figure 1 shows the design of Buck Rogers from Embdu, New Mexico, USA. The cold air in the room is absorbed into the collector by hot air, and the collector returns to the room with warm air. The search results return to the room with warm air. .[1]



**Figure 1.** In the courtyard, a portable solar collector of air type is installed.

In recent decades, the most relevant concept has become - the energy efficiency of buildings, which is directly related to increasing the energy efficiency of buildings. Development in this area was started back in the 70s of the last century, the impetus for this was the energy crisis that swept most of Europe. From that moment on, more and more stringent requirements began to apply to heat-insulating materials. The heat permeability parameters also increase every day, and in general, buildings and structures are evaluated quite strictly by the thermal insulation parameter.

The energy efficiency of buildings includes such a thing as thermal insulation, which implies an overall improvement in the quality of life of people and at the same time a reduction in energy costs. It is important to consider not only the quality of thermal insulation materials but also to develop new engineering solutions, as well as approaches to creating energy-efficient buildings.

In order to increase the energy efficiency of buildings, it is necessary to use the experience of already commissioned structures. Thus, by trial and error, the most effective methods of energy conservation can be distinguished. It is very important to use integrated approaches in this matter, since losses, for example, of heat by 40 per cent occur through walls, by 18% through the roof and windows, by 14% due to improper ventilation in the house, and 10% insufficient insulation of basements.

Modern insulation systems require comprehensive thermal insulation protection since local insulation does not have sufficient efficiency. It is important to install protection on the so-called "cold bridges". As a rule, this is the place of contact of the plates with the walls, the places where the internal walls adjoin the external, subsidence of poor-quality heat-insulating material.

Reducing heat loss can also be achieved by reducing the area of windows, but not always installing small windows is an ideal solution. Since it can significantly worsen the indoor climate. The most acceptable option, in this case, is the installation of three-layer double-glazed windows, the heat loss through which is minimal. It is also important to use intelligent heating systems, implying the rational use of heat in the building. Typically, such systems can increase and decrease the amount of heat depending on the situation.

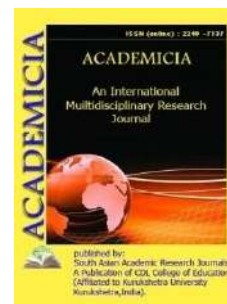
## CONCLUSION

Improving the energy efficiency of buildings has become an urgent issue around the world, especially the achievements of Scandinavia and Western Europe, where heat savings in new buildings range from 50% to 70%. The savings made fully cover the costs of developing and installing energy-saving technologies.

At present, Russian companies have also come to the decision on the need for savings, so every year several new buildings with a modern energy-saving system appear in different regions of Russia.

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## POSSESSIVE PRONOUNS IN INDONESIAN LANGUAGE

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### ABSTRACT

*Indonesian, which is called bahasa Indonesia by its speakers, is classified as a Malayic language of Malayo-Polynesian branch of Austronesian language family [2]. It is spoken mainly in the Republic of Indonesia, as the sole official and national language and as the common language for hundreds of ethnic groups living there. In Indonesia 22.8 million people speak Indonesian as their first language, while more than 140 million speak it as their second language. It is over 80% cognate with Standard Malay, which is spoken in Malaysia, Brunei, and Singapore[2]. Indonesian is an agglutinative language with a rich affixation system, including a variety of prefixes, suffixes, circumfixes, and reduplication. In general, grammatical relations are only distinguished in terms of word order. Indonesian is a diglossic language. The high variety of Indonesian, also called bahasa resmi 'official language' or bahasa baku 'standard language'. This work will analyse examples in these two types of language forms. This article analyse the means of denoting possessiveness and possessive pronouns in Indonesian language.*

**KEYWORDS:** Possessive Form, Formal, Informal, Affixation, Possessive Pronouns

### INTRODUCTION

There are several ways of expressing possessiveness in Indonesian language. This work will analyse these means.

In order to form possessive form in Indonesian language we can use personal pronouns by replacing them after the noun. For example :

Buku **saya**. / My book/

Buku kamu / Your book/

Buku dia /his; her; its book/

Buku kita / Our book/

From above mentioned examples it is possible to conclude that indicating possession pronouns must follow a noun.

There is another way of denoting possessive form, by using affixation (-ku, -mu, -nya ) after the noun. Here, "-ku" is used for first person singular, "-mu" is used for the second person singular and "-nya" is used for the third person singular. For example:

Ini rumahku. / This is my house/

Itu rumahmu. /That is your house /

Dia ingin jual bukunya / He /She wants to sell his/her book/

The suffix "-nya" has several functions within the noun phrase. It can function as a third person possessive pronoun or as a ligature before a possessive noun. This suffix can also denote third person singular "it". Here, this suffix has some feature to be different from "itu" (that). These examples will be used to analyse the difference:

Ibu sudah memasak roti. Roti itu di lemari.

/ Mother has cooked a bread. It is in the pantry./

Kalau mau makan, rotinya di lemari.

/If you want to eat, the rice is in the pantry/

In the first sentence above nasi itu 'that rice' refers to the rice already mentioned.

As nasi is not mentioned previously in the second example, itu is not possible. However, when reference is made to eating in Indonesia rice is understood, and thus -nya can occur.

In the following examples pelayanya 'the waiter' and airnya 'the water' are possible because waiters are assumed in the context of a restaurants and water is necessary for bathing:

Ia menilai pelayanan di rumah makan cukup baik.

"Begitu dibel, pelayanya langsung datang", katanya.

/He regards service in the restaurant is very good./

/ "No sooner she called than the waiter immediately comes," he said./

Saya ingin mandi, tetapi airnya tidak ada.

/ I wanted to have a bath but there wasn't any water./

Saya mau ke rumah sakit tapi tidak tahu jalannya.

/ I want to go to the hospital but I don't know the way./

Use of -nya in this way is optional; it tends to be used by Indonesians whose regional language has a similar construction.

The bound form -nya can refer to non-human animate and inanimate nouns, both single and plural:

Apa/siapa namanya?

/What's its name?/What are their names?/

Saya sudah membacanya.

/I've read it/them./

In contexts where -nya cannot occur there is usually nothing corresponding to English 'it'. This is further discussed in section . In the translations of the following examples 'it' is placed in square brackets where there is no equivalent in Indonesian:

Hebat, bukan?

/It's amazing, isn't it?/

Dia meminyaki rambutnya, supaya mengkilat

/ She oiled her hair so that [it] shone/

As it was mentioned above indicating possession pronouns must follow a noun.

Phrasal forms corresponding to 'mine', 'his', and so on, do not occur. This may require repetition of a noun:

Mobil ini mobil saya.

/This car is mine./

To avoid repetition the first occurrence of the noun is usually omitted. Alternatively the possessive pronoun may be attached to a form like 'kepunyaan' or 'punya' 'possession', milik 'property':

Ini mobil saya.

This is my car.

Mobil ini kepunyaan saya.

Mobil ini milik saya.

Mobil ini milikku. (more informal)

This car is **mine** (my possession).

Dia **memiliki** lima tas baru.

/ She/he has five new bags/

Dia **mempunyai** banyak buku

/She/ he has many books/

This example compares the usage of 'punya' which can be considered as informal form of "kepunyaan".

Saya punya mobil

I have a car.



## CONCLUSION

Possessive form in Indonesian can be denoted by using possessive pronouns and affixation. This article has described the signs and constructions used to express possession and in Indonesian language. The language has many constructions in to express possession. Frequently, there is almost no obvious distinction between attributive and predicative possession in Indonesian language, making possible several different interpretations. Pointing is used to identify both the possessor and the possessed item in a possessive relationship, and occurs in both attributive and predicative possession. Moreover, Indonesian language uses several different 'have'-like constructions to relate a possessor to its possessum. The example including 'mempunya', 'punya' (informal form). "memilik" or "milik" (more informal) are used to denote possessiveness. From the examples that were given above it is obvious that unlike English language structure possessive pronoun + noun, Indonesian language structure noun + possessive.

For example: My book /English language/

Buku saya

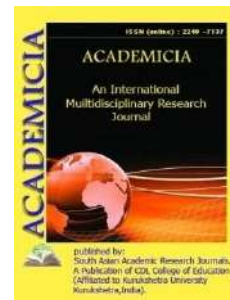
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/My book/

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## ENGLISH AND UZBEK MEAT IDIOMS REFLECTED BY CULTURE AND HISTORY

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### ABSTRACT

*Over the years, research has shown that language and culture are interrelated, and that linguistics is highly relevant in language studies and reflects the notion of national character. The phraseological Foundation of the Language is one of the linguo-cultural units and is a valuable source of folk culture and mentality. Our study shows that gastronomic phrases reflect the customs, customs and traditions of a particular nation.*

**KEYWORDS:** *Linguo-Culture, Phraseology, Culture, Tradition, Etymology, Meat.*

*“We find the way to talk about things that would otherwise be unexpressed in language. The horrors of war, the ultimate alienation of death and the great ecstasy of love would remain vague phenomena if we could not discuss them in terms of easily understood happenings in our daily life<sup>1</sup>”*

Robert Di Pierro

### INTRODUCTION

Phraseology covers all spheres of life. They emerge in the field of sailors, cooks, merchants, curses, tourists, etc. and are created by representatives of the sphere. Over time, these phrases come into the literary language, which is considered the most influential, that is, they move from its narrow meaning to its broad meaning. For example, the English idiom *fat in the fire* appeared in the speech of cooks in the kitchen, which later began to be used in other areas.

Lucien Lévy-Bruhl attributed the formation of expressions with the development of primitive thinking. This progress has gone through two stages connected to each other. The first – prologue (until the emergence of logic) contemplation. This stage people came up with stagnant

expressions caused by the desire to use some concepts and existing words in a completely different sense (taboo and euphemism), to name something and phenomena that are equally imagined for the seed weed within the framework of different magic-related imaginations and superstition. The second is the stage of logical thinking, in which primitive people deliberately took things and events under the influence of natural or linguistic impulses, or formed proverbial phraseological units by using completely different words in relation to them in a portable sense. (Lévy-Bruhl, 1930)

One of the components that are actively used in the formation of gastronomic phraseology is "meat". Meat and meat products are also one of the profound factors that play an important role in human life and in the culture of nutrition. In English culture, the idiom used with components of meat products is associated with the ancient history of England. For example, it can be seen that the origin of the words pork, beef, mutton, was formed from the "Battle" of languages during the period of communication with the Saxons and Normans, in which the second ones were defeated. The process of gradual relocation of French and English languages lasted three to four centuries. The French language was considered the language of the nobility for many years, and in English it was spoken by illiterate people of the lower class. On the table of the Normans were drawn beef, pork and mutton, and in itself the Old English name of these products was changed to the French Alternative:

English	French
pig (old English picga)	pork (old French porc)
ox (old English oxa)	beef (old French boef)
sheep (old English sce-ap)	mutton (old French moton)
calf (old English cealf)	veal (old French veel, later veau)

In the process of the study, twenty two gastronomic phraseological units with the components of meat products in English were identified.

English gastronomic idioms formed with the meat component and their Uzbek equivalents:

To be meat and drink	жонудили
One's meat is another man's poison	кимгасавоб, кимгахаром
After meat mustard	Ғишт қолибдан кўчди
Strong meat	дахшат
Meat and potatoes	мухимомил
Dead meat	мурда (пуписа килмоқ)

English gastronomic idioms formed with the mutton component and their Uzbek equivalents:

To eat one's mutton with smb	Тушлик қилиш
Mutton dressed (up) as a lamb	Кампирлар киз бўламан дейди
Returns to one's mutton	эски ашуласини бошламоқ карам шурвасини бошламоқ

English gastronomic idioms formed with the chicken component and their Uzbek equivalents:

Chicken	кўрқок
Don't count chickens before they are hatched	санамай саккиз дема
Spring chicken	ўнг гулидан бир гули очилмаган, ёш
Like headless chicken	пала- партиш,
Chicken feed	арзимас пул

English gastronomic idioms formed with the turkey component and their Uzbek equivalents:

Red as a turkey	уятдан қизариб кетмоқ
Talk turkey to	масалага ойдинлик киритиш мақсадида суҳбатлашиш

English gastronomic idioms formed with the components of bacon, ham, pork and their Uzbek equivalents:

To bring home the bacon	Оиланибокмоқ
Pork barrel	-
Ham	Кимнингдиркарамогидабулмоқ

English gastronomic idioms formed with the lamb component and their Uzbek equivalents:

Smell of the lamb	Ёзувчилар уз асарлари устида жуда куп вақт утказганларида кулланиладиган ибора
Mutton dressed (up) as a lamb	Хозирги замон кампирлари киз буламан дейди

English gastronomic idioms formed with the fish component and their Uzbek equivalents:

Bigger fish to fry	Мухим вазифа
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We have analyzed all these idioms from linguo-cultural perspectives and tried to find a link between present and past.

The word “meat” refers to such concepts as: *meat and potatoes, one man’s meat is another man’s poison, dead meat*.(phrases.org.uk)

The majority of gastronomic phraseological units in the composition of the Uzbek linguistics, in which meat is involved, represent a negative meaning. For example: the idioms *гўштини бурда-бурда қилмоқ* (to cut someone’s meat into pieces), *гўштини емоқ* (I’ll eat your meat) are used in the sense of a threat, in the sense of “fight, quarrel”. The English idiom *dead meat* is close to the meaning of this group

Along with the above, it can be seen that gastronomic phraseologic units, expressed in English, with the words meat, mutton, pork, beef, and turkey are also widely used. For example:

*To eat one’s mutton with smb – бирга танаввул қилмоқ.*

*Will you eat your mutton with me today, Palmer?* (Ch. Reade, “It is Never Too Late to Mend”, ch. XII).

*Бугун бирга танаввул қиламизми, Палмер?*

*Mutton dressed (up) as lamb – кампир қиз бўламан дейди.*

*They are popular in the neighborhood, I gather.* ‘Some of the old cats don’t like ‘em,’ said General Grant. ‘A good deal of **mutton dressed as a lamb** round here’ (A. Christie, “The Labours of Hercules”, “The Horses of Diomedes”).

*Фикримча, улар маҳалламизнинг кўзга кўринган қизларидан. Фақат кампирлар эмас – деди Генерал Грант. – Ўзимизда ҳам қиз бўламан деган кампирларимиз талайгина.*

The phrase Return to one's muttons (start cabbage soup) came from French *revenons a nos moutons* which is used as a joke. It was used in relation to people who repeatedly spoke one sentence in order to please their opinion.

*Mr. Cox seemed to lost interest in a conversation which had regrettably drifted away from the topic of himself. He turned his back on us rather abruptly, and **returned to his titled muttons**.* (R. Aldington, "Soft Answers", "Nobody's Baby").

The idioms with the component "pork" are also used in modern English. For example, *pork barrel* refers to the amount of money given by the state to some kind of program or projects. (Hornby, 2005) Pork barrel is a metaphor (Wikipedia), the history of its origin is connected with the story of Edward Everett Hale, which was published in 1863 year, titled "The Children of the Public". In the story, this metaphorical phrase was used to express the funds that were given to citizens. Later, after the war of American citizens, this metaphorical expression began to be used in the literal sense. At the beginning of the XIX century, pork was stored in large containers. Those who need it were also able to monetize the meat in the contender. From this arose the meaning of pork barrel's figurative "cash refrain". By the twentieth century, the population began to collect money for the purpose of prosperity of its territory and spend it on several federal projects. Currently, this metaphorical phrase is used in relation to the amount of money allocated by the state for political elections. For example:

*But hey, don't worry, the Democrats have already put this into their \$45 billion infrastructure pork barrel so that we taxpayers get pay for it.* (chicagotribune.com, Talk of the Country: Civil War Days talk is political correctness run amok, 17 June 2019).

The idiom *to talk turkey* means "talk seriously about business". This expression was widely used in the US in 1824 year. During the American colonization, Pilgrim Fathers were in great demand for turkey meat while trading with Indians. Naturally, the first question of the Indians was: "You come to talk to turkey?" According to Nigel Rees, this idiom is taken from the famous story about Americans and Indians. During the colonial period, there was an agreement between the White Hunter and the Indians, according to which everything they hunted was equally divided between the White Hunter and the Indian Hunter. When the time of Sunset came to sum up, there were three crows that were hunted and two turkeys that had to be divided equally between the hunters. The White Hunter first gave the crow to the Indian, and the Indian itself gave the Turkey to the White Hunter, and then the white one handed the second crow to the Indian, and the Indian the second turkey. So the Indians took only the Crow, and the whites-the turkeys. The Indians who were angrily surprised and asked: you took all turkeys and the crows to us? (Rees, Croydon)

K. Watson wrote, "studying another culture means knowing the most beautiful and genuine expressions of this people, as well as everyday lifestyle." (Watson, 1974) Here we can see the importance of the culture in communication of the representatives of two different cultures." K. Watson's research has shown how expressions are significant to know another culture. He believes, if you want to be received by an unfamiliar society, you are obliged to study the phraseological units, which are the value, dignity of this society, and which can manifest its culture.

According to Sh. Usmanova, the semantics of phraseology reflect a long process of development of folk culture. In the phraseology of each language, the events of social history, which belong to the life of the people, are reflected in moral and spiritual-cultural norms, religious outlines, national traditions and customs, cultural stereotypes and archetypes, which are transmitted from the courtyard to the generation. (Usmanova, 2015)



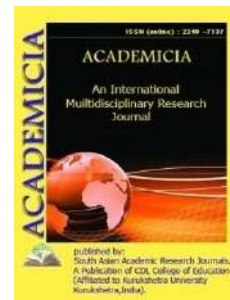
## CONCLUSION

An idiom breaks the normal rules, then, in that it does not mean what you would expect. In fact the idiom is a new linguistic entity with a sense attached to it that may be quite remote from the senses of the individual words that form it. Although it is in form a phrase, it has many of the characteristics of a single word.

All these analysis reveal that English and Uzbek idioms with meat units have almost the same equivalent. However, in some cases they have no one. Of course, history, culture and habitant of target society play a significant role in formation of figurative languages. In spite of the fact that English and Uzbek nations have a great deal of contradictions some idioms have very similar meanings and their explanation and origin can surprise with its identity.

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## PROFESSIONAL TEACHING OF PHYSICS IN ACADEMIC LYCEUMS IN MEDICAL DIRECTION

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### ABSTRACT

*This article aims to enhance interest in science established in the vocational education of physics students who study at medical academic lyceums, it recommends being able to acquire the knowledge which they need to gain from other subjects under the state educational standards.*

**KEYWORDS:** *Vocational Training, Integrative Education, Improving Education Quality, Interest In Science.*

### INTRODUCTION

In recent years, we have seen that among students intending to enter to the higher education, subjects are divided into two categories: "necessary" and "unnecessary". That is, the student places the subject in which he / she is selected for admission at the university of his / her choice as "necessary" or "unnecessary" subjects. As a result, students do not master the subjects they need to know based on state educational standards.

Currently, there are several ways to solve problems that arise in the educational process in order to increase the interest of students in science, and have been introduced into the educational process. For example, the introduction of information technology in the educational process, the wide use of various audio and video materials, the introduction of modern teaching methods in the education system, and so on. Unfortunately, in most cases, students who want to go to a higher education institution, their views remain the same. Students attend in classes which they consider unnecessary only for attendance, keeping their preparations. There are also cases of missing out on extracurricular activities and courses. This, in turn, can not only absorb the knowledge that the learner should have in accordance with the state educational standards, but also cause the attendance of high school students and of course the lack of interest in the subject remains.

## THE MAIN PART

Today, there is a need to address the above disadvantages, to study the current state of the problem, to analyze and draw the necessary conclusions, as well as to develop practical and methodological recommendations.

The natural question arises: What is the main driving force for students to acquire the knowledge they need to master in the state educational standards? How can these problems be overcome?

It is known that when a learner experiences such qualities as interest, demand, commitment, commitment, he or she can accept and remember the content of the lesson. Properly organized teaching will stimulate students' interest in science and this knowledge will be remembered. Of course, it is up to the teacher to attract students to the basics of science and to provide various scientific knowledge on the subject.

We think it is important to do the following in order not to categorize students and to master all the disciplines of the sample work programs.

To avoid confusion and make sure the solution is not just general terms, we will look at the problem solely in medical lyceums and high school physics.

Obviously, a number of students who intend to enter a higher education medical school begin their academic studies at academic lyceums in medicine. Up to now, the entrance exams in medical universities are biology, chemistry, native language and literature, so the high schools in this area are focusing on teaching the same subjects. At the same time, physics is becoming a "secondary" subject. However, in the age of technology, physics plays an important role not only in technical education, but also in medicine. At the same time, it is difficult to make the right diagnosis and treatment without modern medical equipment. In a word, without modern medical devices, it is impossible to imagine the development of medicine. In order to use such equipment properly and properly, it is necessary to know the physics and understanding of physics. Not only medical equipment but also a number of diseases in the human body are subject to physical laws. This means that if a student fails to master physics well, he or she will have difficulty in acquiring the profession in the future. The teacher should be able to explain it to the students, which in turn will involve the learner in the subject and the student will be able to understand the importance of science to the learner. After all, the student should attend the lesson, not because of a commitment, but because of the role that science has in his or her profession. Only then can the student find a clear answer to the question, "Does this subject matter to my chosen profession?" To reveal the essence of the subject and to stimulate the student's interest in learning the subject. Clearly, the learner must be well-versed in his or her knowledge of the subject, as well as the interdisciplinary and interdisciplinary integration of science.

In the system of secondary special education, academic lyceums, which are not specialized in the curriculum and programs of the academic lyceum, are distributed in the same lyceum with the same hours and chapters. This means that for undergraduates who do not have a degree in physics, the direction of the lyceum is different, but the subject matter is the same. So the teacher might also ask, "Can I get out of the program?" However, the development of working curricula for science based on the percentage of changes that can be made to the model curriculum will be assigned to the most qualified personnel in each institution. This is no

accident. Using this, professional education is one of the key to finding a solution to the problem, without altering the content of the sections of the standard education. As we have already mentioned, this solution can appeal to every student, regardless of the direction of the teacher.

Below we consider the content of teaching related to medicine in the distribution of physics subjects in academic lyceums in the field of medicine.

№	Topics	Medical knowledge
1	Introduction. The role of physics in the study of nature. Tasks of kinematics.	The role of physics in medicine. Medical metrology.
2	Mechanics of liquids and gases. Bernoullie's equation	Movement of blood in blood vessels. Occurrence of laminar and turbulent flow in blood vessels. Gas embolism. Effects of changes in blood viscosity on the human body.
3	Dynamics of a rotating solid. The rule of moments.	Biomechanical processes in the musculoskeletal system. Joints and ligaments in the musculoskeletal system. Degrees of freedom.
4	Impulse of body and power. The law of conservation of momentum.	The mechanical work of man. Ergometry.
5	Mechanical vibration action. Forced oscillations. Resonance.	Kinetic and potential energy of oscillating motion. The role of resonance in the human body.
6	Mechanical waves. Sound waves. Sound speed.	Bioacoustics. Characteristics of auditory perception. Clinical sound diagnosis.
7	The concept of ultrasound.	The use of ultrasound in medicine.
8	The basic equation of the molecular kinetic theory of an ideal gas. Measuring the velocity of gas molecules.	Measure body temperature. The organism as an open system.
9	Fluid properties. Surface tension force and surface energy. Humidity.	The use of capillaries in medicine. The importance of surface tension in medicine. The effect of humidity on the human body
10	Structure of solids. Mechanical properties of solids.	Muscle deformation. Mechanical properties of biological tissues.
11	Thermal expansion of solids. Melting and solidification of solids.	Heat treatment. Taking medications.
12	Laws of thermodynamics.	Energy exchange processes in the body. The importance of thermodynamic quantities in the human body.
13	Heat machines and the principle of their operation	Cardiac biomechanics.
14	Current strength and density. Conditions for the availability of electricity.	The effect of current on the human body.
15	Ohm's law for a complete chain. Ammeter	Resistance in the human body. Impedance.

	and voltmeter.	
16	Conductors, dielectrics and semiconductors.	Basics of electrocardiography (ECG). Working with medical devices.
17	Application of electrolysis in engineering and medicine.	Electrophoresis. Enhancement.
18	The magnetic field of the current.	Treatment with current area
19	Electromagnetic field. Electromagnetic waves.	Effects of electromagnetic waves on living organisms.
20	Optics.	Eye-optical system.
21	X-rays and their application.	The use of X-rays in medicine.
22	Quantum light sources are lasers.	The use of lasers in medicine.
23	Nuclear reactions. Radioactive cycles.	The principle of operation of magnetic resonance imaging (MRI)

The table shows that a teacher who is well aware of the interdisciplinary, interdisciplinary integration of his subject can keep the student interested in his subject. In doing so, the student thinks about the content of each subject, realizes the importance of understanding the content of the subject, and, of course, avoids categorizing the subjects.

In order to get a positive result, the teacher must follow the following didactic requirements:

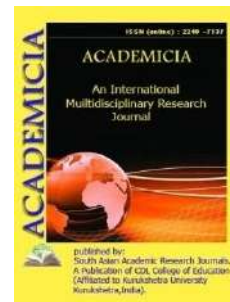
1. The material in question is general and specific to physics should not negatively affect the performance of their duties, and physics should not become a medicine.
2. Misinterpretation without thorough knowledge of medicine should not.
3. The given material helps students to master physics in depth, should help him to remember.

## CONCLUSION

While teaching has a scientific basis, it is pedagogical, psychological, didactic plans may vary. With this in mind, the proper organization of teaching depends on each teacher. In this way, a creative approach to science, the acquisition of theoretical knowledge and laws, the acquisition of knowledge in a spirit that can be confident that in the future they will be able to become experts in their chosen profession, without becoming slaves to common ideas and unreasonable approval of their opinions is needed. Career-oriented teaching in the specific sciences is a clear example of this.

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## CHOLPON'S TRANSLATION SKILLS

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### ABSTRACT

*This article analyzes the work of Abdulhamid Cholpon in the context of world literary and aesthetic thinking on the example of his work in the field of literary translation. Attention is drawn to the fact that he had a direct connection with the literary movements in Russia, Turkey, Great Britain, Germany and a number of other countries. Based on the analysis of the translation of Shakespeare's tragedy "Hamlet", it is proved that the poet studied the traditions of European literature and was able to synthesize the achievements of world literature in his works.*

**KEYWORDS:** *Poetic Content, Literary Process, Translation, Interpreter, Drama, Artistic Interpretation, World Literature, Literary-Aesthetic Thinking.*

### INTRODUCTION

The relationship between the creative and the socio-literary environment, capable of updating the poetic content, is an important literary-aesthetic factor that determines the level of development of a particular national literature. There are issues that need special attention in the process of studying this scientific problem in literature. This, of course, implies issues related to the scope and boundaries of the socio-literary environment. The point is that it is not expedient to limit the sphere of influence of the work of advanced reformers only to the time in which he lived, the



space in which he stepped, as well as the intelligibility factors of language. In the second half of the XIX century - the beginning of the XX century there was such a literary upsurge in the world that it is expedient to look for the reasons in mutual literary influences.

## MAIN RESULTS AND FINDINGS

In the early twentieth century, the Irish writer and poet James O'Connell (1882 - 1942), the Spanish poet and playwright Federico Garcia Lorca (1883 - 1936), the German writer Franz Kafka (1883 - 1924), the Russian poet Alexander Alexandrovich Blok (1880 - 1921), Sergei Alexandrovich Yesenin (1895 - 1925), Chinese writer Lu Xin (Zhou Shujun) (1881 - 1936), Indian writer and poet Rabindranath Tagore (1861 - 1941), a number of French writers, including Henry Barbusse (1873 - 1935), Turkish artists, including Riza Tawfiq, Yahya Kemal, Hussein Rahmi Gurepinar (1864 - 1944) and many other famous artists of the world can not be glazed. It is also true that the work of the same writers determined the level of world artistic thinking in the early twentieth century. Every artist who considers himself a national devotee, who aims to bring his people to the world stage by raising the level of national literature, must adapt the level of artistic thinking to the most advanced trends of his time. This, of course, requires him to make effective use of the achievements and experiences of world writers who lived and worked at the same time as him, and, if necessary, to enter into mutual discussions with them. Cholpon, the son of Abdulhamid Sulaymon, was able to bring Uzbek literature to such a level in the early twentieth century, along with Abdullah Qodiri and Abdurauf Fitrat. In this sense, the study of Cholpon's work in the context of world literature would, in our view, be the most appropriate path. However, it should be borne in mind that "the process of literary influence or comparative studies is reflected in the context of each national literature." [3. 234-235].

The socio-literary environment of Cholpon should not be limited to Uzbekistan or Central Asia. It is well known that he was directly acquainted with the literary movements in Russia, Turkey, Great Britain, Germany and a number of other countries, and had a peculiar connection. After all, the ideological basis of the poet's work was the Jadid movement, the idea of national awakening, which was initiated by Ismail Gaspirinsky, aimed at overcoming the centuries-old national crisis of the Turkic peoples and bringing them to the advanced nations of the world. It is well known that Jadidism and Jadid literature are based on the idea of developing national enlightenment in harmony with world science and art.

Undoubtedly, the education and upbringing he received as a child play an important role in the development of Cholpon's talent. His father, Suleiman Bazzoz, was a prominent merchant and businessman of his time, as well as a poet from Andijan who wrote poems under the pseudonyms Rasvo and Volai Rasvo. Naturally, he was seriously engaged in the education of his son. Academician Naim Karimov writes that Suleiman was "one of the most progressive people of his time, so he subscribed to several foreign newspapers in order to keep abreast of developments in other countries, in particular trade in those countries. Abdulhamid's vision and knowledge of the world and the peoples of the East and the West were formed with the help of these publications" [4. 6]. At the age of 15, in 1913, he wrote a letter to a famous man like Ismail Gaspirinsky, in which he was well acquainted with the materials of the newspapers "Shalola", "Turk Yurdi", "Shahbal", "Vaqt", "Iqbol" and "Tarjumon". indicates that he is enlightened.

The bourgeois uprising and coup d'etat that took place in Russia in February 1917 seemed to give him the hope, albeit a weak one, of a short-lived hope of freedom in the subordinate and

colonial lands. A new independent state was declared in Kokand, and thousands of intellectuals were involved in its construction. Cholpon, who was not yet twenty, wrote the Anthem of the new state. It was not a coincidence. As early as 1914, the young Abdulhamid began to gain the recognition of the nation's educated patriots. On April 18 of the same year, the newspaper Sadoi Turkiston wrote the following lines before the poem "To our Turkestan brothers": their heroes are the cause. Their young hearts dream of conquering everything and destroying the forts of ignorance and ignorance by force. And some of them will succeed in their dreams and become the leaders of an entire nation's age, old age, husband and wife alone. With their young hearts they begin the light of light and knowledge, the light of enlightenment. Such young people exist in every country, more or less, in their own way. Alhamdulillah, such young people and young like-minded children are starting to appear among our Turkestan Turks. For proof, he will show 12-year-old M. Sanjarbek from Osh and 15-year-old Abdulhamid from Andijan" [5. 330].

According to Academician Naim Karimov, Cholpon's poem "To our Turkestan brothers" published in 1914 in the newspaper "Sadoi Turkiston", stories "Victim of ignorance", "Doctor Muhammadiyor", journalistic article "School", "What is literature?", "Dear literary writers" his "creative program was reflected" [4. 7]. Such an enthusiastic creative activity, the creation of works worthy of great recognition at the age of 16, and, most importantly, the possession of a creative program, turned the hope in him into confidence. When an author was chosen for the new National Anthem, it was difficult to find another worthy one.

But it was not about the Anthem, but the emergence of a new autonomy that was in line with Cholpon's patriotic ideas. That is why the poet was ready to give him his existence. Unfortunately, he was crushed in a short time and his activists were persecuted. Until the Turkestan Autonomy was forgotten, the poet who wrote its Anthem could only survive if it was out of sight. Realizing this, Zaki Validi takes Cholpon to Orenburg. Here he took part in the formation of the Autonomous Government of Bashkortostan. All these processes nurtured in the poet the idea of the freedom of the country and formed his political views on the basis of the ideas of a renewed homeland, a rising nation. Naturally, these ideas required innovations in creativity as well. Therefore, in the opinion of Professor Nurboy Jabborov [2. 45]. This was based, firstly, on the achievements of world literature and, secondly, on the scale of individual poetic thinking.

As a child, Cholpon was educated in a madrasah and studied Arabic and Persian well, and in a sense became acquainted with the literature in these languages. Later, the poet got acquainted with the Russian language and literature in the Russian-language school at the level of school education, within the framework of the ideology of tsarism in relation to indigenous peoples. But when Jadidism began to get acquainted with the works of the representatives of the political-enlightenment movement of the national awakening, the level of awareness of Russian literature no doubt did not satisfy him. Because the traditional features of these literatures were in a sense obsolete in the face of updates in Russian, Turkish and Tatar literature. Perhaps this is why Cholpon, in his poems, along with the old styles and traditions, boldly begins to apply the innovations he has learned through these languages to national standards. We will try to explain them with some examples.

***Mastering Shakespeare's poetic skills through the translation of Hamlet.*** It is known that at the beginning of the XX century in Turkestan there was a renewal in all spheres of culture. Here the

rise of theatrical art began to be realized, first of all, by the efforts of serious intellectuals. In particular, Cholpon's translations of world classic dramas have made a worthy contribution to the development of Uzbek theater. On the other hand, these translations also served as a great school in the growth of the poet's artistic skills. This is clearly shown in the translation of the tragedy "Hamlet" by W. Shakespeare. The translator translated this work, presumably, on the recommendation of M. Uyghur. In the poem "The first symbol of art, comrade Uyghur", there are references to this: You would say. Or: "How it shone to the delight of the people, the greatest work of W. Shakespeare."

It is known that Shakespeare's tragedy "Hamlet" was written in a poetic way, like many other tragedies. Some of the translations into Russian before Cholpon (there are about 20 of them) were done in a poetic and some in a prose way. For example, the translations of Nikolai Ketcher, A.M. Danilevsky, Pavel Kanshin, etc., were prose, while Peter Gnedich, Dmitry Averkiev, Nikolai Rossov, Mikhail Lozinsky, Anna Radlova, and Boris Pasternak performed translations in the path of poetry or prose. From our brief observation, it is clear that Cholpon was acquainted with all of them. It is based on a prose translation by P. Kanshin on the advice of Shakespearean Eugene Lan. At the same time, with the help of E. Lan, he is studying this translation in comparison with the English original. " (4. 538). The prose translation of the work must have taken into account the taste and level of the Uzbek audience at that time.

Although Cholpon's translation is prose, it reads like a poem. There are so many imagery in the sentences that they are no different from poetic verses. An example of this can be found anywhere in the work. An excerpt from the fourth scene of the third act of the translation, we observe the debate of Hamlet and his mother, the Queen:

***Translate in to Uzbek:***

*Qirolicha: Oh, basqil, Hamlet! Senmenio 'zko' nglimning chuqurjoy larigako'z tash lashgamaj burqilding vamenund as hunday qoradog'larniko'rayotirmanki, dunyod ahechnars abilanularniyuibbo'lmaydi!*

*Hamlet: Shudog'larniko'ribturi bhamjir kanog'I ldayashab, if losyo to qningsassi qbo'ylarinihidl abvabiraravago'ngustidamuhabbatnash'alarinisurishdadavometmak. Hamda...*

*Qirolicha: Bas, endibirog'izhamgapirma! So'zlaringqulog'imgaxuddixanjardaybotmoqda. Basendi, sevimliHamlet!*

*Hamlet:* (davomettirib)

*Hamdaburungieringningbirharomtukigaarzimaydiganqotilvayirtqichbirmaxluqningqo'ynida!*

*Qirolningemas, odambolasiningnuqulaybiniko'rsatadiganbirmasxarabozqo'ynida!*

*Podshohliqnivahukumatnikasbqilibolgan,*

*tokchadagiqimmatbahotoshnio'g'irlabcho'ntagigaberkitgankissavurqo'ynida...*

*Qirolicha: Bas!*

*Hamlet: (davometib) Qiyqimlardanvalatta-puttalardanyasolg'anqirolqo'ynida!..*

The same passage was translated into Russian by B. Pasternak as follows:

***Королева***

*Гамлет, перестань!*

*Ты повернул глаза зрачками в душу,  
А там повсюду пятна черноты,  
И их ничем не смыть!*

**Гамлет**

*Валяться в сале  
Продавленной кровати, утопать  
В испарине порока, любоваться  
Своим паденьем...*

**Королева**

*Гамлет, пощади!  
Твои слова – как острия кинжалов  
И режут слух.*

**Гамлет**

*... с убийцей и скотом,  
Не стоящим одной двухсотой доли  
Того, что тот. С петрушкой в королях.  
С карманником на царстве. Он завидел  
Венец на полке, взял исподтишка  
И вынес под полою.*

**Королева**

*Гамлет, сжалься!*

**Гамлет**

*С святошной игрушкою...*

**In English, this passage is as follows:**

**Queen Gertrude**

O Hamlet, speak no more:

Thou turn'st mine eyes into my very soul;  
And there I see such black and grained spots  
As will not leave their tinct.

**Hamlet**

Nay, but to live  
In the rank sweat of an enseamed bed,

Stew'd in corruption, honeying and making love

Over the nasty sty, -

**Queen Gertrude**

O, to me speak no more;

These words, like daggers, enter mine ears;

No more, sweet Hamlet!

**Hamlet**

A murderer and a villain;

A slave that is not twentieth part the tithe

Of your precedent lord; a vice of kings;

A cutpurse of the empire and the rule,

That from a shelf the precious diadem stole,

And put it in his pocket!

**Queen Gertrude**

No more!

**Hamlet**

A king of shreds and patches... (Shakspeare homepage. Shakspeare.mit.edu)

This passage looks like this in a poetic translation by Maqsud Shaykhzoda after Cholpon:

**Malika**

Basqil, Hamlet! Senmeningko'zimnihozir

Vijdonimgaqarashgamajburaylading.

Undako'rganimnuqulqoradog'lardir,

Udog'larnihechnarsayuvibketgizmas.

**Hamlet**

Baribir, sizyog'bosganyotoqdamudom

Nafsingizningkayfidannash'alartopib

Shahvatningxumoridaag'nayotirsiz.

**Malika**

Hamlet, rahmet! So'zlaringxanjarsingari

Qulog'imnitilmoqda.

**Hamlet**

Sizgahamyosti qbo'lgan qotil vahayvon

Marhumning bittaharom tukichaemas.

Sizni qo'yniga olganshohemas – ayyor,

Utaxtuz rao'tirgan bittakisabur,

Tokchadatoj niko'ri bo'g'irlagan pes.

### Malika

Hamlet, rahmet!

### Hamlet

Yoringiz birmas xaraboz...

As can be seen, despite being written in prose, Cholpon's translation has a peculiar perfection in poetic terms. Therefore, it can be called a mansur translation. It is also clear that Maqsud Shaykhzoda learned from Cholpon during the translation process. This is confirmed by the use of the phrase "*not worth a single dirty hair*" - "*not a single dirty hair*". Here we are not thinking about the skill of translation, but about the background of the emergence of the common form of Mansura poetry in Uzbek poetry through the poetry of Cholpon. Initially, this situation was widely reflected in the poet's poetry. It is known that the poet used this method even before the translation of "Hamlet". In particular, he used it in his poems "That's how we end up," "Hey, hungry Poor." and in the embrace of "Nature", "Nature's answer". Probably because he liked it more, the translation was done in this way.

It should also be noted that Cholpon's creative way of thinking is close in nature to Shakespeare's thinking. It is no coincidence that in the poem "Cholpon is Cholpon" Ahmad Shukri compared the poet to Shakespeare. "Shakespeare's spirit is visible as soon as the Cholpon horse enters my ears," the author wrote. - No matter how much I tried to distinguish between Shakespeare's lyricism and Cholpon's poetry, I could not find her. I have read "Awakening" many times. I read Shakespeare. Finally I came to the conclusion that Shakespeare is Cholpon or Cholpon is Shakespeare.

### CONCLUSION

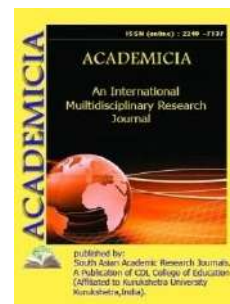
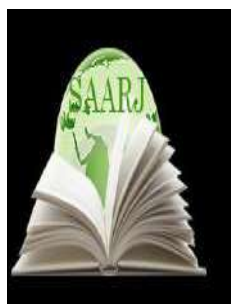
The breadth of the poet's worldview is seen when he deeply analyzes the events taking place in the world and finds many motives for freedom in them. Ancient Egypt, from the events cited in ancient Greek sources to the political attitudes of Great Britain, France, Germany, Italy, the Arab world, Iran, India, China and other countries in the twentieth century, is not left out of the poet's view. Fresh emotions from them are appetizing, influenced by the unusual manifestations of oppression and violence. It captures them in a variety of ways, similar to the Soviet policy that enslaved a number of republics. Sometimes when he is confronted with exposing this attitude, with works that are appropriate to the oppression of the oppressed peoples, he translates it, whether it is a poem or a dramatic work. Sometimes he also translates works in harmony with his dreams, some of which take the form of a series. A deeper and more detailed study of the poet's translation work is one of the tasks ahead.



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## **DISEASE-RELATED EUPHEMISMS IN CHINESE AND UZBEK LINGUOCULTURE**

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UZBEKISTAN

### **ABSTRACT**

*This article is devoted to linguistic research of euphemisms associated with diseases in Chinese and Uzbek languages, the general and specific features of the euphemisms that characterize diseases are covered in the course of their propagation, indicating their role in language and culture. In both folk speech it was found that such cognitive signs as eastern embarrassment, shame, chastity are reflected in euphemisms. The study of euphemisms provides an opportunity to penetrate deeply into the mentality of the people, to have a complete idea of its national culture, values, customs, moral norms, national character of the owner of the language, as well as the interaction of language and culture.*

**KEYWORDS:** *Mental Illness, Gonorrhoea, Linguoculture, Physiological Defect, Chill.*

### **INTRODUCTION**

One of the reasons that make people vulnerable is because of these diseases and illness-related topics. A person who is depressed, both physically and mentally, first of all tries to find a way out of depression in order to get rid of this helpless situation. Because, by mentioning the name of the disease, the disease seems to have intensified. Therefore, in the fight against the disease, it is necessary to change the interpretation of the disease in the first place. This leads to a positive change in the psyche of the person himself and his loved ones. People resort to various euphemistic expressions to dispel the misery and sorrow caused by the disease. Relieving this disease is the best, tried and tested way to overcome it.

The disease endangers human health and life. That's why the Chinese often use the saying, "Don't get sick no matter what." According to ancient traditions, sickness and injury are punishments inflicted on a person, and this punishment occurs through divinity or as a result of

encountering the wrath of divine beings. Therefore, avoid using words related to the disease and try to use softer expressions instead.

## THE MAIN FINDINGS AND RESULTS

In Chinese, the disease is called 疾恙 jíyàng, and the disease is often perceived as “feeling uncomfortable”. This is why many euphemistic means are used instead of the word disease in Chinese. For example: 不适 bùshì – “there is a slight pain in the body”, 略感不适 lüègǎnbúshì – “a little discomfort” (a little, a little, taste loss), 微恙 wēi yàng – “no taste” (usually used as a response when others ask about the situation), 微 wēi – “a little pain”, 偶染微恙 ǒurǎnwēiyàng – to take action, to run away from time to time”, 欠安 qiàn’ān – “not to taste (a little, a little)”, “to be uncomfortable”, 欠安 qiànān – “not in good condition”, 失调 shītiáo – “to have pain all over his body”, 虚弱 xūruò – “to be sick and weak”, 症候 zhènghòu – “Symptoms of the disease observed in the patient”, 沉痾 chéngē – “chronic disease, serious illness”, 苛疾 kē jí – “rare disease” (“ke”, ie severe, irritating), 内伤 nèi shāng – ararlanishi “外伤 wài shāng – “external damage”, 感觉差 gǎnjué chà – “status of the members of the body, she felt bad and not good”, 有麻烦 yǒu máfan – “Check to be in a critical condition”, 采新之忧 cǎi xīn zhī yōu – “due to the illness of occurrence of inconvenience, “低于常态 dī yú cháng tài – “is not in good standing”.

In Uzbek linguistics, the word sick means sick, ill, sick; to be ill, to be ill, to be ill; euphemisms such as bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste, bad taste applied. For example: My uncle's seriously ill wife was lying in this house (A. Qahhor, vol. 3, p. 205); *Hamroqul, the packer, escaped* (A. Qahhor, Tomoshabog, 279). *Sultankhan's mother became ill. Only the fly moans, the patient revolves* (A. Qahhor, “Bemor”, 8); *The old man was in pain, apparently, holding his back* (N. Aminov, “Elvizak”, p. 49); *If it doesn't taste good, why does it go out and not lie down?* (“Mushtum”, 1996, №1, p. 8); *“Bahodir, why didn't you go to school yesterday?” - Mazam escaped* (“Mushtum”, 1996, №1, p. 9); *Sotiboldi's wife fell ill* (A. Qahhor. vol. 1, p. 289); - *Allo, Mukarramkhan, ... please tell the chief that I am not healthy, I can't go to the meeting* (“Oil avaj Jamiyat, 1999, April 21); - *If he is in poor health, he should go home and sit, but not look bad in everyone's eyes* (“SurkhanTongi”, December 12, 1997); *She needs to be spoken to with caution, she is not in good health* (N.A., “QitigiO’ImaganQiz,” p. 83); I'm sorry, I have a cold. - Now is the time (Sozlashuvdan); Dress thicker and you will catch a cold, my child (E. Turan, “Bu toglarlugtoglar”, p. 81).

Along with the above-mentioned, the Uzbek language also uses the euphemic expressions of being perfect in the sense of “going away from power and becoming a weak” and “becoming overweight and lying in front of death”. For example: -- while Gafforjonsufbadal was studying at the jadid school opened in eshon's room, his father did not send him to school after his mother was paralyzed, his mother remembered the school as an old woman (A. Qahhor vol. 3, 215).

In Chinese and Uzbek linguistics, disease-related euphemisms can be divided into thematic groups such as “euphemisms for dangerous diseases”, “euphemisms for mental illnesses”, “euphemisms for skin and genital diseases” and “euphemisms for internal diseases”.

### Euphemisms representing dangerous diseases

People especially hate incurable diseases and are terrified of them. In medicine, the names of many dangerous diseases are tabooed. In ancient times, people called rash “flower”, “bloom”, plague “chronic disease”. The reason was the high mortality rate from these two diseases at that time. That is why people were very afraid of dying from these diseases. But to date, due to the development of medicine, many diseases have been overcome. Rash, plague, and plague no longer frightened people. Therefore, the naming of such diseases as euphemisms in everyday treatment decreased, and they began to be referred to directly.

In Chinese linguistics, cancer is often interpreted as “swelling,” “new cell,” or “something has grown”. For example, 生长物 shēng cháng wù – “suffering from swelling of the body, the appearance of tumors”; Mild expression of 大写字母 C - dàxiě zìmǔ – cancers, S.A. the abbreviation of the word cancer in the West; 最后一场疾病 zuìhòu yī chǎng jíbing – (analogy) is a euphemistic expression of incurable diseases.

Cancer, cancer, tumor in science instead of cancer in Uzbek; a bad patient in speech, a dangerous patient, such a patient, without treatment; instead of plague, euphemistic means such as moonshine, chronic diseases are used. Experiments have shown that cobra venom can even stop cancer from growing (“Science and Life”).

AIDS, which appeared in the West in the middle of the twentieth century, is one of the most difficult global diseases to treat. In recent years, the disease has become a major concern of eastern communities as well. Its euphemistic synonyms began to be used in order to alleviate the depressed mood in people with the disease, to lift their spirits, to encourage them to overcome the disease, to encourage and sympathize with them. In this sense, the term “social disease” appeared in English, and it appeared in the dictionary of most languages. In Chinese, 社会病 shèhuì bìng euphemistic expressions are used instead of AIDS.

COVID - the 19-coronavirus (coronavirus), which has become a global pandemic around the world today, has caused a great deal of confusion. Even in some countries, the name of the coronavirus has become taboo.

### Euphemisms for mental illness

A group of diseases that result from a disorder of brain activity, ranging from a functional change in mental activity to a complete breakdown of it, is called a mental illness. It is well known that euphemisms arise mainly as a result of mental fear. Below we consider euphemisms related to mental illness in Chinese and Uzbek linguocultures.

In Chinese linguoculture, mental illness is expressed by the following euphemistic expressions: 弯轴断裂 wān zhóu duànliè – “mental illness”; 螺丝松了 luósī sōngle – “depression, insanity”; 心智不健全 xīnzhì bù jiànquán – “mental disorder” and so on.

In Uzbek linguoculture, the concept of “crazy // stupid” in the literary language is unhealthy, mentally ill, mentally handicapped, mentally retarded; in speech, “coming in and out”, “ninety-nine”, “one less face”, lacking, deaf, dementia, stupid; as before, the roof is represented by euphemistic means, such as: Do you hear that every year six thousand mentally retarded babies are born (A. Jumakul, “Yurakgasig’ masgaplar”; “O’ylamasdanso’ ylaganodamni no sog’ deydilar

“Song”. *It is called a person who speaks nonchalantly*”; Who knows, maybe everyone knew that Nargis's body was “**unhealthy**” (O. Hoshimov, “Twice two-five”, 179); What a pity, I say that this girl is less sane, - thought Juraboy (N. Ergashev, “Uzanbiyavlodlari”, 19).

In most linguocultures, the concept of “crazy” is sometimes expressed in a nonverbal way. For example, in Uzbek linguistics, the sign of turning the index finger on the temple is “stupid”, “crazy?”, “Are you crazy?” meanings. In Chinese linguistics, this meaning is expressed by tapping a finger on the forehead or head.

#### Euphemisms for skin and genital diseases

Sexually transmitted diseases are called mitochondrial diseases. The word “tanosil” (from the Arabic language) means “reproduction, multiplication, reproduction.” In Chinese linguistics, 花柳病 huāliǔbīng euphemistic expressions are used to mean “skin and genital diseases”, “syphilis”. The 爱神之痒 ai shén zhī yǎng euphemisms are also used in the mild expression of sexually transmitted disease.

Syphilis is an infectious, chronic sexually transmitted disease called zahm in Uzbek. Tuberculosis, syphilis and cancer poison the vocal cords and change the sound (N. Ismailov, “Care of diseases”).

Gonorrhea is an infectious venereal disease, mainly caused by casual sex, with inflammation of the urinary tract and genitals, which is expressed in Chinese by the 微妙的污点 wéimiào de wūdiǎn euphemistic means. In Uzbek, this disease is expressed verbally. As the word is contagious, it is necessary to consult a venereologist as soon as symptoms appear (“National Encyclopedia of Uzbekistan”).

“Xez, Xezalak” words are replaced by euphemisms such as sexual weakness, temperament weakness, constipation, parentheses, and urinary incontinence. For example: Don't be shy. If I am not ashamed ... my temperament is weak ... said Otabek (A. Qodiriy, “Days Gone By”, 78).

Skin diseases are a type of illness that causes a person to be depressed, especially because they have a negative effect on a person's appearance. Therefore, euphemisms are used more often than other diseases in the expression of skin diseases. Including white, spot, dry in place of leprosy; instead of measles, softened euphemistic means such as flowers, smallpox are used.

*Yana echkingizniemsam, esbo'liy - dedixiqillab. - To'g'riayt! -Aytdim-ku ... esbo'liy (pes so'ziniaytishdanes deb talaffuzqilinmoqda)* (N. A. “Qitig'io'lmaganqiz”, 95). *Sizgao'zog'zimbilaniqrorgilishgauyalaman. Xotiningizdanuyalasizmi? Oqdomlapeshonasi, ko'zostlari, birchekkasivabutunbo'ynioppoq pes, biroqnafasidan jinni shifotopadiganbo'lganiuchunxalq Pes domladeganiog'zibormay, oqdomladerkan*(A. Qahhor, 3-t., 212). Bolagagultoshdi (so'zlashuvdan).

An allergic reaction is a disease characterized by severe itching, rash on the skin, sometimes large and small blisters on the mucous membranes. The disease is called in Uzbek donkey, donkey metaphorical euphemism. In Uzbek culture, it is customary to feed a donkey at the foot to cure a patient with hives. *I went to one and a half of my cousins, wondering if I had a donkey, and rented a man's donkey for an hour* (G. Gulom, “Noughty Boy”).

In Uzbek tradition, good wishes are expressed in order to cheer up the sick person and his relatives, to comfort and encourage them. Typically, the patient: "Be healed," "Be healed," "You will still be like a horse," "You will be like you have never seen before," "May this be what you have seen and experienced," "May God heal you," and "He will heal you."

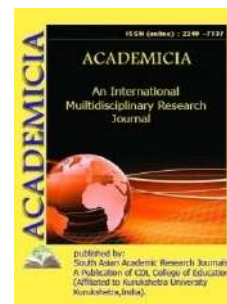
## CONCLUSION

To sum up, an illness is a phenomenon that leaves a person helpless and helpless. Therefore, various euphemistic expressions are used in order to avoid this unpleasant situation, to encourage the patient and his relatives, to have a positive effect on their depressed mood. Instead of being sick, euphemisms such as "there is a little pain in the body", "a little discomfort", "no taste", "a little sick", "to be uncomfortable", "to escape the disease", "to be like this", "to be awake" expressions are used.

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## LINGUOCULTURAL APPROACH IN THE STUDY OF SURKHANDARYA'S DIALECTS AND ETHNOGRAPHIES

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### ABSTRACT

*This article discusses the collection and study of dialects and ethnographisms in the territory of Surkhandarya, as well as the collection of dialectic proverbs and sayings in the speech of our ancestors and their study in the linguo-culturology, aspect.*

**KEYWORDS:** *Dialect, Ethnography, Proverb, Proverb, Linguo- Culturology, Animal Husbandry.*

### INTRODUCTION

In Uzbek linguistics, in the 30s and 80s of the last century, a lot of scientific research was conducted on the study of Uzbek dialects. These studies are one-sided and do not focus on the ethnolinguistic and linguocultural aspects of dialects. Scientists attribute this to the existing system of the time. The communist ideology was not interested in the study and research of the national history, customs, values, ethnography, national culture of the peoples. At this point, let us pay attention to the views of some linguists.

“There are objective and subjective reasons why professional speech in Uzbek linguistics is not studied in general linguistics. Subjective reason: in 20-30 years, as if to “improve” the Uzbek language - to put it in the form of a literary language, first of all, to clean it from dialect, religious, outdated words (archaism, historism), the struggle for “pure literary language” is characterized by the influence of vulgar sociological, purist ideas” [4,2].

Many scientists were not indifferent to this process at the time. For example, academician V.V Vinogradov assessed the processes of synthesis of social dialects (poludialekt, interdialekt - koyne) with the literary language, the role in the formation of oral and written forms of literary language. In particular, he stressed that professional lexicon in dialects, first of all, the

manifestation of folk speech (speech), ethnography, therefore, their study is an urgent issue [1,27].

The objective and subjective causes of the problem were also explained by other scholars in the 1970s. In particular, the achievements of Professor S. Ibragimov in the field of science and technology have radically changed the method of production, mechanization and improvement of many industries (textiles, blacksmithing, carpentry, ceramics, jewelry, handicrafts) based on handicrafts and simple production left over from the past. therefore, some professions (such as saddle, shoemaker, machinist) are facing a crisis. He stressed that the language tools used for them - professional vocabulary - are gradually being forgotten - are becoming a passive dialectal layer, and now it is urgent to study and preserve it [2,121]. Academician Sh. Shoabdurahmanov also praised the importance of dialect and the means considered as a passive, dialectal layer of speech in the development of literary language. He stressed the danger of losing them if they were not collected immediately [6,16].

“Unfortunately, our modern Uzbek literary language,” writes Bosim Tuychiev, “has bypassed many words related to animal husbandry, such as o'tov (pasture), qishlov (winter), yaylov (grass), keraga. Just as there is a great barrier between our modern literary language and our classical language, such barriers have been made very insignificant between the literary language and the vernacular, as well as the language of examples of folklore. As a result, our literary language has lost many of them” [5,68]. The author also mentions the modern Uzbek literary language in three sources: 1) **classical language**; 2) **the common language**; 3) It is also rightly stated that **folklore** should be based on the language of riddles, proverbs, sayings, fairy tales and epics.

Based on the views of scientists in the field, it is necessary to determine the differences between the living spoken language, dialect and ethnography in the territory of our country. Their study on a large scale, in the linguocultural aspect, is one of the long-standing issues facing linguists. In addition, for some reason, terms, words and phrases, proverbs, sayings related to changes in the times, socio-political factors, technical progress, etc., which are out of our speech today or forgotten, not even found in dictionaries, preserved only in the language of the elderly, proverbs, parables, riddles, weddings, mourning songs and sayings, writing, studying, creating dictionaries, in particular, the return of ethnocultural masterpieces to the owners of the treasury - the people.

For this reason, in recent years, our research, as well as dialectological practices organized by students in remote villages of the region, have paid special attention to the immediate collection of rare dialects (words and sayings) and ethnographies that are in danger of extinction in the coming years. Hundreds of dialectal and ethnographic materials were collected from the speech of the local population (mainly the speech of the elderly) during the research. For example like that words: *jarchi, qo'noq, ovul, sipoh, navkar, qozi, baharjurt, chillasuv, biy, paranji, o'mgan, oymaq, qalmoq, qo'ton, po'stak, janda, changak, chobag'an, suruv, biya, baytal, to'qol, to'biq, shishak, tuvcha, mulla, eshon, qushnach*. Many of these ethnocultural proverbs and sayings are specific to the speech of the people of the oasis and are not found in popular proverbs. At the same time, these proverbs and sayings are very ancient and reflect the ethnocultural way of life of the people of the region. This can be seen in the fact that most of the collected materials are related to animal husbandry, agriculture, hunting, harvesting, weaving,

ceremonies, kinship. Below, we focus on dialectal-ethnographic proverbs and sayings taken from the speech of the older generation living in different parts of Surkhandarya region.

Chillasichiroqko'rmaganning,

Sochitaroqko'rmas.

(If you do not see the forty days lamp,

Sochi does not see a comb) (Kokildor ota mahalla of Termez district).

(meaning: *stingy, stingy, jealous*) [3,8].

Jemiyman-jemiymandegankelin,

Jengsadayhasipjepti

(The bride, who said she would not eat, ate the sausage like a big shoulder)(meaning: *cunning*).

Qutli qunoq kelsa qo'y egiz tuvar,

Qutsiz qunoq kelsa qo'yga qashqir. ("Khojamqon" mahalla of Angor district). (When a blessed sheep comes, twins are born, and when a unblessed sheep comes, it feeds the wolf. Meaning: *luck doesn't always come. It is also a reference to people with good and bad intentions*) [3,10].

To'qolsiyir – suzog'ich,

Oqsaqbiyatepog'ich (meaning: *a flaw in every shed*).

To'qol (kalqiz)dingbaxtiochilsa, jordayboybichajorilibo'lar. (meaning: *envy, greed, jealousy*).

Kovrak, o'zingrovasan,

Mingbirdardgadovasan (Novshahar mahalla of Angor district).(meaning: *belief in the blessings of nature, devotion*) [3,24].

Qiyshiq-shiyshiqbo'sayamqiy (qo'yaxlati) shipiribkeladi,

Joman-jumanbo'sayamjoppa (tappi,tezak) teribkeladi (meaning: *contentment, sufficiency; bless you*).

Qudag'ayimqurovuz,

Jegannonibirovuz. (My mother-in-law 's mouth is dry, the bread he eats is a mouthful. Meaning: *in the sense of a woman who talks a lot and can't hold a sieve in her mouth*)

Qizkattarsaqozibo'lar,

Ketarigarozibo'lar. (meaning: *every job has a time*)

Mengaso'yilgankalulaq,

Sengayamso'yiladishu(l) ulaq. (meaning: *all are equal, the same person, the same fate*)

O'tinningyaxshisi – jontaq,

Xotinningyaxshisi – qalmoq (Alisher Navoi mahalla of Jarqurghon district) [3,39].

Ostidag'iolaboytaldioityorag'an. (axtargan) (meaning: *a careless man who does not climb on his heels when the world is flooded*).

Ovuloymag'ibilan,

Bo'tatoylag'ibilan.

Sipohtingboshiko'prikbo'sayam

Bosibo'tma. (Kumkurgan mahalla of Kumkurgan district), (meaning: *appreciation of sacred and holy things*) [3,40].

Tonimasangtog'angdi,

Jirtayinmajog'angdi?!(Will I tear your jaw because you don't know your uncle. Meaning: *self-awareness*).

Egachim yergatiydi,

Yeskisimengatiydi.

Chobag'an (chavandoz) otiniqaritmaydi,

Yoxshi yer (er) xotinini (Meaning: *a man who knows the eye of the work, a master, a resourceful, skillful man*).

Xotinio'lganqizliovulgaqarabjilar (The dead man cries towards the village where his daughters are. Meaning: *vital need, pointing to necessities*). (Rabot village of Boysun district) [3,48].

Joladaottanlama,

Hayitdaqiz (Don't choose a horse if you go on the road, don't choose a girl on holiday. Meaning: *a sign of not making a decision when the nerve is disturbed, or in a hurry*).

Omochtingqiynalg'anini,

Tirkishqayoqdanbilsin. (Let the hole know where the hammer is tormented. Meaning: *everyone knows what happened*) [3,52].

At the same time, a number of unique words and phrases related to animal husbandry are used in the dialects of the oasis. It should be noted that most of the following dialects and ethnographies related to the horse and its equipment are not found in the explanatory dictionary of the Uzbek language or are given a common name.

**Jerchil**– agile, a left-handed rider who quickly lifts off the ground and does not easily tear the kid off.

**Kurmov, ilmak, chiymoq**– rope tying methods.

**Nurmantog'a** – an eight-figure iron fixture made of metal that connects the rope to the horse point.

**Beldachiq**– a device that can be pulled at the horse's waist while tied. A small horse harness with a reed 20 to 40 cm long and sewn on a hard cloth.

**Qo'm** – the size of the belt.

**Jugan**– a device that is attached to the horse's head, to control the horse.

**Suvliq**– part of the jugan, a metal tool in the horse's mouth.

**Bostirma**- a horse's winter harness (protective clothing) sewn from a hard cloth over felt.

**Terilik** –a thin, wind-blown device that pulls from the bottom of the saddle and absorbs the skin when the horse sweats.

**Jahannik** – a bag-like device that is placed under the saddle, specially sewn from a hard cloth over the felt.

**Digdika** – a large ornate, embroidered horse harness that covers over all the harnesses of the horse.

**Otto`rba**– designed to feed, is a specially sewn device that fits almost the entire head of a horse, and is one of the devices that protects the horse from the cold when it is transported to the barn by car.

**Tonglay qi(l)moq** – If the horse is not fed on time, the reflex of feeding time formed in the horse is disturbed and damage to the palate occurs in the throat (this term is used in similar cases).

**Nohina**–(name of the disease) A horse that is overheated in the cold is left in a cold place, in the wind, in the rain, as well as as a result of the horse being left in the cold too much, the respiratory tract is damaged. If the disease is not prevented and treated in time, it can also lead to the death of the horse.

**Ballaqam** – a wild, “hard-skinned” horse that is not even affected by a whip.

## CONCLUSION

The results of extensive research of Surkhandarya dialects and ethnographies give the following conclusions:

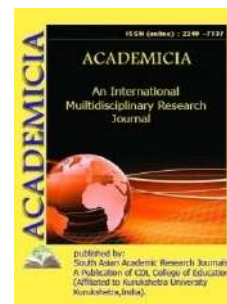
1. It is necessary to master thousands of dialects and ethnographies, which are not included in the explanatory dictionary of the Uzbek language and still remain lacunae in the Uzbek literary language.
2. Dialects and ethnographies mainly reflect the way of life, customs and traditions, ethnographic traditions, religious ceremonies, values of the population living in a particular area. Therefore, it is expedient to study dialects and ethnographies from the linguocultural aspect.
3. Given that most of the dialectal-ethnographic materials are now preserved in remote areas, in the speech of the older generation, their immediate collection and creation of dictionaries allows for a more extensive study of the spoken language.
4. Scientific works, dictionaries created on the basis of the study of dialectal-ethnographic proverbs, sayings and sayings serve as an important program and guide for the growing field of ethnotourism in our country.

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## JEW'S ENTRY INTO CENTRAL ASIA AND THE FORMATION OF JEWISH DIASPORA

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### ABSTRACT

*Since ancient times, the territory of Central Asia, particularly Uzbekistan, has become an abode for representatives of various nations and nationalities, which lived under the same sky and have become an integral part of our homeland. Among them should be noted the Jewish community. The article is devoted to analysis of views on the appearance of Jews in the Central Asia, formation, characteristics and social life of Jewish communities. Also are disclosed relationships of the Jews with local people (Persians, Tajiks, Uzbeks, and others.), customs, and rites, the similarities and differences in the costumes.*

**KEYWORDS:** Bukharan Jews, Central Asian Jews, Kosher, Assimilation, Wedding Ceremonies And Burials, Kalima, Nadzhama, Jazz, Rites "Yeti" (Seven), "O'ttiz" (Thirty), "Yil" (Anniversary).

### INTRODUCTION

Central Asia has long been one of the regions where people of various nationalities lived. It is known from history that here they lived a peaceful life, preserving their culture and traditions. Among them, in particular, in Uzbekistan and Tajikistan, the Jews of Bukhara, an ethno-confessional community that has its place in socio-cultural processes as part of the Jewish nation, are should be mentioned.

The issue of first Jewish settlements in Central Asia, development of local communities and their socio-cultural life has always been of big interest among historians. Most famous of them are M.Zand<sup>1</sup>, S.Gitlin<sup>2</sup>, Z.L.Amitin-Shapiro<sup>3</sup> (12: P. 124-127).

Despite the abovementioned fact, the question about exact time of first Jewish settlements in Central Asia remains open. Dozens of books dedicated to the issue are overfilled with contradicting information and hypotheses.

There is no exact information about the appearance of Jews in the Central Asia in sources. It is worthy to state that although many books were written and researches were carried out on this problem, all of them give contradictory information about it.

Baseless information was spread in last century that Jewish diaspora has been formed since “Captivity of Babylon”. In addition, it is scientifically baseless to compare Hever (mentioned in the book of the reign) with Bukhara by scholars of the medieval centuries, although the territory of modern Uzbekistan is not included into the territory of the reign of Babylon” (15: P. 93-94).

Every person who studies the history of Jews in the Central Asia and, at least, is interested in it, may have some questions like “When and from where Jews come to this region?”. It is necessary to state that some views that far from a scientific character are also observed when we try to find answers to this question from sources. For example, it may be given a supposition that Jews of Bukhara are considered as “indigene” – native people.

When we talk about Jews of the Central Asia and their role in the social-cultural life of the region, it is useful to emphasize a method of our research. It is advantageous to use a method of a transition from abstract to exactness in the study of the history of Jews in the region. Because, it is impossible to include all characters and shapes of a complicated, many-sided, differential and changeable subject in the study and explanation of it. In addition, some characters of this subject are not important or others are obstacle in the comprehension of it. That is why it is not necessary to take all of them into account. It is very important to distinguish all essential aspects in the correct comprehension of the subject of the research. It has more complicated and many-sided form in this abstract situation.

The second problem is a changeableness of the subject in its appearance and its mutual influence on the permanent change of results. In brief, we have to choose the true essence of the subject and to analyze it separately from other essences at the same time. Then we study it considering its other essences as well. A conclusion, obtained in a result of it, expresses a meaning and matter of the truth in the abstract case, which is free from various situations. Now, considering all shapes of appearance of the subject into account, we will have an opinion, which expresses a meaning and matter of the truth on the condition of accepting a concrete conclusion – all existed situations (26: P. 49-50).

It is advantageous to use the above-mentioned method for a subject of our research – Jewish communities of the Central Asia or Bukhara.

Analyzing all information, we found out that most historians incline that first Jews came to Central Asia 2 000 – 2 500 years ago. The reason of such vagueness is lack of sources giving information about that time. According to most scientists, the III-IV centuries are least studied ages of Central Asian history. Only sources regarding that time belong to Arab writers and mostly consist of history of ‘*arab futuhat*’ (conquests) of VII-VIII centuries. We can see little information about events of II-IV centuries in later sources (21: P. 749).

Historians agree that Central Asian Jewish communities came there from Israel (9: P. 39.). Their settlement in these lands are closely related with their exile from Israel after collapse of Israel

Kingdom in I century BC and destruction of The Temple in Jerusalem. In 586 BC, far earlier from destruction of the Temple in Jerusalem and Babylonian captivity first Jewish diasporas spread to Egypt and Mesopotamia, in the beginning of new era to eastern coasts of Mediterranean Sea, Persia and other lands (9: P. 39.). Life of Jews in Persia was complex. We can see many data in historical documents regarding discrimination of Jews there. Researchers parallel this with aggravation of political and especially religious conditions (9: P. 39.). After enthronement of Yazdegerd II (438-459) and his son Piruz (460-484) oppressions toward Jewish people strengthened. During the rule of Piruz we can even see the genocide of Jews. For instance, historical documents state that in 468 (in some sources 472) Piruz killed half of Jewish population in Isfahan accusing them of killing two Zoroastrian *mobads* (priests). Another example of Piruz's severe attitude towards Jews was killing the leader of Babylonian Jewish community Hun Marin (18: P. 65-67.).

Intransigent policy of Yazdegerd II and Piruz towards Jews resulted mass migration of Jewish people from Persian kingdom. Migrated people settled in Byzantium, Crimea, India and China, where Zoroastrianism did not have much influence.

Most researchers agree in the point that Jews migrated and settled in Central Asia during the rule of Ahamanide dynasty (after 559 BC) (9: P. 39.). As a proof they cite book of Esther from Old Testament, written in 78-77 BC, where it is said "...jews spread in all territories of Persia" (19: P. 6). First reliable information on the settlement of Jews in Central Asia shows that Jewish people emerged in Balkh, Merv and Khorezm in VIII-IX centuries AC. In contrary to this, according to M.Zand immigration of Jews to Central Asia falls on IV century (25: P. 531-533). To prove this he adduces Babylonian Talmud, where it is written that member Babylonian Amoraim (Institute for Jewish legislature) Samuel Bar Biseni (Pumbedata<sup>4</sup>) travelled to Merv. Visiting his brothers in faith abstains from drinking wine. Stressing on this fact, M.Zand says that Jews, after several centuries' life in Merv, have forgotten religious rituals of preparing the wine. That is why Samuel did not drink their wine (25: P. 531-533).

All researchers, including M.Zand, attribute the migration of Jews to Central Asia with their silk trade activity through The Great Silk road (25: P. 531-533). But, it would be unreasonable to link this only with Silk Road. It is known that repressions of Jews by the Romans during the rule of Marcus Aurelius, forced the Jewish people to migrate to other lands, including Central Asia (19: P. 8).

According to Jacob Neusner<sup>5</sup>, in first centuries AC Jews played important role in socio-economic life of Parthian Empire. Most of them were engaged in Roman-Chinese trade (17: P. 910).

In the beginning of new era Dura-Europos became a big Jewish center<sup>6</sup>. Archeological excavations detected there remainings of ancient synagogue (19: P. 9). Dura-Europos bordered with Khadra (arabic – al-khadhr)<sup>7</sup>, Khamadan, Parthia, Marghiyana and Baktria. E.Rtveladze, a famous scholar on history and traditions of Central Asian Jews states that Jews migrated to Central Asia from these territories (19: P. 9).

Undoubtedly, it was Merv where most Jews of Central Asia lived. During the archeological excavations in 1954-1956 were found ossuaries with rectangular Hebrew inscriptions on it dating VI-VII centuries. Later information about those findings was published by A.Kelvan (13: P. 91-92).

According to E.Rtveladze, jews later spread from Merv to Baktriya, Tokharistan, Soghd and Khorezm. The main reason of it, he states, was policy of Babylonian Jew academy, starting from 6<sup>th</sup> century, towards spreading Judaism across South Iran, Khorasan and other neighbouring territories (19: P. 9).

Some researchers stress that Jews lived in Balkh till 709, when the city was conquered by Arabs. According to such sources as “Fadhail al-Balkh” and “Bakhr al-asrar” one of the gates of Balkh was called “Yahudiyyah” (Jewish), also in the outskirts of Balkh there was residential area called “Yehudanak” (Little home of Jews) (25: P. 531-533.).

Historical sources evidence that in the Juzhjan province, north-west of Balkh, there was a town called Yahudiyyah. In the period between 988-1031 it was renamed as Maymanah. This fact corroborates that the town was founded by Jews or was reconstructed by them in early medievals. Furthermore, many graveyards of Jews with gravestones with written epitaphs in Persian and jewish language were found in Herat and other cities of Afghanistan (10: P. 335-342).

It is difficult to find written sources about life of Jews in Bukhara and Samarkand in early medieval. Famous historian Narshakhi in his “History of Bukhara” quoting from Nishapuris “Khazain al-ulum” (Treasury of sciences) states that territory of Bukhara was covered with riparian forests and only in 6<sup>th</sup> century after settlement of people from other territories of Central Asia it became a city. Researcher P.Is’hakov relies on these sources and in his “History of Bukhara-Jewish ethnos” supposes that since Bukhara city did not exist until the end of 6<sup>th</sup> century, then till that time there lived neither jews nor other nations (9: P. 43.).

E.Rtveladze in his article “Jews in pre-Islamic Central Asia” quotes a narration from Nasafi’s “Kandiyyah”. According to this, before the Arab conquest there was a well called Juyi Arziz, and this well was dug up by Jewish man (19: P. 9). Another orientalist O.N.Logofet suggests that Jews came to Central Asia, particularly to Bukhara together with Arab conquerors.

Sources witness that settlement of Jews to Khorezm was much earlier from arab futuhāt (conquests). In the historical treatise called “Shakhrestani- Iranshakhr” written in Pakhlavi language it is said that the founder of Kat, the capital of ancient Khorezm Narse (Narshakh) was a son of a Jew (25: P. 531). According to the myth given in medieval historical sources, another city of ancient Khorezm – Khiva was founded by Sam, the son of prophet Noah. Of course those myths may seem far from reality. But there may be a part of the truth. Because, Tabari in his famous “Tarikh” (History) states that before the conquest of Kat by arabs in 712, among advisers of the Kharezmshakh were people called akhbars (27). It is known that the term akhbar was used by arabs for representatives of other religions, especially Jewish priests (rabbis). Later, through Soghd, Chach and Ferghana Jews reached Eastern Turkistan. An ancient document of Jewish merchants dating 8<sup>th</sup> century AC, found in Dandan-Uylak<sup>8</sup> is written in jewish-persian language using abramic scripts. This evidences that those merchants who wrote this document were from Central Asia or Iran (27).

The information given above shows that there are many hypotheses about migration and settlement of Jews in the lands of Central Asia, and all of them pretend to be truth. It is known that some associate emergence of Jews in this region with biblical traditions. But we must not forget that there is difference between emergence, spreading and settlement. We cannot ignore that individual Jews existed in Soghd from ancient times. But this fact is not supported by

historical sources. For instance, near the Onega Lake was found a graveyard dating the Neolithic Period. Among hundreds of skeletons was found skeleton of a human from Negroid race. However, despite this well-known fact, no one from researchers said that Negroids were widely spread in Northern Europe in Neolithic Period (6: P. 3).

Most researchers are sure in one point – Jews came to Central Asia through Afghanistan and other frontiers of the region. It is considered as undoubted reality. Cultural monuments of the region show that direct relations between Jews and people of Iran and Central Asia have at least four thousand year history.

It is important to stress that migration and settlement of Jews in Central Asia did not occur at the same time, but it was slow process, which lasted for hundred years, stage by stage.

The delta of Amudarya River is considered as historical and geographic center of Central Asia. Nowadays, much part of this region goes to the territory of modern Uzbekistan. Other smaller parts of it go to modern Turkmenistan, Kazakhstan (Chimkent region), Kirgizstan (Osh, Jalalabad), Tajikistan (Khojand, Khisar and head of Amudarya) and Afghanistan (left Coast of Amudarya River). Central regions of Central Asia are much fertile. Nearly all ancient cities of sub region as Samarkand, Merv, Bukhara, Khiva and little independent states are situated in this region (14: P. 24-25).

Jews massively settled in Central Asia coming from Afghanistan, Iran and even Iraq. But, historians do not rule out the possibility of individual settlement of Jews in Bukhara in earlier periods. Relying on M.Zand we can conclude that migration and settlement of Jews to the region is closely associated with The Great Silk Road, which was founded in early 1<sup>st</sup> century AC (9: P. 45). Besides, according to Chinese Jews their coreligionists came to China in first century during the rule of Han dynasty. At this period there was a road linking Manchjuriya, Eastern Turkestan with Central Asia. Historians believe that migration of Jews to China was via this road (11: P. 5-7).

After the Jews settled in the region, for years, a separate diaspora has formed as a community of Bukharan Jews. Science questions such as, "Was Jews from Iraq, Afghanistan and other regions considered as 'Bukharan Jews' from the beginning?" or "Did it form under the influence of other cultures over time?" This can be answered only by examining Jewish history in the region and their social life. In fact, the Jewish community in this region was not formed in a single shell (vacuum). On the contrary, in the Central Asian region, their formation as a sub-ethnic community can be seen in Jewish migrations which happened many times and at different times as well as in the situation of the ethnically complex population of the region.

It should be noted that the relations between different peoples leave a certain mark on them: most of them are assimilated and some of them "die" as a result of their full acceptance of the language and culture of the majority. It is worth noting the following words of archaeologist G.Ya.Dresvyanskaya: "Historically, migration of various peoples to Central Asia was related to the name of Amir Temur. Among them were Persian Jews who, in the 14th century, had almost forgotten their native language. For centuries, they have become ethnicized as a result of being far from their historical cultural centers" (4: P. 22). It is noteworthy that the Russian, Chinese, European prisoners of war or other emigrating people associated with the Amir Temur epoch retained their identity only in the names of their places. For example: Uruskishlak, Khitay,



Baghdad, Damascus and so on. In contrast, the Jews still hold the name “Bukharian” in relation to the region where they still live (9: P. 95).

Central Asian Jews can entirely be seen as a section that preserved their unity and cohesion. It is true that here was a struggle to survive. At the same time, people of majority were also influenced by the people around them (9: P. 95).

Jews lived as a particular category of civilized society in Central Asia. In this layer, the temporal transformations took place and had an impact on the formation of ethnic groups. However, for all the people united under the name of the Turks, the common features of dress, house design and mentality were common to all. The material culture, customs and folk art of the people of this country were inseparable. The ancient, often medieval history of these people, including the Central Asian Jews is close and in many cases the same. The main reason is that their development emerged in one region.

Central Asian Jews have adopted many features of the local population (Persian, Tajik, Uzbek, etc.) and to a lesser extent they still retain them as their subcultures. The changes in the Jewish life occurred mainly in their lives, which reflected a major part of human life. It is well-known that this can be seen in everyday affairs, lifestyle, character similarities, customs and values, as a result of interethnic relationships (9: P. 95).

The life lasted centuries based on community neighborliness have led to the interplay of culture, language, everyday life and economy. As a result, the characteristics of the Tajiks and Uzbeks in dress, food, home arrangements, customs, music and everyday life were also reflected in the lives of Central Asian Jews. This is especially true in the tradition of cooking, serving meals and welcoming guests. It is worth noting that since many Central Asian Jews follow Kosher (foods that may be consumed according to Halakha law) there are certain characteristics in cooking and serving. In particular, milk and meat products are not served at the same time. Sabbath observance is also reflected in the preparation of dishes in advance (8: P. 172).

Speaking of the clothing of Central Asian Jews, traveler Franz von Schwartz wrote in the 19th century that: “...the situation had reached the point where Jews preferred to dress like Uzbeks and Tajiks” (7: P. 87). For example, suits, especially men's outerwear, were practically the same as those of Uzbeks. Their national elements were mainly shirts, belts, hats and skullcaps. It can be said that skullcaps differed in shape, color and pattern, depending on the particular ethnic group. Also, some details in clothes depended on social status. Male Jewish shoes were identical to those of Muslims. Their boots with flat heels were made from leather (20: P. 344; 1: P. 40). Scientists are currently conducting a number of studies in this area. In particular, it is worth mentioning T.G.Yemelyanenko, a leading researcher of the Russian Ethnography Museum, Department “Ethnography of the peoples of the Caucasus, Central Asia and Kazakhstan”. In her monograph titled “Traditional suit of Bukharian Jews”, she discusses the clothing of Bukharian Jews. In his opinion, the clothes of Bukharan Jews who lived among Muslims were similar, but insisted that they had some uniqueness (23: P. 3-45).

Along with the above mentioned facts, it can be seen that assimilation processes were also reflected in other areas of Central Asian Jewish life. For instance, the Jews accepted some characteristics of Muslims in their marriage ceremonies. Examples of this situation include marriage registration, couples' meeting, their relationship till the marriage, marriage contract and so on (9: P. 96). Z.Amitin-Shapiro notes: “Looking at the material aspects of the marriage



process in Central Asian Jews, it was not different from other Central Asian nations. For example, kalima (money given the bride's family), najama (bridal gifts), and jazi (father's gifts such as home appliances, clothes, jewelry for his daughter) were the same (1: 45; 2: 40).

This is also reflected in the selection of bride. According to this, only the female relatives of the bridegroom were allowed to see the girl. The bride and groom had not met each other until the marriage was announced. All issues were agreed by the old as in local families. The bride and groom could see each other during the marriage ceremony. As is customary in the local tradition (mainly in Samarkand and Bukhara), the bridegroom stayed in the bride's house on the first night of marriage and the second day he solemnly took the bride away from her parents' house in the cab (9: P. 96).

In another case, a Jewish woman did not call her husband by his name, as in local families. This was considered a violation of the dignity of the man. The woman usually addressed to her spouse saying the words which mean "father of my children" and then called him with the name of their first child (3: P. 31-37).

Another tradition that has been preserved for centuries is related to the death ceremonials. After the funeral, relatives of the deceased had to organize "seven", "thirty" and "year" ceremonies to commemorate the dead. Semen Gitlin says on this issue: "Rituals like the "seven" or "thirty" are not mentioned in the Torah or the Talmud. So in this case, these ceremonies might be adopted from Muslim traditions" (9: P. 97). However, it is surprising that by which source the scholar expressed this view. Because, there are references of such ceremonies in the Jewish legislation (Halakha) and it is remarked that these dates are based on the sacred sources of Judaism. For example, the mourning on the seventh day is found in the book of Genesis of The Torah, chapter 50, paragraph 10, which states: "Joseph mourned for his father seven days". This is why Jewish religious scholars have accepted the first week of mourning when one's loved dies. In addition, the ceremonies of the "year" (Yahrzeit) and laying stones on the tomb have also been found in the Jews and this has also become customary to the local Muslims and still exists today (22: P. 264-275).

**Conclusions:** From the above, we can conclude that the study of history of Jews in Central Asia is based on written sources, archeological and ethnographic researches. Summarizing results of these studies and researches, it will be appropriate to date the first emergence of Jews in Central Asia as 1500 - 2000 years BC.

Also, since Central Asian Jews have been living among the different nations in the same territory for centuries, they have evolved in similarity in many ways. At the same time, there was a danger that Central Asian Jews would be completely assimilated. Only time would tell if one of the ancient networks of the Jewish nation will disappear or be retained on the ethnic map of the world. The words of Joseph Maimon to E.K. Meiendorf, a Russian diplomat who visited Bukhara in the late eighteenth century, make this conclusion: "I saw my fellow believers in the depths of ignorance. Only some of them knew reading. They have only two copies of The Holy Book, with only the first three books of the Torah manuscript" (16: P. 95). Commenting on these words, R.Rabic concludes: "Taking into account the low religious knowledge of the Bukharan Jews, they can be barely regarded as Jewish. If two or three generations lived like this, the Jewish community would have been united with the Muslim population" (24: P. 94). However, it did not happen.

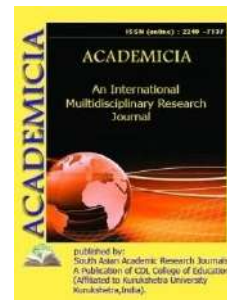
## CONCLUSION

Some scholars have concluded that the dominance of Islam in the region has led to the adaptation of Central Asian Jews to Muslim culture and the acceptance of some of the Muslim rituals. However, it would be a mistake on the other hand to define this state only with the hegemony of religion. Because, it is important to remember that these nations have lived side by side for centuries. As we have seen in the aforementioned examples, not only did the Jews accept the Muslim traditions, but also Muslims adopted the traditions of the Jews. It is not an exaggeration to say that Jews, with their national character, history, and lifestyle, have become integral parts of the lives of other Central Asian people, like Tajiks and Uzbeks. The rituals of daily life have united this nation of different race, culture, language for many years. Scholar Dresvyanskaya said: "The Jews of Bukhara had close ties to many people in the process of adaptation in Persia and later in Central Asia. During this time, they learned some aspects of the life, customs and ceremonies of the native peoples. However, they maintained their ethnic identity first of all because of Judaism" (5: P. 3). Consequently, it was the religion that served to preserve Jewish nationality. It is because Judaism has ethnical and confessional character. According to the traditional view, the conversion of a Jew to a different religion is equivalent to the conversion to another nation. The Jewish theologian Lewis Jacoby describes this concept as follows: "The history of Judaism and Judaism itself is so intertwined that it is impossible to imagine them apart. Godless Judaism is not Judaism. Judaism without the Torah is not Judaism. Judaism without the Jews is not Judaism".

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## SYMBOLIC LANGUAGE OF NUMBERS IN MUSLIM ARCHITECTURE

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### ABSTRACT

*Numerology is a way to assess the real prospects for the development of various events and factors in your life. What events have numerical codes and rhythms? Well, almost in all. This paper interprets the symbolic significance of numbers in Islamic culture, especially in Islamic architecture using examples of architectural monuments and historical objects. The patterns' shapes and existence are analyzed according to the Islamic belief and Quran interpretation. Abjad- the alphabetical science of numbers has been used to elucidate some data related to numerology. This science concerns itself not only with the numerological aspect of letters but also with the study of the shapes of letters and their cosmological significance. The true essence of numbers have been revealed in the means of architecture. According to the great thinkers such as Seyyed Hussein Naser the origin of Islamic art is in the esoteric dimension of Islam. The results also suggested that Symbolism is a factor which transfers the meanings of upper-world to the material-world.*

**KEYWORDS:** Muslim Architecture, Pythagoras, Abjad Numbers, Numerology, Alhambra, Mihrab.

### INTRODUCTION

Numerology uses numeric symbols and geometric shapes as the “main toolkit” to search for patterns. However, numerology is not mathematics - they have different methods of “miscalculating” rhythmically repeated life phenomena: numbers in mathematics are used to calculate quantitative or volume indicators, and numerology uses numbers as a philosophical and statistical criterion. Numbers in numerology usually symbolize the different properties of phenomena and objects and have a philosophical (qualitative, not quantitative, as in mathematicians) interpretation.

Persians, Sumerians, Egyptians, Japanese, Chinese, Hindi, Greek, Christians, Buddhists, Muslims, Hebrew, and many other ancient nations and religions have had symbolic behavior with numbers. The symbol is simply defined as mysterious substitute of a concept or image perceived unconsciously. Jan Shuvalieh, the mythologists, has extensively discussed about the meaning of symbol. He thinks that symbol is more than one simple sign. Symbol is beyond the meaning and has its own particular interpretation which it requires sort of talent. The symbol is full of effectiveness and dynamism. Numbers have had different symbolic meaning in different nations. However, all of them include metaphysical, mental, abstract, and mysterious concepts. The numbers of zero, one, two, three, five, seven, nine, twelve, thirteen, forty, seventy, hundred, and one thousand have always had various degrees of validity and particular symbolic load among various nations. The science of number governs nature. Numbers themselves are the first effusion of soul on ego and it is the basis of creatures and source of all sciences. Each number has inside value that distinguishes it with other numbers. This inner value is embodiment of unity links the number continuously to its source[10, 2014: 3].

Muslim architecture is the most amazing and visible art form related to the culture of Islam. It includes not only religious, but also secular buildings and structures. The main religious building in Islam is a mosque. The mosque in Arabic means a place of worship. Over time, such types of Muslim architecture developed as a madrasah (educational institution), khanaka (Sufi monastery), zawiya (cell), mausoleum, maristan (military hospital). In accordance with Muslim ideas about the world, the principle of “hidden architecture” was developed in Islamic architecture: the dull facades that hide variously decorated rooms open to the courtyard with a fountain and reservoir with blooming greenery.[1, 1990: 190]

The creations of Muslim architects occupy no less honorable place in the history of world architecture than the celebrated achievements of architects of Christian Europe or Buddhist Asia. Muslim religious buildings, caravanserais, covered markets, public baths, gardens and parks, palaces, castles, and citadels, founded in the Middle Ages, invariably admire the high level of amenities, simplicity, and ease of layout, ingenious engineering solutions. Muslim architects have developed flexible layout schemes and universal construction methods applicable to the construction of both powerful fortresses and light palace pavilions. Excellent mathematicians invented ways to transform elementary geometric shapes (square, triangle, circle) into complex architectural structures and jewelry is woven ornaments, using simple and cheap clay, brick, natural stone, knock or gypsum, concrete. Artfully combining carving, polishing, painting, mosaic, they turned wood, marble, glass, glazed ceramics into precious finishing materials. Guided by the principles of geometric correspondence and harmony of numbers, similarity, and symmetry, they created unusually effective compositions from combinations of simple elements [2, 2012].

Mystical and cosmological symbolism, whether found in literature, art, or architecture, created a context for understanding and attuning oneself to the spiritual world. As the example of Muslim architecture the Alhambra palace in Spain is taken as an example. It is often cited by art historians as an example of Islamic architectural symbolism because of the cosmological references evident in the ceiling of the Hall of the Ambassadors. It has been very credibly demonstrated that this ceiling depicts the cosmological hierarchy of the Throne of Allah set



above the seven heavens of the created world [6, 2004]. The impact of the room's proportions, lighting and surface detail allow one to viscerally experience the message illustrated in the vaulted ceiling. One feels at once dwarfed, awed and protected under this walled heavenly dome. It is easy to imagine divine authority acting through the sultan whose throne once sat under this representation of the cosmic hierarchy[5, 67:3].

A good deal of debate has taken place concerning the symbolism of this and other structures at the Alhambra. Yet the treasure trove of mystical symbolism and allusion hidden throughout these palaces has scarcely been tapped. The symbolic language must be known before the communication can be understood. One of the symbolic languages of the Sufis is a form of numerology generally called Abjad in the Islamic world. Each letter of the alphabet is assigned a number, allowing words to have specific numerical assignments through the addition of their letter-numbers. In this manner, words and concepts with the same number totals can be identified with each other. The fundamentals of this system, far from being esoteric, are to be found in any Arabic dictionary or grammar book [7, 1994:245].

Before continuing the idea about the symbolic essence of numbers in Islamic world, let's look back to the history of numbers.

Pales believed that water is the basis of everything, and Pythagoras thought- it was a number, so the basis of the Pythagorean teaching is the science of numbers, in which they correspond not only with geometric figures, but with all things existing in the world. Here is how he formulates these relationships in his notes: "The beginning of everything is one; the unit as the cause is subject as an indefinite duality substance; numbers come from a unit and an indefinite double; from numbers - points; from points - lines; of them are flat figures; from flat - volumetric figures; of them are sensory-perceived bodies, in which there are four foundations - fire, water, earth and air; moving and turning as a whole, they give rise to the world - animate, intelligent, spherical, in the middle of which is the earth; and the earth is also spherical and populated on all sides. " All things are similar to number - so Pythagoras said. For example, a unit, two, three and four in geometric interpretation correspond to a point, line, square and cube. The sum of these numbers gives the number ten, which the Pythagoreans revered as the ideal number expressing the Divine essence... Each number for Pythagoras denoted opposites, on the harmonious relationship of which the ordered Cosmos is held: 1 (limit — unlimited), 2 (odd-even), 3 (single — many), 4 (right-left), 5 (male-female), 6 (piece — movement), 7 (straight — crooked), 8 (light — darkness), 9 (good-evil), 10 (square — rectangle) [3, 2018].

The Islamic world was heir to the alphabetical numerology already used for centuries throughout the Near East. In this system, each letter of the alphabet also represents a number. A system of alphabetical numbering of things was the common practice in Arabia prior to the introduction of Indian numerals. We now call them Arabic numerals, but they were not commonly used in Arabia prior to the 9th century. Alphabetical numbers were used instead. Arabs were raised reading letters as numbers and would, as a matter of course, see words simultaneously as a collection of numbers. Numbers had to be colored or overlined to distinguish them from words. Given these facts, it is easy to imagine the development of a sophisticated usage of alphabetical numerology in Arabic [4, 2018].

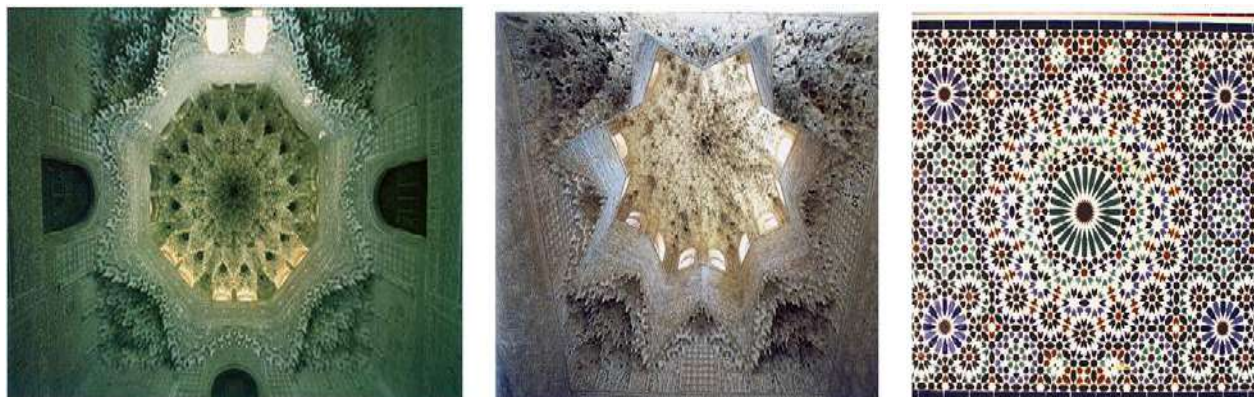


Aesthetic use of numerology in a prayer rug from the late 19<sup>th</sup> or early 20<sup>th</sup> century can be another example to the article. Textile experts were curious about the asymmetry evident in the *mihrab* design. While studying the piece Dr. Haydar made the following discoveries. The asymmetry results from eleven leaves or palm fronds of different colors that form the arch of the *mihrab* in the rug.

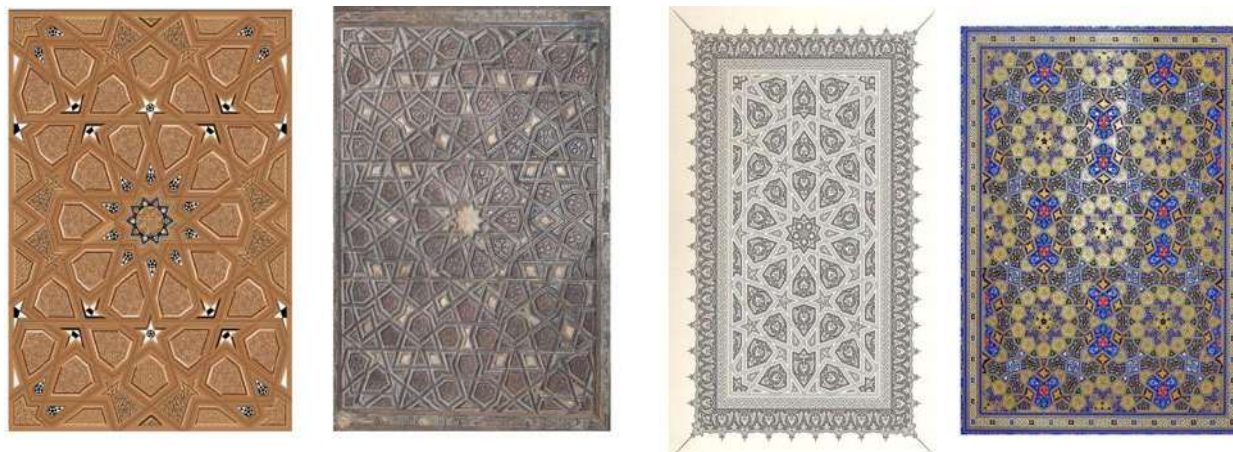


The borders are particularly interesting. The border of the inner field is a line of sixty-six identical flowers broken by one anomalous sprout. Sixty-six, as you may recall, is the abjad number of Allah. The single sprout would seem to represent the principle of unity. At the spot where the worshipper's head touches the rug during prostration, a sentence has been stitched. The sentence is the liturgical '*subhana rabbi al-'ala*', "Praise to my Lord, most Sublime." The cartouche surrounding this phrase is made up of 130 tiny flowers. This is the abjad number for the word *qul*, the command to 'say.' Now if we gather together the several meanings already discovered, we find the reference to the *Surah al-Ikhlās*, the Surah of Sincerity or Unity which is often called by its first line, *QulHuwaLlahuAhad*, "Say that Allah is One." All of these words have numerological symbols within the *mihrab* field upon which the worshipper stands, bows, and prostrates.

There are quite a few more abjad meanings in the prayer rug which together with the ones I've already mentioned in the field, convince me that these were conscious choices made by the rug designer. The two perimeter borders contain a total of 329 identical small flowers. You may recall that this is the abjad for both *ar-Rahman* and *as-Sabur*. Within these borders is a wider band that holds fan-shaped flowers. There are three of the same floral shapes at the top of the rug. Together these total 44 which is the abjad number for *al-Ahad*, the One [6, 2004].



This is the applications of the octagon based on eight pointed patterns in architecture. “And the angels will be on its sides, and eight will, that Day, bear the throne of thy Lord above them”[8, 69:17].



Wooden panel at a Minbar  
at a book art (Quran)

Wooden panel on a door

Two frontispieces

Applications of a five-to-tenfold pattern based on the golden mean proportion.

The *IkhwanAl-Safa*(the Brothers of Purity) stressed the important symbolism of number six, regarding number 6 as a perfect number. The number 6 consists of 1 2 3; at the same time also  $1+2+3$ . Any number with this quality is considered a perfect number. Also, it was on the sixth day of the Creation that God created man. There are six directions of space as well. The six-sided hexagon is therefore a symbol of the universal man [4, 2018].

## CONCLUSION

These are the mere examples of sacred numerology in Islamic world. Numbers are one of the cores of human being. Every single thing in life even, a drop of water includes numbers in itself. There is a proportion in life, everywhere which contains numbers as well. The mysticism of numbers, in my belief, lies in the root of Islam, in recognition of Allah and His Prophets, Books and Religion. Like number 1 represents the uniqueness of Allah, the rest numbers symbolizes other beliefs either.

The number in its Pythagorean sense to highlight certain forms of visible world and the forms through the essence disposed within the integrated unity [12, 2013: 1]. Seyyed Hossein Nasr says



that the source of Islamic art is the inner dimensions of Islam religion. The source of Islamic art should be sought in the inner facts of Quran that is the main facts of world and divine revelation. To design the spaces Islam-rich concepts should be extracted from Quran and present them in the architecture form. With gradual introduction of the concepts to field of architecture, special form of architecture was shaped that was known as Islamic architecture. These concepts were gradually developed in the Islamic architecture and they enriched this type of architecture and by increasing the culture level of people and perspective of Muslims and increasing the progress and understanding of Muslims from religion, Islamic architecture has been developed toward meaning –oriented course [11, 2013: 9]. Formation of symbols is not a conscious process, but it is produces and emitted by revelation or intuition from unconscious heart. Symbols have a special importance and a special place in human life, and they have been used in different ways and different interpretations since old days till now [13 2013: 16].

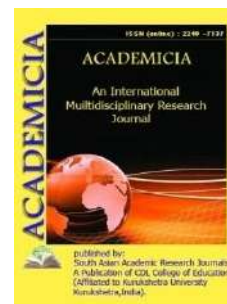
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## THE USING MODELS OF 去[QÙ]AND EQUIVALENTS IN UZBEK LANGUAGE

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### ABSTRACT

*The verb plays a major role in any grammar. The verb is the name of the action. Therefore, it is more difficult to describe the verb semantics. Verbs are categorized according to the direction of the interrelated meaning and the presence of objects and objects to which they relate. Chinese language researchers distinguish movement verbs within a group of action verbs. Movement verbs are polyphonic in nature and form joint (complex) verbs together with other verbs in the sentence as an independent verb, as well as in the function of auxiliary verbs. Such complex verbs can be used not only as independent verbs, but also to combine with other verbs to express direction. All Chinese researchers include verbs 来(to come) and 去(to depart) in the direction verbs group. In their view, these are basic verbs of action, as they form joint verbs with the meaning of direction. In this article, we present the leading and moving meanings of the verb 去 [qù] in the main action verb, as well as the orientation of this verb in Lyu Shusyang's book 现代汉语八百词. 吕叔湘 (800 Chinese words) models and their analysis.*

**KEYWORDS:** Action Verb, Joint Verb, Complex Verb, Modifier, Simple Modifier, Complex Modifier, Predicate, Additional Grammatical Meaning, Leading Meaning, Portable Meaning, Meaning Of Direction, Movement Towards Orientation.

### INTRODUCTION

As it is known, there is a lexical-semantic group of action verbs in all languages. Also, the meaning and function of the verbs are very versatile. An example of this can be seen in Chinese grammar. In Chinese, verbs can serve not only as a predetermined function, but also to have

additional grammatical meanings, that is to say, an auxiliary verb function. Also, verbs that do not have action meanings refer to the action verbs in the auxiliary verb.

(想出来 [xiǎng chū lái] to think, to find out) this can represent the meaning of results. In the Uzbek language, auxiliary verbs come with a leading verb, which also adds additional meaning. In addition, this additional meaning may indicate the direction, speed, duration, and so on.

## THE MAIN PART

In Chinese and Uzbek, the direction from the direction of action is expressed by the verb 去 [qù], that is, the direction of departure, to depart. The verb to depart in Uzbek means direction of action. Also, the use of the verb 'to go' in verbs of action that have directional meanings (to go, to come out, to get out, to fall, to pass, to turn). In this article, the verb of 去 [qù] is translated as "to go".

In Chinese and Uzbek, the verbs of 去 [qù] "to go", "to depart" differ from those of verbs, which form a group of directional verbs.

To leave the verb in the Uzbek language, the verb means "to move away from", and "to move away from it" (O'TIL, 2008: 2- j. 359-360). To find out the meanings of the verbs with the highest frequency of usage, we will look at the "Explanatory Dictionary of the Uzbek Language". It contains six behavioral meanings of the verb to go: a) move away from the speaker or observer's location, move away, move to the destination; b) to reach a destination; v) to drive across the vehicle; g) to be somewhere; d) to move in one direction, move forward; e) to go on, to attend (O'TIL, 2006; 1- j. 316-317).

By examining the similarities and differences in the meanings of 去 [qù] and the verbs of departure, we seek to determine the Uzbek equivalents of 去 [qù]

As we have said, the direction of the action is taken by the subject in the sentence (the direction in which the action is directed is not clearly defined, so the position of the speaker is taken as the place of the speaker or some other place [2]), As well as the object (the location of the sentence is clearly specified and serves as the reference point for the action to be performed "). Based on this, we analyze the following:

### 1- case.

The movement direction is represented by the object (which contains the action direction in the sentence) and the spoken position as an external observer. In this case, the move toward the semantics of the Chinese verbs 去 [qù] means "to go" in Uzbek verbs, for example:

常常雨过三天了，地上已经干燥，那石凹里水儿还有，鸡儿便去那里渴饮 [Chángcháng yǔguò sān tiānle, dìshàng yǐjīng gānzào, nà shí āo lǐ shuǐ er hái yǒu, jī er biàn qù nàlǐ kě yǐn] [4].

*It has been three days since heavy rains, the ground is already dry, but there is still water on the pavement and the chickens are going to drink it.*

In the example given, the direction of the movement is clearly indicated on the roof of the object, that is, 那里 [nàlǐ] (there, in front of the stone).



**2- case.**

The direction of the movement is determined by the subject (the direction of the speech is not specified; the position of the speaker corresponds to the orientation). In this case, the speaker becomes a participant of the situation, not an external observer, for example:

唉！对了，刚才爸爸又给你买来巧克力，你快去，要不都叫妈妈吃了[Āi! Duìle, gāngcái bàba yòu gěi nǐ mǎi lái qiǎokèlì, nǐ kuài qù, yào bù dōu jiào māma chīle] [5]. *Yes! In fact, your dad has just bought you some chocolate, and you can go soon, or your mother will eat it.*

In the example given, the direction of the action is determined by the subjective “I”. In this case the movement is directed from the direction, ie from the speaker's position.

**3- case.** The direction of action is set by the subject (not specified in the direction of the action), in which case the speaker becomes the action rather than the external observer, for example:

我三天去了[Wǒ sān tiān qùle]. *It's been three days since I left (literally: It's been three days since I left).*

In the aforementioned situations, the Chinese verb 去 [qù] and the verbs of “to go” and “to depart” in the Uzbek language have similar directions. Based on the results of the analysis, it is possible to say that in both languages, the behavior of the speaker (speaker - external observer, speaker - participant in the movement condition) and different features of the action orientation influence the semantics of the verb.

As can be seen from the examples, in case 1, the speaker of the situation, where the action orientation in the sentence is expressed by a specific object, the 去 [qù] and the semantics of the verb “to go”, correspond to the orientation.

**2- case.** The speaker becomes a participant in the movement condition, where the position corresponds to the direction of the movement, the direction of the movement determined by the subject (the speaker). In this case, both 去 [qù] and the verb of “to go” represent the direction from the verbs' direction (from where the speaker is) and are semantically interconnected.

**3- case.** The speaker is also a participant in the speech situation, but differs from the case in the case of the speaker. In this case, the verb that is conjugated also has similar meanings. That is, both verbs 去 [qù] and the verb of “to go” indicate the direction from the starting point of the movement. In turn, this starting point serves as an action orientation.

**Parabolical meaning.** Apart from the action of the Chinese verb 去 [qù], it also has parabolical meanings in terms of time. The verb of 去 [qù] has the meaning of “to pass” (term, moment), instead of the verb in Uzbek, it is appropriate to use the word “to pass”. After all, in Uzbek, verbs of action that have directional meanings (to go, to come, to come out, to go down, to pass, to turn, to swing).

大势已去[Dàshìyǐqù] [6]. *The severe crisis (critical situation) is behind (passed).*

去冬今春[Qù dōng jīnchūn]. *Winter passed, and spring arrived.*

This means that there are cases when the verb 去 [qù] can be translated into Uzbek not only with the verb to go, but also with another verb.

The verb 去 [qù] does not have the same meaning in Uzbek as “to go”, “to leave”, “to return”.

去东北上北京来 [Qù dōngběi shàng běijīng lái].

*To go (to leave) from Dunbey to Beijing.*

他的父亲去世了 [Tā de fùqīn qùshìle]

His father died (passed away) (literally: his father left the world).

去路不好走 [Qùlù bù hǎo zǒu]. *Walking way is not easy.*

The figurative meaning of the verb 去 [qù] “to fall”, “to spill” is not expressed in the Uzbek verb “to go”. For example:

此老人已八十多岁，齿发已去 [Cǐ lǎorén yǐ bāshí duō suì, chǐ fā yǐ qù]. *The old man is over 80 and has already lost his teeth and hair.*

The 去 [qù] verb “to play” or “to perform” does not mean to go in Uzbek. For example:

梅兰芳去白娘子 [Méi lán fāng qù bái niángzǐ].

*Mae Lan-Fan plays the role of maid (... in the role).*

The meanings of the verbs in 去 [qù] also have the meaning of utility.

For example, the words “to send off” in 去 [qù], “to send on a business trip”, or “to send” something are also used in Uzbek with other verbs:

给他去信 [Gěi tā qù xìn] [7] *To send him a letter.*

This example is more specific to oral speech. The reason is that the meaning of sending a letter is mainly expressed by the verb 寄 [jì].

去 [qù] verb “to throw”, “to throw away”, “to clean”; The meanings for “to clean” are expressed in the following verbs in Uzbek:

这句话，去了几个字，就更明显了 [Zhè jù huà, qùle jǐ gè zì, jiù gèng míngxiǎnle]. *If we remove a few hieroglyphs from this phrase, it becomes clearer.*

去皮 [Qù pí]. “To clean the skin” “to scrub” (“to remove”).

去 [qù] means “to reduce”, “to minimize”

把这条线再去一寸 [Bǎ zhè tiáo xiàn zài qù yīcùn].

*This thread should be shortened to another sun (unit of measure).*

The verb 去 [qù] means “to refuse”, “to push away”; The meaning of “to abandon” in Uzbek is as follows:

人所畔者，天所去也 [Rén suǒ pàn zhě, tiān suǒ qù yě].

*Heaven (God) will drive away those who turn away from Him.*

As can be seen from the above examples, these figurative meanings of the verb 去 [qù] are given by other verbs, because its original meaning in Uzbek does not express its figurative meaning in Chinese.

In our article, we also review the use of 去 [qù] in Lyu Shusyang's book “现代汉语八百词. 吕叔湘” (800 words in modern Chinese) [8].

### 1. The use of 去 [qù] in the verb function

In this case, 去 [qù] means the movement from one position to the other; 了 [le] and 过 [guo] can be used with attachments. In Uzbek it is expressed by the verbs “to go”. For example:

他已经去了 [Tā yǐjīng qù le] *He's already gone.*

去过好几趟，都没碰到他 [Qù guò hǎojǐ tàng, dōu méi pèng dào tā]

*I went there several times and never met her.*

你去得不是时候 [Nìqù dé bùshì shíhòu] *It is not the time you go.*

**Noun (place, time)+ 去 [qù] + noun (subject of action).** In this model, words that belong to a number group are used in front of the next noun. In Uzbek, it is given by the verbs “to go”, for example:

昨天已经去了三个人 [Zuótiān yǐjīng qù le sān gèrén]

*Three people went and came back yesterday.*

刚去了一辆车运行李 [Gāng qù le yī liàng chē yùn xínglǐ] *Just recently a car went to the luggage.*

**a) Noun (subject of action) + 去 [qù] + Noun (action object).** The model also uses the number of words in the last name of the next noun. It is translated into Uzbek based on the verb “to send”, for example:

我给他去过两封信 [Wǒ gěi tā qù guò liǎng fēng xìn]

*I have sent two letters to him.*

我们只去了个代表 (=派去一个代表) [Wǒmen zhǐ qù le gè dàibiǎo (=pài qù yīgè dàibiǎo)]

*We have sent only one representative.*

**b) Noun (subject of action)+ 去 qù + noun (place)** The verb 去 qù of in the mode is translated into Uzbek with the verb “to go”:

我去车站接人 [Wǒ qù chēzhàn jiē rén]

*I go to the station to meet the [man].*

他想去一趟长春 [Tā xiǎng qù yī tàng Chángchūn]

*He wants to go to Changchun.*

**2. 去 qù** The verb 去 qù may be used before or after another verb. In these cases, it means:

**a) 去 [qù] + fe'l.** It expresses a desire to do something. But even when 去 [qù] is not used, the meaning is practically unchanged.

这件事我去办吧 [Zhè jiàn shì wǒ qù bàn ba] *I'll do it.*

你们去研究研究，耆该怎么解决 [Nǐmen qù yánjiū yánjiū, qí gāi zěnmē jiějué]

*You go there and learn how to deal with it.*

**b) fe'l + 去 [qù].** Here the verb expresses its purpose “to go”.

咱们看电影去 [Zánmen kàn diànyǐng qù] *We're going to the movies.*

他上街买东西去了 [Tā shàng jiē mǎi dōngxī qù le]

*He went out to buy things on the street.*

**\去 [qù] // 成 [chéng].** Modal Meaning: To be able to do something:

他去中国去成了吗? [Tā qù zhōngguó qù chéngle ma?]

*Can he go to China?*

飞机票不好买，恐怕去不成 [Fēijī piào bù hǎo mǎi, kǒngpà qù bùchéng] *Buying air tickets is not easy, I am afraid I will not go.*

今天有事，去不了你那儿了 [Jīntiān yǒushì, qù bùliǎo nǐ nà'ěrle] *There are things to do today, I can't come to you.*

Although in these examples, the 去 [qù] verb comes with the 成 [chéng] verb, and the modal meaning and the direction meaning are preserved.

### 去[qù]'s meaning of the direction

**1. Verb+ 去 qù [+Noun(action object)].** Usually not used with “得”[de] and “不”[bù]. The verb 去[qù] that follows the leading verb represents the direction of the leading verb. It has the following features:

a) it means that the person or subject may leave the speaker after a certain action. It is usually translated into Uzbek with the verb to leave. Occasionally other verbs based on the leading verb may also be used, such as:

车队向远方开去 [Chēduì xiàng yuǎnfāng kāi qù]

*The team started to walk long distances.*

一群孩子向河边跑去 [Yīqún háizi xiàng hé biān pǎo qù]

*A group of kids ran to the river.*

谁把我的笔拿去了？ [Shéi bǎ wǒ de bǐ ná qù le?] *Who took my pen?*

刚派去一个人 [Gāng pài qù yīgè rén]

*We just sent one person.*

我们给图书馆送去不少新书 [Wǒmen gěi túshū guǎn sòng qù bù shǎo xīnshū] *We have donated many new books to the library.*

In the above sentence, a different verb is used. It is also important to note that in addition to 去 [qù], the prefix 给 [gěi] also indicates direction of action.

他从我这儿借了几本书去 [Tā cóng wǒ zhè'ér jiè le jǐ běn shū qù]

*He took some books from me.*

我们给幼儿园送了不少玩具去 [Wǒmen gěi yòu'ér yīn sòng liǎo bù shǎo wánjù qù] *We donated a lot of toys to the kindergarten.* In the above examples, we can observe another aspect, that is, between the leading verb and the modifier verb. Such cases are common in Chinese. However, whether or not the complement is between a leading and a modifier is based on certain rules. For example, when a simple modifier expresses the directional meaning, if a simple modifier is represented by “来/去”, the complement is used before “来/去”:

太晚了，我要回家去 [9] [Tài wǎnle, wǒ yào huí jiā qù]

*It's late, and I have to go home.*

If the complement indicates the name of the person or subject, the complement may be used before or after the modifier. For example:

睡觉前, 妈妈给我端来一碗汤, 一定叫我喝了 [Shuìjiào qián, māmā gěi wǒ duān lái yī wǎn tāng, yīdìng jiào wǒ hēle]

睡觉前, 妈妈给我端一碗汤来, 一定叫我喝了 [10][Shuìjiào qián, māmā gěi wǒ duān yī wǎn tāng lái, yīdìng jiào wǒ hēle]

Before she goes to bed, my mother brings me a bowl of soup, of course she invites me to drink.

Also, when a compound modifier represents the direction of the complement, the complement name is placed in the middle of the compound modifier. For example:

我们很高兴地走上楼去 [Wǒmen hěn gāoxìng de zǒu shàng lóu qù] *We went to upstairs with being happy.*

他明天就要飞回国去了 [Tā míngtiān jiù yào fēi huíguó qùle]

He must return home tomorrow. Hence, the use of a complement in such a form is a common occurrence of action verbs and modifiers.

b) a person or subject is left behind after a certain action, which sometimes means death, translated into Uzbek with the words “to die” and “to leave”.

For example:

那一年, 他父母都相继死去 [Nà yī nián, tā fùmǔ dōu xiāngjì sǐ qù] *His parents passed away one after the other in that year.*

疾病夺去了他的生命 [Jíbìng duó qù le tā de shēngmìng]

*The disease took him away from this life.*

他从设计室拿去了三份图纸 [Tā cóng shèjì shì ná qù le sān fèn túzhǐ] *He took three drawings from the design studio.*

他把多余的枝叶剪去 [Tā bǎ duōyú de zhīyè jiǎn qù]

*She cut off unnecessary leaves.*

**2. Verb + 去 qù + Noun (action object, number).** It means “to finish”, “to lose”. 用[Yòng], 占[zhàn], 吃[chī], 花[huā] are used in such constructions.

这些琐碎事情占去了他不少时间 [Zhèxiē suǒsuì shìqíng zhàn qù le tā bù shǎo shíjiān] *These unimportant things took too long.*

已经用去了好几吨水泥 [Yǐ jīng yòng qù le hǎojǐ dūn shuǐní] *A few tons of cement have already been used.*

In the above examples, although the meaning of the verb 去 [qù] is not to go away, or to lose, in these portable meanings of the verb 去 [qù] we can observe the partial presence of the verb.

**3. 随 suí (让 ràng) + 小句 xiǎo jù a small sentence + 去 qù.** Trust means to act on someone you trust. For example:

随他说去, 别理他 [Suí tā shuō qù, bié lǐ tā]

*Do what he says, don't ignore him.*

**4. “看去 kàn qù, 听去 tīng qù”** refers to the assumption or emphasis of a particular aspect, comes at the outset, is often used in literary language (often used in ‘看上去[kàn shàngqù], 听上去[tīng shàngqù]’. For example:

他看去还是一久不到二十岁的青年 [Tā kàn qù háishì yǐjiǔ bù dào èrshí suì de qīngnián] *He looks like a teenager in his early 20's.*

这声音听去像是有人走动 [Zhè shēngyīn tīng qù xiàng shì yǒurén zǒudòng] *When you hear this sound, it seems as if someone is walking [11].*

## CONCLUSION

The results of the article's analysis lead to the following conclusions:

- The verb 去 [qù] in Chinese verb meaning in direction of movement (in the place aspect) and the Uzbek meaning of the verbs of going, directing, in a sense are mutually compatible;
- The verb 去 [qù] in Chinese has broad semantics. Its meaning is expressed in the words “to go”, “to leave”, “to send”, “to pass” (in the time aspect) in Uzbek language;
- however, the verb 去 [qù] does not have its own meaning in the Uzbek language, such as “leave”, “send”, “leave”, “to go back”. It is used with other verbs;
- the verb 去 [qù] means “to collide”, “to drop (e.g., tooth)”; “perform on stage”; “send someone”; “To remove”, “to clear”; “Shrink”, “reduce”; It has the same meanings as “to give up”, “to push away”. These meanings are expressed in Uzbek with various verbs;
- Verbal verbs and modifiers are often used to fill in the modifier's phrases, either before or after the modifier; in the middle; In the case of a compound modifier, it is used in the middle of a complex modifier.

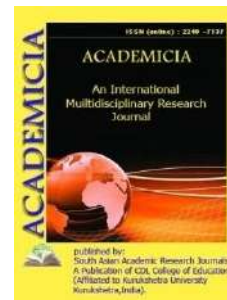
At the end of the conclusion, when expressing the direction from the orientation (in the spatial aspect), the Chinese verb 去 [qù] and the meaning of the direction in the Uzbek language are intertwined, however, the portable meanings of the verb 去 [qù] are not mentioned in Uzbek at all. This indicates the broader meaning of the verb, and it shows that how and why it is to be studied in the Uzbek language.

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## TRAINING SPEED QUALITY IN STUDENTS OF FOOTBALL ACADEMY

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### ABSTRACT

*Football is a real athletic game that helps to develop qualities such as speed, agility, endurance, strength and jumping. During the game, the player performs work at a very high load, which, in turn, increases the level of functional capabilities of the person and cultivates mental-volitional qualities. In Uzbekistan, football is popular as a means of physical education. Football is practiced in schools, special schools specializing in football, colleges, institutes, production organizations and the army. In the football process, speed and endurance are very important.*

**KEYWORDS:** *Football, Physical Education, Coaching, Training, Style, Endurance, Endurance, Team, Amplua, Game, Physical Education, Speed, Breathing*

## INTRODUCTION

The problem of cultivating resilience in schoolchildren has been studied by a number of specialized scientists as a subject of scientific research in our country and abroad. They described the quality of this movement as endurance, "the body's ability to fight fatigue, that is, to continue to work in opposition to the appearance of factors that delay the onset of fatigue or cause the process of fatigue." In recent times, the concept of resilience has expanded somewhat. This was due to the stability of the movement of external and internal negative factors. Speed is recommended as the degree of resistance to the duration of the body's ability to maintain the cocktail capacity and its ability to withstand the effects of fatigue or adverse factors of the external environment (high or low temperature, low atmospheric pressure).

## MAIN RESULTS AND FINDINGS

The endurance of the players is the ability to continue the game activity from the beginning to the end of the game without ever letting go. In general, endurance can also be said to be the ability to resist fatigue again. Fatigue in sports practice can be divided into 4 types: mental, sensory, emotional, physical fatigue. These four fatigue are common to all players. Naturally, the weight of physical fatigue is greater among these. In order to properly approach the method of training speed in players, it is necessary to take into account the nature of the game activity of athletes and the load they will have during the game [1, 45].

It is well known that the activities of players take place in conflicting zones; on the one hand a short time, the maximum running time is 5-8 seconds (fast running, wrestling, jumping, wrestling, etc.), on the other hand the game time lasts 90 minutes, which is a characteristic feature of the average work [1, 47]. If we take into account that a moderate workout has a negative impact on maximum work, then it becomes clear that the issue of speed in football is a very serious issue. That's why speed experts say that speed is needed during the most responsible period of the race, and endurance is needed during the whole distance when the athlete is most tired. Of course, this is also typical for young players, but the psychological readiness of players of this age has been noted.

In determining the methods of speed training in young players, it is necessary to distinguish between general and specific speed in them. The overall speed of a player is usually understood as the ability to perform tasks that are even significantly different from each other, at a moderate level or without exceeding a long watt [2, 65].

The special speed is reflected in the ability of the players to keep the required image until the end of the game.

Athletes who specialize in running 800, 1000, 1500, and 2000 meters may not be as fast and must be very, very resilient at the same time [2, 69].

Exercises involving long movements are commonly used to develop overall speed.

Fast walking 800-2000 m, running 3-5 km, skiing, long-distance swimming, climbing 10-30 times on tourniquets and so on. These exercises are usually performed when idle athletes are in the early stages of the training period when they are not yet ready for the hard work [3, 36].

The player will cover a distance of 5.5 to 10.5 km, depending on his position in the team. In this case, intense movements (running fast, accelerating, running fast) take 5 minutes. During this

time period, players run from 1,500 to 2,000 meters quickly, but briefly, from 7,15.25 meters in length. In the meantime, they take 25 to 35 minutes to run slower and 45 to 57 minutes to walk. On the surface, it seems like more time is spent on non-violent running for players. But that's actually the time it takes to accelerate the movement in 5 minutes to cover the huge amount of energy that is spent on running fast and fighting for the ball. If we define speed in terms of physiological and biochemical expert scientists, running requires a certain amount of energy expenditure, like any other form of muscle activity, i.e. the body receives energy for chemical change from chemical changes. Respiratory processes are involved in the presence of oxygen in the air, in which nutrients (mainly carbohydrates and fats) are oxidized to carbon dioxide and water [2, 70-71].

At the initial stage of training with young players, it is advisable to use a set of tools aimed at their comprehensive physical training, strengthening and balanced development of health, acquisition of various skills and abilities, learning the basics of football techniques and tactics.

The task of physical training at this time is primarily to shape the movement functions of young players (strength, speed, endurance, agility and dexterity), as well as the ability to control their movements over time (air and muscle strength are key components of movement function). Great attention should be paid to cultivating the speed of action. Because in childhood and adolescence there are ample opportunities to cultivate this most important physical quality [3, 63].

It should be noted that in the stages of initial training and primary sports specialization, agility is nurtured in a strong connection with agility, which provides the necessary basis for successful mastery of the rational technique of shifting (moving from one place to another). A significant increase in maximum speed in running between the ages of 8-12 is associated with a natural increase in movement speed [1, 32]. At the age of 12-14, however, speed increases mainly due to an increase in speed-strength qualities and muscle strength.

Therefore, in the development of speed, it is necessary to try to maximize the frequency of movements that require running speed and great muscle strength. It is necessary to give more space to natural movements. Games, sports games and action games in the form of competitions, exercises can also be of great help.

Performing game exercises forces young players to exert maximum effort to win. Game material should take up 50% of the total training time. Each exercise is performed in a short series (10-15 seconds) in several series, with a rest interval of 10-15 m. It is important to run again at maximum speed, which is done in the relay method at a distance of up to 20 m. In addition to relays, it is recommended to include control exercises for running 10-15 m. To develop a complex movement reaction and frequency of movements, it is necessary to make extensive use of speed exercises that run from different sports positions. These exercises are performed by changing the direction of running according to different visual signals. This allows you to react to each of the signals with response actions, modeling the complex situations that arise during the game [4, 42-43].

In the primary sports specialization phase, a wide range of games can be used, in addition to the use of game exercises, basic physical training exercise complexes. This creates favorable conditions for creating a solid base of all-round physical training. Complexes aimed at developing more speed should be applied at the beginning of the main part of the lesson, followed by the use of games that help to improve this quality. Much less time is spent on a set

of appropriate games and game exercises that require strength, as well as a set of games that require endurance. They are held in the middle and at the end of the lesson, respectively.

The variety of tools, including games and special training exercises, helps to better improve the general physical fitness of children and adolescents and, in particular, to develop their basic physical qualities specifically [4, 51].

In the phase of serious training and improvement, great attention is paid to the development of speed, because increasing speed is a much more complex task. In addition to repetitive running at maximum speed, a wide use of speed-strength, individual strength training, i.e., increasing running speed, mainly at the expense of dynamic force, is necessary to get rid of premature stabilization of speed at the achieved level. It is advisable to use the method of dynamic exertion in cultivating the ability to demonstrate strength quickly. This is achieved by moving the light load to another location at maximum speed.

Exercise that is done very intensively is a powerful tool. Therefore, exercises aimed at developing maximum speed should be performed more frequently, but on a smaller scale. It is necessary to correctly determine the norm of exercises aimed at increasing the speed of movements, to take into account how many times the exercises are repeated without slowing down, as well as how long the continuous training work is performed without lowering the speed limit. Exercises aimed at developing speed are stopped when a young player's subjective sensations, external signs of fatigue, or stopwatch readings indicate a decrease in movement speed. This decrease serves as the first signal ("sufficient criterion") [5, 64-65] to stop the work on speed development in this exercise.

Exercises that can be done at maximum speed are used as a means of developing speed. First of all, three groups of exercises are used: general developmental (focused on speed development), special exercises in their own sports, and exercises in other sports. At least three requirements must be taken into account:

1. Exercises should be performed at the last speed.
2. The exercises should be mastered so well by the trainees that during the movement, the emphasis should be placed on the speed of the movement, rather than on the method of performing the movement.
3. The duration of the exercise (or the length of the distance) should be such that by the end of the exercise the speed does not decrease as a result of fatigue [5, 62].

If we take into account the fact that the player's activity is in a state of strong mental tension and a huge emotional excitement, it does not take much effort. However, an analysis of game activity shows that they have enough time to recover from the general initial state during breaks that occur after vigorous activity. Therefore, players need to be prepared for the same type of activity. Sometimes it determines its quality depending on the amount of work in the classroom, which is completely wrong. Execution of a large load should not be the goal in itself and should not be seen as a primary means of cultivating agility [6, 56-57].

Football is a non-cyclical sport in which the duration of the movement is constantly changing, so it requires proper training. An activity that changes rapidly in intensity requires more effort than an activity that is performed at a steady pace. This is something to keep in mind when training

speed in players. It is important to remember that breathing, which is a legitimate task, adapts to the form and nature of the movement you are performing. In this case, breathing and exhalation are integral to the act of movement.

The breathing of the players is different from the breathing of a skier or staer (long-distance runners) [6, 37].

Willpower is also at the forefront of speed training. Regular long-term work requires athletes to overcome internal and external challenges with a strong, determined, strong will, that is, a “stable will quality”. While performing work of a non-cyclical nature, the athlete experiences difficulty in a relatively short period of time, but intense repetitive strain. Players are well aware of how difficult it is to force oneself to do so when the air temperature is high, on top of doing any more strenuous movement activity against the backdrop of intense fatigue after repeated rapid runs due to the demands of the situation in the game. In the training of endurance of players, a great deal of attention is paid to the explosive short-term work of the body, mainly in the absence of oxygen. During the breaks between intensive work, the player is given as much oxygen (debt) as possible. Tasks specific to special functional training are solved more effectively during the performance of game exercises. In terms of their character and emotionality, they are much more suited to the game. However, it is necessary to combine game exercises with exercises without balls [7, 64-65].

Speed training should be conducted in accordance with the five signs of the load; a-run time, b-work complexity, c-rest time, g-rest character, d-number of repetitions [7, 82].

Given the rapid and variable nature of external signals, football places high demands on a player's psyche.

Hence, a good adaptation of the psyche to the various influences of the external environment; the ability to move on the basis of anticipating the actions of an opponent or partner and the ability to implement game skills in a creative approach. Football requires creative tactical thinking, the ability to play a combination game, as well as teamwork, discipline and self-control.

There are great demands on the nature of football players, their willpower, goal-orientation, fighting spirit, perseverance and aspiration to victory. The player's organism forms an integral complex, so it is not possible to study the physical and psychological aspects of the organism separately, just as it is not possible to separate the individual parts of the exercise. Based on this, it can be concluded that:

- Development of the player's personality in terms of the requirements of modern football;
- Development of the ability to compete in complex conditions of play activities;
- It is necessary to manage changes in the psychological state of the player in the game activities [5, 73].

With the help of pedagogical control of the competitive activity of players it is possible to estimate different levels of development of individual and collective technical and tactical actions.

## CONCLUSION

Football is one of the most beloved and popular sports on earth. The simplicity and convenience of the game, the skill and speed of the players still attract all the fans.

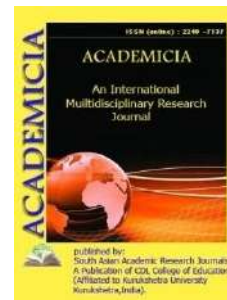


So does this sport have an impact on student health and development? As it turns out, the impact is huge. If you play football regularly, you will develop speed, agility, endurance and goal-orientation. During the game, a large load is placed on the player, which serves to cultivate the willpower in him, increasing the overall endurance of all members. Because football is mainly played outdoors, it leads, firstly, to physical training, and secondly, it increases the resistance of body parts of players to the effects of the environment.

In football, two teams compete with each other. Striving to win encourages players to act in unison and fosters a sense of camaraderie, mutual support. The mass interest of students in football academies in this game is causing them to study in special schools, work on themselves and become fast and resilient players. Speed and agility are very important in the game process. That is, it is very important to cultivate the quality of speed in the process of transitioning to a quick counter-attack or defense during the game.

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## **MODERATING AND MEDIATING ROLE OF INTRINSIC MOTIVATION ON DEVELOPMENTAL PERFORMANCE APPRAISAL SATISFACTION AND AFFECTIVE ORGANIZATIONAL COMMITMENT: A STUDY IN NEPAL**

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### **ABSTRACT**

*This study has examined the direct and interactive effects of performance appraisal satisfaction and intrinsic motivation on affective organizational commitment. Self-reported perceptual cross-sectional data obtained from 358 employees working in the Nepalese insurance industry have been analysed quantitatively. Direct effects of performance appraisal satisfaction on intrinsic motivation as well as on affective organizational commitment were significant. Intrinsic motivation antagonistically moderated the relationship of performance appraisal satisfaction with affective organizational commitment. Where, relatively negative strong prediction of performance appraisal satisfaction on affective organizational commitment was for those employees who had a high level of intrinsic motivation and vice versa. Likewise, the intrinsic motivation mediated the relationship between performance appraisal satisfaction to affective organizational commitment. Out of total mediated effected size of performance appraisal satisfaction to affective organizational commitment, 38% effect size went through intrinsic motivation.*

**KEYWORDS:** *Performance Appraisal Satisfaction, Intrinsic Motivation, Affective Organizational Commitment*

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## INTRODUCTION

### Background of the Study

Performance appraisal (PA) is the measurement of work and its results by using the scale and index with the freedom of personal judgments and vague criteria of evaluation (Ali et al. 2012). PA has been increasingly becoming the part of a strategic approach to integrate human resource activities and business policies. PA pervades all types of organizations and the results are very important for employees and the organizations (Jawahar, 2010). PA continues to be a very essential topic in these days for both practitioner and researchers because organizations attempt to use the formal appraisal process as a critical human resource management tool. Rapid changes in environment, increasing communication, technology, and development of knowledge management have made the existence of an effective organizational PA system inevitable (Ali et al., 2012). However, the implementation of PA has been challenging for developing countries, due to the problems of capacity and institutional constraints (Liu & Dong, 2012).

Tziner et al. (2000) have suggested two broad uses of PA result in organizations. First, it serves administrative purposes in the areas like reward allocation (increases in salary, bonuses, etc.) and assignment decisions (promotions, transfers, demotions etc.). Second, it contributes to employee development by making it possible to identify their strengths and weaknesses with up to date performance feedback from supervisors. Directly and indirectly, employee's developmental activities are related to the successful life of both the employee as well as organization. Therefore stakeholders, especially employees, should be comfortable and satisfied with developmental aspects of the PA mechanism. This study concentrates to the employees' perceptions of developmental aspects of the PA, which has been defined as the perceived clarity, relevance, recognition and understanding with regard to the goal setting through feedback activities involved in the appraisal procedure. More specifically, developmental goal setting refers to the degree in which employees perceive through PA feedback that the goals are attainable, clear, relevant, and understandable. For the purpose of the study, hereafter, PA denotes the developmental aspects of the PA.

Motivation is a multidimensional construct; one well-established way to think about the dimensions of motivation is according to the origins of individual motivation i.e. intrinsic and extrinsic. The intrinsic arises from the task itself, while the extrinsic comes from expectations of external rewards (Cho & Perry, 2012). In contrast to rewards and punishment based extrinsic motivation (which are controlled by the organization), intrinsic motivation is based on positively valued experiences that a person gets directly from their works. These positive experiences serve to get an individual excited, involved, committed, and energized in their works. Thomas and Velthouse (1990) have argued that intrinsic motivation is the key psychological component of employees' empowerment and it enables them to become self-managing or self-leading. Among various types of motivation, intrinsic motivation has been noted as having a large effect on employees' attitudes and performance (Deci & Ryan, 2008). Benabou and Tirole (2003) stated there is no doubt that the benefits (piece-rate systems or pay-for-performance incentive devices) can be considerably compromised when the systems undermine workers' intrinsic motivation. Here this study concentrates on intrinsic motivation with a belief that this is a necessary consequence of an individual's subjective sense of the developmental PA mechanism.

Employees' affective organizational commitment is the employee's emotional attachment to his or her organization being the member of that organization. Meyer and Allen (1991) have identified three distinct themes in defining commitment as affective, continuance, and normative. However, this study concentrates on affective organizational commitment of the employees in order to achieve the intended objectives of this study. In the view of Allen et al. (2003) affective organizational commitment refers to the emotional attachment to the organization based on feelings of loyalty toward the employer. Employees who are affectively committed are seen as having a sense of identification and belonging which increases their serious involvement in the organization's activities, willingness to pursue the organizational objectives, and desire to remain with the organization for a long-time (Meyer & Allen, 1991). The field of industrial and organizational psychology provides ample researches that affective commitment in the workplace has demonstrated an improvement in employees' performance and ultimately the performance of the overall organization (Sandra et al., 2008). However, lower levels of affective organizational commitment exist in most industries (Sandra et al., 2008).

PA satisfaction, intrinsic motivation, and affective organizational commitment are the subjective construct in the field of management of human resources. Studies of direct or indirect association of these variables are very important for practitioners as well as theoreticians for the betterment of both employees as well as organizations. So, the role of intrinsic motivation cannot be ignored in the relationship between PA satisfaction and affective organizational commitment. Research on the effect of intrinsic motivation has been considered moderating and mediating influences (Cho & Perry, 2012) in the relationships of cause and effect variables that have been related to employees. Among the several possible pathways from PA satisfaction to employee outcomes, intrinsic motivation could be a key mediating variable (Hackman & Oldham, 1976). About the moderation, it can't be expected that all employees will react in the same way to PA (Fletcher, 2001), and intrinsic motivation has a global or dispositional component that may partly explain individual differences in how employees are affected by the PA. Researchers like Piccolo and Colquitt (2006) agreed that there are very few empirical testing and it requires further testing to measure these relationships. In this context, the study has been dedicated to examine a new perspective in PA satisfaction- affective organizational commitment relationship with moderating and mediating role of intrinsic motivation in the context of the Nepalese insurance industry.

### **Statement of the Problems**

Managers are lacking generalized, latest, and home-ground generated theoretical knowledge to improve their employee's affective organizational commitment through the proper mechanism of the PA and intrinsic motivation. Most of the organizations are facing employees' problems regarding less attachment with organization and leaving the organization. In such context, managers are investing a lot of money and efforts to improve their situations. But they are careless on the importance of PA satisfaction and intrinsic motivation which improve employee affective organizational commitment without the additional financial burden to the organization. Employees as a dominating source of competitive advantage, most of the organizations are interested to solve these problems.

Jawahar (2010) stated that although PA feedback is advocated as a means for influencing performance via intrinsic motivation, empirical investigations indicate that the effect of feedback

on performance is not uniformly positive. Likewise, Fletcher (2001) mentions performance evaluation systems are not successful in creating intrinsic motivation and improvement of employees' performance. But Ali et al. (2012) and Kuvaas (2007) state successful PA feedbacks significantly improve the employee's intrinsic motivation and employee outcomes. Such contradicting findings regarding the impact of PA feedback on employee's intrinsic motivation and employee outcome (here affective organizational commitment) has been first gap to be fulfilled.

Scientific inquiries and technological advancement make knowledge obsolete, which were developed in the very beginning. Obsolete knowledge creates a dilemma about the applicability of the theories and models to solve the current problems (Dissanayake, 2013). The latest theories are compulsory to solve the current problems. Therefore, obsolescence of knowledge has been the next gap to be fulfilled in this study.

Self-determination theory suggests that the social and environmental forces influence intrinsic motivation (Grouzet et al. 2004). If intrinsic motivation is influenced by environment, its antecedent (here, PA satisfaction) and consequences (here, affective organizational commitment) are not free from the social and environmental influences. So, the findings from the western context may not be generalized. Context representing the insurance industry and Nepalese cultural phenomena has been another gap that is desired to fulfil in this study.

Considering these gaps a study to examine the role of intrinsic motivation in the relationship between PA satisfaction and affective organizational commitment in the Nepali insurance industry has been felt necessary.

In this context, the following research issues are worth examining:

- i) Are there significant relationships between: a) PA satisfaction with affective organizational commitment b) Intrinsic motivation with affective organizational commitment?
- ii) Does intrinsic motivation moderate and mediate the relationship of PA satisfaction to affective organizational commitment?

In order to address the above issues, this study seeks to answer the following fundamental research question.

In what way PA satisfaction is associated with affective commitment in the Nepali insurance industry? Does intrinsic motivation moderate and mediate these associations?

### **PA Satisfaction and Affective Organizational Commitment**

Impacts of the developmental PA satisfaction on affective organizational commitment can be highlighted from the following three ways. First, through communicating organizational strategies, goals and vision to the employees while conducting a performance interview. Kuvaas (2006b) mentioned 'to the extent that PA is able to communicate subordinate strategies, goals and vision; employees should experience a higher level of commitment to subordinate organizational goals and, therefore, become more affectively committed to their organization.

Second, increasing employees' perception of being valued and being part of an organizational team; PA contributes to increase employees' understanding of the sense of being valuable and know themselves as a part of the organizational team that is the main understanding for being committed to the organization. Levy and Williams (2004) stated that developmental PA is also



about increasing employees' perceptions of being valued and being part of an organizational team. Such perceptions are central to the affective commitment.

Third, increasing perception of organizational investment for employees' career development; if reflections that have been obtained from PA satisfaction are being invested in developing employees, then probably employees will compensate it through increasing of affective commitment in the organization. Lee and Bruvold (2003) stated that PA satisfaction reflects perceived investment in employee career development; employees will probably reciprocate by the way of higher affective commitment to the organization.

Roberts and Reed (1996) noted that PA satisfaction may be positively related to affective commitment due to the enhanced employee participation and perceived clarity of goals within the PA process. Kuvaas (2006b) concluded after analysing the data from Norwegian banking employees that PA satisfaction positively influences employees affective organizational commitment. Similar findings have been revealed from the other studies from Malaysia (Vignaswaran, 2008) and Iran (Fakharyan et al., 2012). On the basis of preceding arguments and research evidences; it can be hypothesized that:

Hypothesis 1: There is a positive relationship between PA satisfaction and affective organizational commitment.

### **PA Satisfaction and Intrinsic Motivation**

One function of PA systems is to arouse motivation in the employees (Ali et al., 2012). The systematic practice of giving feedback to employees will have a great impact on the intrinsic motivation of employees (Wang & Guthrie, 2004). Pettijoh et al. (2001) stated that by reducing ambiguity through feedback and discussion, PA may positively affect the resulting levels of motivation exhibited by the employee.

PA is one such technique to provide feedback that can affect intrinsic motivation (Oh & Lewis, 2009). They indicated that an employee's intrinsic motivation depends on meaningful feedback about his performance and perception of his self-control over setting his own goals and over defining the paths to these goals. Procedural fairness of an appraisal, such as opportunities to participate in setting goals, would positively affect intrinsic motivation of the employees because they are self-involved for their interesting and attainable goal setting. PA system that is perceived to be fair and acceptable in terms of distributive, procedural, and interactional aspects would positively affect intrinsic motivation (Kim & Rubianty, 2011). Similarly, Studies conducted by Kuvaas (2006b), Vignaswaran (2008) and Fakharyan et al. (2012) remarked that PA satisfaction positively impacts employees' intrinsic motivation. Therefore, on the basis of the preceding arguments and related research evidence, it has been hypothesized that:

Hypothesis 2: There is a positive relationship between PA satisfaction and intrinsic motivation.

### **Intrinsic Motivation and Affective Organizational Commitment**

Innate satisfaction of the intrinsically motivated people contributes to the affective commitment of the employees, they are enjoying with their jobs and overall working environment. Empirical study carried out by Ganesan and Weitz (1996) found a positive relationship between intrinsic motivation and affective organizational commitment, suggesting that some of the benefits associated with a challenging and interesting job are attributed to the organization. Results from the study conducted by Karatepe and Tekinkus (2006) demonstrated that high levels of intrinsic



motivation resulted in high level of affective commitment to the organization among the front-line banking employees in Turkey. Likewise, studies conducted by Kuvass (2006b), Vignaswaran (2008), and Fakharyan et al. (2012) remarked that intrinsic motivation positively impacts on employees affective organizational commitment. Therefore, on the basis of the preceding arguments and related research evidence, it has been hypothesized that:

Hypothesis 3: There is a positive relationship between intrinsic motivation and affective organizational commitment.

### **Intrinsic Motivation as a Moderator**

By nature individuals are different and their level of motivation is different, even they are working under the same context. If individuals are reviewed from a psychological perspective, their level of intrinsic motivation from PA satisfaction can be different. Ryan and Deci (2000) stated that people are intrinsically motivated for some activities and not others, and not everyone is intrinsically motivated for any particular task. Individuals with high intrinsic motivation will become more self-learning and self-correcting in response to changing demands of the environment, without waiting for formal training and development for the organization (Vignaswaran, 2008). Fletcher (2001) claimed that if all appraises are going to react the same way to PA, it may be very unsafe to the organization. Furthermore, individual differences play a substantial role in how people interpret appraisal feedback and how they respond to these interpretations (Ilgen et al., 1979). If it is agreed that individual differences cause to create different level of intrinsic motivation from the PA feedback mechanism, there is no doubt that individual's different level of intrinsic motivation cause to different level of employees affective organizational commitment. Therefore, individual's intrinsic motivation plays vital role in the direct relationship between PA satisfactions to employee affective organizational commitment. According to Kluger and DeNisi (1996), compared to employees with lower intrinsic motivation, those with higher intrinsic motivation should, to a greater extent, view feedback as task oriented, which in turn should enhance self-learning and performance associated with PA satisfaction. Therefore, on the basis of the preceding arguments and related research evidence, it has been hypothesized that:

Hypothesis 4: The relationship between PA satisfaction and affective organizational commitment is moderated by intrinsic motivation.

### **Intrinsic Motivation as a Mediator**

It is simple to state that, feedback received from PA activity impacts on intrinsic motivation and intrinsically motivated employees will increase their affective commitment. Jawahar (2010) tested a model and concluded that ratees' reactions (e.g. perceived accuracy, perceived utility, and satisfaction with feedback) mediates the relationship between feedback related characteristics (e.g. rater's job knowledge, criticism by rater, opportunity to participate in feedback, job relatedness of criteria, goal setting, and suggesting ways to improve performance) and ratees' performance. In this model, ratees' reactions with feedback related characteristics somehow related to intrinsic motivation and feedback related characteristics are related to the PA satisfaction. So, it was expected that the relationship between PA satisfaction and affective organizational commitment can be mediated by intrinsic motivation. Results from a survey carried out by Vignaswaran (2008) in Malaysia showed that the relationship between PA satisfaction and affective organizational commitment was mediated by employees' intrinsic

motivation. Another study conducted by Fakharyan et al. (2012) in Iran concluded that intrinsic motivation as a mediator has affected in the relationship between PA satisfactions with affective organizational commitment. Therefore, it has been hypothesized that:

Hypothesis 5: The relationship of PA satisfaction to affective organizational commitment is mediated by intrinsic motivation.

### Research Design

Quantitative research design has been followed to analyze the cross sectional data. Richard (2009) stated that quantitative research is typically considered to be the more scientific approach to do social science research. Indeed, the ability to make correct predictions are one of the most outstanding characteristics of quantitative methodology and it may be valuable for evaluating theory and testing whether the theory holds up under a variety of circumstances and instances. Platt (2012) expressed that Britain's Economic and Social Research Council has striven to increase the level of quantitative work in British social science. In the context of America, Freese (2007) has stated that it is the policy of the American Economic Review to publish papers only if the data used in the analysis are clearly and precisely documented and are readily available to any researcher for the purposes of replication. The credibility of quantitative social science benefits from policies that increase confidence that the results reported by one researcher can be verified by others. Regarding the verification and replication of research methodology Duvendack and Palmer-Jones (2013) stated that there is a growing demand for replications of authoritative works in development studies, which reflects recent trends in other social sciences.

### Measures

All multi-item scales used in this research were adopted from prior research work.

Except demographic variables, responses to all the items have been measured at a 5-point Likert type scale where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. Measures of this study were as follows: *PA satisfaction* was assessed by using an instrument developed by Meyer and Smith (2000). They have used these items to measure the satisfaction from developmental PA. It has included seven items concerning the overall satisfaction with PA activities in the organization. This instrument has been used by many researchers (e.g. Kuvaas, 2006b; Vignaswaran, 2008) with coefficient alpha ranging from .86 to .93. *Intrinsic motivation* was assessed by six items developed by Cameron and Pierce (1994). This instrument has been used by many researchers like Kuvaas (2006b, 2009), Vignaswaran, (2008), and Hsu (2012) with coefficient alpha ranging from .82 to .90. *Affective organizational commitment* was measured by the six-item scale used by Meyer and Allen (1997). This instrument has been used by many researchers like Kuvaas (2006a, 2006b, 2007) and Vignaswaran, (2008) with coefficient alpha ranging from .77 to .88.

### Reliability and Validity

Explorative Factor Analysis (EFA) has been computed for each instrument to check whether the constructs used in this study fit the same factor structures or not. Reliability of the measurement scales has been assessed by calculating Cronbach coefficient alpha after EFA. According Knies and Leisink (2014) Cronbach's alpha should be at least .70 for acceptable reliability. The computed Cronbach's alpha (reliability values) of the constructs in this study are; PA satisfaction = .83, intrinsic motivation = .71, and affective organizational commitment = .70. Peterson and

Kim (2013) stated that Cronbach's coefficient alpha is the most widely used estimator of the reliability of tests and scales.

The internal validity of this research has been ensured through measuring different constructs using prior validated measures. Hypotheses were formulated based on the comprehensive review of the empirical evidence from the different context. The normality of the data were tested by plotting Histogram and Normal Q-Q plot and found normally distributed. Likewise, the interactive effect of independent and moderating variables with dependent variables were measured after centring interactive variables. Variance Inflating Factor (VIF) was tested and found less than 10 which are not problematic (Adnan et al., 2006). The findings were calculated from well-known statistical tools.

### Sample and Sampling Design

Through quota (stratified and non-random) sampling method, 15 insurance companies (4 life insurance, 10 non-life insurance, and 1 both life and non-life insurance), out of 25, were selected from the Nepali insurance industry. To select the sample companies, strata have been categorized into two stages. Firstly, according to nature of the business (e.g. life insurance, non-life insurance, and both); secondly, life insurance and non-life insurance companies were categorized into 3 strata based on the volume of business (e.g. high, medium, and low level of premium collecting companies). Within the selected strata, companies were selected as the convenience of the researcher. From the sample selected companies 358 respondents have been surveyed, as convenience, as a sample for 3200 population size. Demographic composition of the sample is presented in Table 1.

**TABLE 1 DEMOGRAPHIC COMPOSITION OF THE SAMPLE**

	Group	N	Percentage
Sex	Male	208	58.10
	Female	150	41.90
Age	Below 30 Years	125	34.92
	30 to 50 Years	210	58.66
	More than 50 Years	23	6.42
Education	Under-Graduation	64	17.88
	Graduation	170	47.49
	Post-Graduation	124	34.64
Experience	Less than 5 Years	143	39.94
	5 to 10 Years	96	26.82
	More than 10 Years	119	33.24
Designation	Executive	9	2.51
	Manager	59	16.48
	Officer	129	36.03
	Assistant	161	44.97

N = 358

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### Common Method Variance

Self-rating made it possible to assess individual perceptions that are not easily measured by objective measures (Hasson et al. 2013). However, self-ratings also have some disadvantages such as social desirability (giving the answer one believes is the desirable one) and negative affectivity (a general tendency to perceive things negatively). These problems are particularly pronounced when all variables are measured using self-ratings, as they may lead to spurious relationships (Hasson et al. 2013). Collecting data at one point in time and using self-reported data would be prone to common method bias, and it would be a serious threat to the magnitudes of the relationships among the study variables (Karatepe, 2012). Podsakoff et al. (2003) identified four potential sources of Common Method Variance (CMV), namely, self-report data, item characteristics, item context, and measurement context, but concerns about CMV are almost exclusively limited to the use of self-report surveys (Spector & Brannick, 2010). Therefore, common method bias should be controlled via the relevant procedural remedies.

Two common strategies to circumvent the problem of self-reported data at a point of time include the collection of data from multiple sources and temporal spacing of variables. However, the use of multiple sources is not always applicable because many important variables, i.e. personality, attitudes, cognitions, and values, are primarily measured by self-report and hard to be observed by others (Lai et al., 2013). These variables often occupy key roles in theoretical models, functioning as independent variables, moderators, mediators, and dependent variables. The remedy of temporal spacing of measures may not be feasible in some research contexts, and the time gap involved may introduce other types of biases, like the non-equivalence of contextual characteristics across the two waves of measurement (Lai et al., 2013).

Consistent with the suggestions made by Podsakoff et al. (2003), this study used two procedural remedies for controlling common method bias. Firstly, around 33% questionnaire were reverse scored to reduce the potential effects of response pattern biases, by incorporating negatively worded items in the questionnaire. Secondly, questions measuring different variables (e.g. independent, moderating and mediating, and dependent) were counterbalanced in order, so that respondents could not recognize the corresponding constructs of the items.

However, to know the degree of common method bias, this study has tested the Harman's one-factor test, which implements principal component factor analysis of all the variables in the model. According to Podsakoff et al. (2003), one of the most widely used techniques that has been used by researchers to measure the problem of CMV is Harman's one-factor (or single-factor) test. One concludes that the bias is serious when the analysis (from Harman's one-factor test) retains only one factor or a single factor explains most covariance (Podsakoff, et al., 2003). In this study, the analysis revealed that three factors were retained, and the first factor explained only 27.62 % of the variance. If the first factor explains less than 50% of the variance, then result shows that the bias is not so serious as to make analysis invalid even though it may still slightly inflate regression coefficients (Cho & Lee, 2012).

### Administration of the Questionnaire

The questionnaire comprises of 18 items including seven demographic details. A questionnaire has been prepared in English language with translation in Nepali language in order to ease the participants. Concretely, the translation was performed by researcher and edited by two other researchers whose native language is Nepali. Five employees comparable to the respondents of

this research also checked the language, simplicity, and clarity of the questionnaire. For the administration of questionnaires, chief executive officers of each and every sample selected companies were requested to make participation their employees in the survey. In each company, on the request of the researcher, a referral person was assigned by CEO to facilitate the distribution and collection of questionnaires. With the help of reference person, altogether 550 questionnaires were distributed to each respondent individually. Out of the 550 distributed questionnaires 417 were filled up and returned back. But only 358 (65%) questionnaires were found ready to use for the study purpose.

### **Data Analysis**

The data collected for this study were analysed in various phases. First, to determine the item retention in the context of this study, factor analysis (principal component analysis with varimax rotation) was computed on all multiple scale items. In order to avoid confounded measures of closely related constructs, the following three strict rules-of-thumb (Dysvik & Kuvaas, 2013) have been applied. The Items were retained only; i) with a strong loading of .50 or higher, ii) a cross-loading of less than .35 on other included factors, and iii) a differential of .20 or higher between included factors. Whenever construct measuring items are translated from English to local language, there are practice of choosing an exploratory factor analysis rather than confirmatory factor analysis (e.g. Karatepe, 2012; Dysvik & Kuvaas, 2013). All the items used in this study were prepared in English with translation into Nepali that is why exploratory factor analysis has been adopted rather than confirmatory factor analysis.

Histogram and Normal Q-Q plot have been plotted to test normality of the residual. Multicollinearity diagnostic have been tested ( by VIFs) to measure the multicollinearity among the independent variables and moderating variables while measuring the interactive effect of independent variables and moderating variables on the dependent variable.

Multiple Regression Models (MRM) have been calculated to measure significant of direct association of independent variable and moderating/and mediating variable with dependent variable after controlling the effect of demographic variables. Hierarchical Regression Model (HRM), as the guidelines provided by Baron and Kenny (1986), has been calculated to measure interactive (moderating) effects. F- test have been computed to measure the significance of the model, t-test has been computed to measure the significance of association of single variable, and change in  $R^2$  has been used to measure the significance of adding another variable in the model.

According to Baron and Kenny (1986) the following three conditions must be met to support a mediating relationship. First, the independent variable must be significantly associated with the mediator in the first equation. Second, the independent variable must be significantly associated with the dependent variable in the second equation. Finally, after the mediator is entered in the regression model, the relationship between the independent and dependent variables should either disappear (full mediation) or significantly diminish (partial mediation). Sobel test (Preacher & Leonardelli, 2001) was used to measure the significance of reduction of the relationship between independent variable and dependent variable due to entering the mediating variable.

### **Results**

As shown in Annex I, the principal component analysis revealed that two of the PA satisfaction items loaded in another factor and another one item loaded with less than the threshold value .50. One of the intrinsic motivation items crosses loaded with value .43 and another one loaded in

other factor. Two of the affective organizational commitment items loaded in another factor and one factor loaded with less than the threshold value .50. All these items (which were not properly loaded) were removed from the analysis before computing scales by averaging of the items. Details of principal component analysis have been presented in Annex I.

As depicted in Table 2, there were no strong correlation coefficients (all are less than .50) between predictor variables, therefore the issue of multicollinearity need not be addressed.

**TABLE 2**

	PAS	IM	AOC
PA Satisfaction (PAS)	-		
Intrinsic Motivation (IM)	.35***	-	
Affective Organizational Commitment (AOC)	.34***	.44***	-

However, VIFs (variance-inflating factors) have been calculated to measure the presence (or not) of the multicollinearity while calculating the interactive effect of independent and moderating variable on the dependent variables (i.e. calculating hierarchical moderating regression). In this study, VIFs have been found less than 10 except interactive variables. According to Adnan et al. (2006), the multicollinearity would not be problematic if VIF is less than 10. **Even VIFs are more than 10 and it is caused by the inclusion of powers or products of other variables, there would not be a problem of the multicollinearity (Paul, 2012).**

**TABLE 3**  
**REGRESSION RESULT TESTING DIRECT, MEDIATION AND MODERATION MODELS**

Independent Variables	Dependent Variable: Affective Organizational Commitment			
	Model 1 ( $\beta$ )	Model 2 ( $\beta$ )	Model 3 ( $\beta$ )	Model 4 ( $\beta$ )
Step 1: Demographic Control Variables				
Sex	.18***	.19***	.13**	.13**
Age	.07	.06	.06	.06
Education	.03	.02	.03	.02
Experience	.05	.04	.04	.04
Designation	.00	.02	.04	.03
Step 2: Main Effect				
PA satisfaction		.34***	.22***	.23***
Step 3: Main Effect				
Intrinsic motivation			.34***	.32***
Step 4: Interactive Effect				



PA Satisfaction X Intrinsic motivation				-.10*
$\Delta R^2$	.051	.113***	.096***	.01*
$R^2$	.051	.164	.26	.27
F	3.77**	11.44***	17.54***	16.06***

\*, \*\*, \*\*\*, the mean difference is significant at the .1, .05, and .001 levels, respectively

Table 3, model 3, has been used to measure the direct association of PA satisfaction on affective organizational commitment after controlling the effect of the demographic variables and intrinsic motivation. As depicted in this model, to predict the affective organizational commitment, coefficient of PA satisfaction was statistically significant ( $\beta = .22$ ,  $p < .001$ ).

Table 4, model 2, has been used to measure the direct relationship of PA satisfaction with intrinsic motivation, after controlling the effect of the demographic variables. As depicted in this model, to predict the intrinsic motivation, coefficient of PA satisfaction was statistically significant ( $\beta = .35$ ,  $p < .001$ ).

**TABLE 4**  
**REGRESSION RESULTS TESTING PA SATISFACTION WITH INTRINSIC MOTIVATION**

Independent Variables	Dependent Variable: Intrinsic Motivation	
	Model 1 ( $\beta$ )	Model 2 ( $\beta$ )
Step 1: Demographic Control Variables		
Sex	.17**	.18***
Age	.01	.01
Education	-.04	-.05
Experience	.02	.01
Designation	-.10	-.08
Step 2: Main Effect		
PA satisfaction		.35***
$\Delta R^2$	.045	.12***
$R^2$	.045	.165
F	3.32**	11.54***

\*\*\*,  $P < .001$

Table 3, model 3, has also been used to measure the direct association of intrinsic motivation with affective organizational commitment after controlling the effect of the demographic variables and PA satisfaction. As shown in this model, to predict the affective organizational commitment, coefficient of intrinsic motivation was statistically significant ( $\beta = .34$ ,  $p < .001$ ).

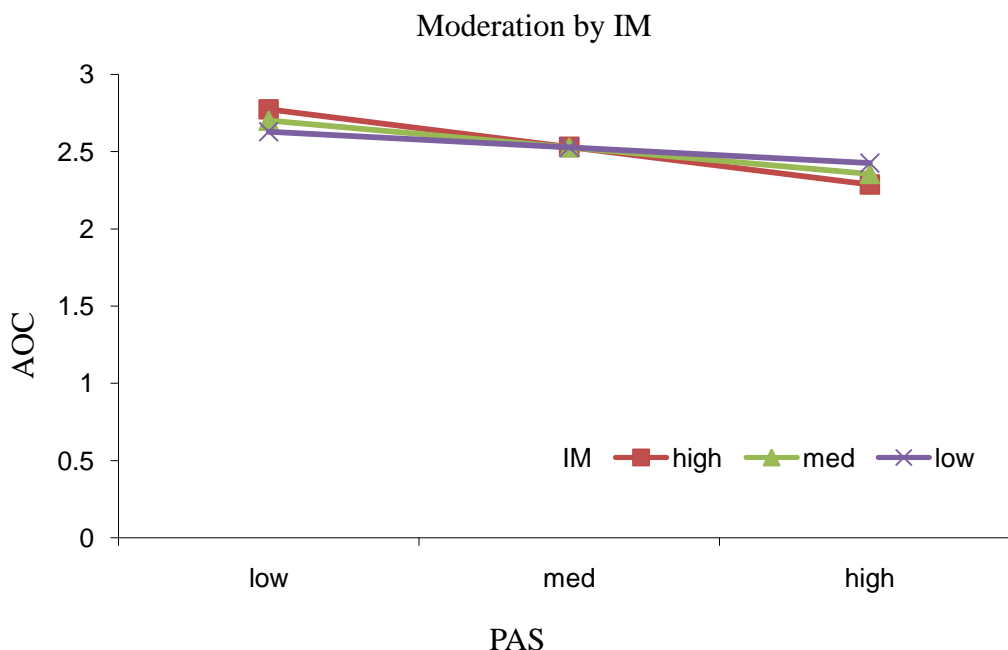
Table 3, model 4, has been used to measure the moderating role of intrinsic motivation in the direct relationship between PA satisfaction and affective organizational commitment. As shown in this model moderating role of intrinsic motivation in the relationship between PA satisfaction and affective organizational commitment was statistically significant ( $\beta = -.10$ ,  $\Delta R^2 = .01$ ,  $p < .05$ ).

Significance of change in  $R^2$  was used to measure the moderating effect of intrinsic motivation in the direct relationships of PA satisfaction with affective organizational commitment. The statistical significance of the change in  $R^2$  due to the addition of the interaction term is typically used as the criterion to measure the effect size of the interaction. However, researchers Witt et al. (2000) have argued that the change in  $R^2$  does not adequately reflect the magnitude of the impact of the moderator variable. A limitation of using the change in  $R^2$  as the only estimate of the effect size of the interaction is that it provides a conservative estimate; as it reflects the average effect of a moderator across the entire range of values of a predictor. To address this issue, three levels (high = mean value plus 1SD, medium = mean value, and low = mean value minus 1SD) of criterion effect identified by Aiken and West (1991) have been applied. In this study, to measure the three levels of criterion effect, interactive regression models were introduced in graph as advocated by Jose (2008) who clarifies the forms of moderation. Figure 1 displays the statistical interaction of PA satisfaction, affective organizational commitment and intrinsic motivation as dependent, independent and moderating variables respectively. According to Jose (2008) statistically significant interactions occur when the three lines representing high, medium and low value of moderating variable (here, intrinsic motivation) are not parallel.

Graphic presentation of interactive effects of PA satisfaction and intrinsic motivation to predict the affective organizational commitment has been shown in Figure 1. As shown in Figure 1, graphs representing the high, medium, and low level of intrinsic motivation are not parallel and sloped negatively. Negative sloped graph mean there is antagonistic (where moderator reverses the original effect of the predictor on the outcome) moderating role of intrinsic motivation in the relationship between PA satisfaction with affective organizational commitment.

Figure 1

*Moderation by IM in the Relationship between PAS and AOC*



Graph representing high-value of intrinsic motivation was comparatively steeper than both mid-value and low-value representing graphs. This indicates that there was a relatively strong negative prediction of PA satisfaction on affective organizational commitment for those employees who had a high level of intrinsic motivation and vice versa.

Three criteria developed by Baron and Kenny (1986) that need to be satisfied in order to determine the mediator relationship were adopted. Table 4, model 2, depicts the first criterion that the independent variable (PA satisfaction) must be associated with the mediating variable (intrinsic motivation) which was met ( $\beta = .35, p < .001$ ). The second criterion, independent variable must be related to the dependent variables before the mediator is entered. This relationship was measured in Table 3 - model 2. The second criterion was met for the association of PA satisfaction with affective organizational commitment (Table 3, model 2,  $\beta = .34, p < .001$ ). Third criterion, after the mediator is entered in the regression model; the relationship between the independent and dependent variable should either disappear (full mediation) or significantly diminish (partial mediation). The third criterion was measured in Table 3 - model 3. Coefficient of PA satisfaction to predict affective organizational commitment has diminished from .34 ( $\beta = .34$ , coefficient of PA satisfaction before entering intrinsic motivation) to .22 ( $\beta = .22$ , coefficient of PA satisfaction after entering the intrinsic motivation). Then, next step was to test whether these diminished coefficients of PA satisfaction were statistically significant or not; for this purpose, Sobel test (Preacher & Leonardelli, 2001) has been applied. Sobel test revealed that diminished PA satisfaction coefficients, after entering intrinsic motivation, to predict affective organizational commitment ( $z = 5.13, p < .001$ ) was statistically significant.

In addition to measuring the significance of diminished coefficients of the independent variable on the dependent variable after entering the mediating variable; it was interesting to know the effects size of the independent variable on dependent variables before and after entering the mediating variable. As shown in Table 5, the total effect of PA satisfaction on affective organizational commitment was .34. Out of this effect; direct effect of PA satisfaction on affective organizational commitment was .21, and indirect effect of PA satisfaction on affective organizational commitment through intrinsic motivation was .13. Indirect to total ratio was .38 which means 38% effect of PA satisfaction on affective organizational commitment goes through the mediating variable intrinsic motivation.

**TABLE 5**  
**DIRECT AND INDIRECT EFFECT SIZE (COEFFICIENTS) OF THE PAS ON AOC AND TI**

Effects Size	Dependent Variables
	AOC
Total effect of PA Satisfaction on AOC	.34
Direct effect of PAS on AOC	.21
Indirect effect of PAS on AOC via IM	.13
Indirect to Total ratio	.38

Independent Variable = PAS, Mediating Variable = IM

## DISCUSSION

This study found that there was direct impact of PA satisfaction on affective organizational commitment. This finding is consistent with different prior studies, like Fakharyan et al. (2012), Vignaswaran (2008), and Kuvaas (2006b). In the case of direct relationship between PA satisfaction and intrinsic motivation, this study found the positive and significant relationship. Theoretically, Pettijoh et al. (2001) have stated that by reducing ambiguity through feedback and discussion, PA satisfaction may positively affect the resulting level of motivation exhibited by employees. Likewise, Kim and Rubianty (2011) have stated a PA system that is perceived to be fair and acceptable in terms of distributive, procedural, and interactional aspects would positively affect intrinsic motivation. Similarly, the findings of this research consist with Fakharyan et al. (2012), Vignaswaran (2008), and Kuvaas (2006b). Likewise, this study found that there exists a positive direct impact of intrinsic motivation on affective organizational commitment, which shows similarity with numbers of prior studies like Fakharyan et al. (2012), Vignaswaran (2008), Karatepe and Tekinkus (2006), Kuvass (2006b), and Ganesan and Weitz (1996). Such similarities of findings with theoretical expectations as well as empirical findings indicate that established theories are strong and they are not affected by the contexts.

As expected, this study found that intrinsic motivation has moderated the relationship between PA satisfaction and affective organizational commitment. But moderation of intrinsic motivation was antagonistic. Introduction of a moderating variable changes the direction or magnitude of the relationship between independent and dependent variable. A moderation effect could be (a) enhancing, where increasing the moderator would increase the effect of the predictor on the outcome; (b) buffering, where increasing the moderator would decrease the effect of the predictor on the outcome; or (c) antagonistic, where increasing the moderator would reverse the effect of the predictor on the outcome.

Regarding antagonistic moderation, perhaps one of the novel findings, this study indicated that PA satisfaction comparatively strong but negatively impacts on affective organizational commitment for those employees who have a high level of intrinsic motivation and vice versa. Whether high, or medium or low level of intrinsic motivation exist in the relationship between PA satisfaction and affective organizational commitment; it applies the antagonistic moderation. Possible causes can be that intrinsically motivated people are self-managed and self-controlled; they do not like comments from supervisor either it is about their strength or weakness. Due to their intrinsic motivation, they are already excited, involved, committed, energized, and psychologically empowered. Comments about their career development, work- life, roles and responsibilities in organization, personal goals etc. from supervisor (or others) may threat their self-esteem. If, intrinsically motivated people feel PA activities are threatening their self-esteem and development, then it may lead negative impact on affective organizational commitment.

Out of different PA methods, a particular method can be the best suitable for the particular context. For example Management by Objective methods can be more effective than the Graphic Rating Scale method for managerial and professional employee rating. Moreover, performance appraisal systems are not generic or easily passable from one organization to another or one designation to another. Their design and administration must be tailor-made to match with a particular employee and organizational characteristics. Therefore, the application of the generic performance appraisal method for all types of employee might be the other possible causes of an antagonistic moderating effect of intrinsic motivation in the relationship between PA satisfaction and affective organizational commitment. Because, if intrinsically

motivated people felt they are not assessed as what they are and rated in predetermined standard format. Then, they do not feel their own compatibility with current organization which may leads to negative affective organizational commitment.

Though, to the best of literature reviewed in the study, there were few empirical evidences regarding moderating role of intrinsic motivation between PA satisfaction and affective organizational commitment. Finding of this study did not show similarity with the findings of a prior study carried out by Kuvaas (2006b) in Norwegian banking context who reported that there was no moderation of intrinsic motivation in the relationship between PA satisfactions and affective organizational commitment. Intrinsic motivation depends not only on innate qualities common to all people, but also on socialization aspects of corporate culture that support proactive work behavior (Peterson & Ruiz-Quintanilla, 2003). So, logic for such inconsistent findings can be the adaptation or not the particular culture (e.g. collaborative and cooperative) in the organization.

This study found that intrinsic motivation mediates the relationship of PA satisfaction to affective organizational commitment. This finding is consistent with the prior study of Fakharyan et al. (2012) and Vignaswaran (2008) but not with the study of Kuvaas (2006b). Such inconsistencies indicate that theoretical proposition; intrinsic motivation mediates the relationship of PA satisfaction to affective organizational commitment are also context dependent and requires further empirical testing. Another important and novel finding of this study is a measurement of the effect size of PA satisfaction to affective organizational commitment that goes directly and indirectly via intrinsic motivation. Apart from the total effect size; only 38% effect of PA satisfaction on affective organizational commitment goes through intrinsic motivation.

### **Practical implication**

Employee's affective organizational commitment was positively affected by both PA satisfaction and intrinsic motivation; which means organizations can increase employee's affective commitment by increasing PA satisfaction and intrinsic motivation. Intrinsic motivation has antagonistically moderated the relationship between PA satisfaction and affective organizational commitment. Here, the organization should consider the level of employee's intrinsic motivation while increasing affective organizational commitment by increasing PA satisfaction. There was a relatively negative strong prediction of PA satisfaction on affective organizational commitment for those employees who had a high level of intrinsic motivation and vice versa. The organization can focus to increase affective organizational commitment by enhancing PA satisfaction for those employees who have low level (or zero level) of intrinsic motivation. So that, relatively, the marginal decrease of PA satisfaction on affective organizational commitment becomes lower. Relationship of PA satisfaction to affective organizational commitment has been mediated by intrinsic motivation. Being affective organizational commitment is positively affected directly by PA satisfaction as well as indirectly via intrinsic motivation; the organization can increase affective organizational commitment by increasing PA satisfaction in a way that increased PA satisfaction should cause to increase in intrinsic motivation. So that organization can be benefited to increase affective organizational commitment directly by increasing PA satisfaction (i.e. .21, direct relationship) and indirectly through intrinsic motivation (i.e. .13, indirect relationship)

**Theoretical implication**

Novel theoretical contributions of this study are; firstly, the intervention of intrinsic motivation in the relationship between PA satisfaction and affective organizational commitment is negative; means original positive association of PA satisfaction with affective organizational commitment becomes negative when it is interacted with intrinsic motivation. A marginal decrease on employees' affective organizational commitment due to PA satisfaction is lower for those employees who possess low level of intrinsic motivation and vice versa. This finding can be a base for further study and analysis in the literature of intervention of intrinsic motivation in the relationship of PA satisfaction to affective organizational commitment. Secondly, out of the total effect of PA satisfaction on affective organizational commitment; 38% effect size goes through the mediating variable intrinsic motivation. These findings can be interesting issues to theoretician for further discussion and testing in the literature of the mediating role of intrinsic motivation in the relationship of PA satisfaction to affective organizational commitment. The direct impact of PA satisfaction on affective organizational commitment and intrinsic motivation on affective organizational commitment are consistent with prior number of studies (e.g. Fakharyan et al., 2012; Kuvaas, 2006b & Vignaswaran, 2008). Such consistencies of findings in different contexts reveal that the theory can be generalized.

**Critiques of the Study**

Despite Common Method Variance (CMV) is widely regarded as a serious threat to the validity of findings based on self-reports, there is insufficient research on its confounding influence (Lai et al. 2013). However, Podsakoff et al. (2003) have suggested different procedural remedies for controlling findings that may deviate due to common method bias (more discussed in the methodology section). Out of their suggested remedies; one technique (i.e. obtaining measures of the predictor and criterion variables from different sources) was not considered in this study. It is one of the issues to be addressed in obtaining self-reported perceptual data. Because one of the major causes of CMV is obtaining the measures of both predictor and criterion variables from the same rater or source, one way of controlling for it is to collect the measures of these variables from different sources. But all the measures in this study were obtained from the same sources at a time. Moreover, Harman's single-factor test that implements principal component factor analysis of all the variables in the model showed that first factor explained 27.62 % of the variance. One concludes that the common method bias is serious when the analysis retains only one factor or a single factor explains the most variance (Podsakoff, et al., 2003). Though, this result does not show the serious problems of common method bias, there is room to improve it because 27.62 % of the variance was explained by first one factor out of the five factors in Harman's single-factor test.

PA satisfaction is the predictor variable in this study. There are different methods of performance evaluation with own rating scale format. A wide range of rating scale formats can be used for PA. It is arguable that differences in rating scale formats could have influence on its dependent variables. So, the rating scale format cannot be ignored to determine the level of satisfaction with PA. Tziner et al. (2000) have concluded that ratees' satisfaction with PA was highest and their perceptions of performance goals were more favourable when using BOS (Behavioral Observation Scale- which asks raters to report the frequency of specific job-related behaviours). Trainer and associates further added that different behavioural-oriented rating



formats can enhance or inhibit the developmental applications of PA. But this study has not considered the rating scale format which can be one of the important facets of PA satisfaction and that can cause its moderating, mediating and dependent variables.

Different controlling variables are whether controlled or not while measuring predictor variable (here, PA satisfaction) significantly impact on its explained variable (here, affective organizational commitment). Ratees' perception of perspective use of PA result can be one of the controllable variables to determine the employee's PA satisfaction level. So, perceptions of PA use can be one of the important factors to be considered while measuring PA satisfaction, as they affect both rater and ratee attitudes and behaviours. Boswell and Boudreau (2000) concluded that the perceived developmental PA use positively associated with both PA satisfaction and satisfaction with the appraiser, but the effect of perceived PA use for evaluation was non-significant. Boswell and Boudreau added if an organization states that the PA is used for a certain purpose (for example, individual development) but the employees do not feel it is actually for that purpose, attitudes may be more negative in comparison to when an organization succeeds in matching perceptions of use as stated. Actually, this study has not considered the employees' perception of perspective use of PA, though PA satisfaction measuring items were only about the developmental use of PA. Organizations should perhaps make the developmental aspect of the PA process clear so that employees understand and believe that a primary purpose of their PA is for job and career development. Having said this, organizations should be careful to match perceptions to reality, so that employees perceive development feedbacks are important components of the appraisal process and react favourably.

Likewise, gap between employees' PA event and measuring its response is another factor to be considered while measuring PA satisfaction. It is common in PA practice that many organizations conduct the PA on an employee's anniversary date. But it is possible that survey responses can be influenced by the most recent experiences. So investigating employees' reactions immediate after PA reveals more realistic information. But this study has not considered such factor.

Another factor can be considered while measuring PA satisfaction is the role of Core Self-Evaluation (CSE) of an individual that may cause differences in responses regarding feedback from the PA. Individual CSE represents a stable personality trait which encompasses an individual's subconscious, fundamental evaluations about themselves, their own abilities and their own control. According to Judge et al. (1997), CSE is a broader, higher order trait consisting of four evaluations-focused and fundamental personality traits. They are : (1) self-esteem – i.e. the favourable or unfavourable attitude toward the self (Rosenberg, 1965), (2) generalized self-efficacy – i.e. the evaluation of one's capability to mobilize motivation, cognitive resources, and courses of action needed to exercise general control over many events (Judge et al., 1997) (3) emotional stability - i.e. the tendency to be emotionally stable and steadfast as opposed to insecure, guilty, and timid (Costa & McCrae, 1988), and (4) locus of control- i.e. the degree to which people believe they can control events and outcomes in their lives (Rotter, 1966).

From the definition it can simply be argued that individuals who have high core self-evaluations will think positively themselves and be confident in their own abilities. Conversely, individuals with low core self-evaluations will have a negative appraisal of themselves and will lack confidence. Empirical evidences show that higher CSE were positively associated with both higher satisfaction and goal commitment following the PA discussion. Kamen and Annen (2010) tested that individuals with high CSE were more satisfied and motivated because they were more likely to experience having a voice (their own opinion) during the appraisal process. Satisfaction and goal commitment following the PA discussion are related to PA satisfaction. Meta-analytic results, carried out by Chang et al. (2010) support the relation of CSE with various outcome variables, including job and life satisfaction, in-role and extra-role job performance, and perceptions of the work environment (e.g., job characteristics and fairness). Therefore, consideration of control of CSE while measuring predictor construct (PA satisfaction) seems meaningful, but it is not regarded in this study.

As discussed in the previous paragraphs, numbers of issues to be addressed for refinement of the findings are raised as the critique of this study. Further study's findings will be more generalizable if it is carried out addressing these issues, like: common method bias, performance rating scale format, ratee's perception of perspective use of PA, timing of PA event and measuring its response, corporate culture (e.g. cooperative culture, innovative culture, and supportive culture), employee's core self-evaluation etc.

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### ANNEX I

Explorative Factor Analysis - (Rotated Component Matrix (a) Component)							
	1	2	3	4	5	6	7
I am satisfied with the way my organization provides me with feedback (PAS)	.75						
The feedback I receive on how I do my job is highly irrelevant (PAS)							.72
My organization is good at providing recognition for good performance (PAS)	.77						
The feedback I receive do not agree with what I have actually achieved (PAS)							.68
I think that my organization attempts to conduct performance appraisal the best possible way (PAS)	.72						
My organization seems more engaged in providing positive feedback for good performance than criticizing poor performance (PAS)	.76						
Performance appraisal is valuable to myself as well as to my organization (PAS)		.44					
My job is so interesting that it is a motivation in itself (IM)				.70			
The tasks that I do at work are themselves							

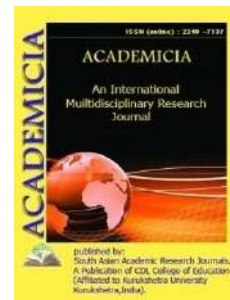


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representing a driving power in my job (IM)	.66	
My job is not meaningful (IM)	.52	.43
I feel lucky being paid for a job I like this much (IM)	.64	
The job is like a hobby to me (IM)	.51	
I do not feel 'emotionally attached' to this organization (AOC)		.68
I feel a strong sense of belonging to my organization (AOC)	.67	
This organization has a great deal of personal meaning for me (AOC)	.64	
I really feel as if this organization's problems are my own (AOC)	.69	
I do not feel like 'part of the family' at my organization (AOC)		.56
I enjoy discussing my organization with people outside it (AOC)	.45	

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Extraction Method: Principal Component Analysis.



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## THE PROBLEMS OF PEOPLE'S RESETTLEMENT POLICY IN THE BUKHARA REGION IN 1950-60s

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### ABSTRACT

*In the following article the issues of the people's resettlement policy on the basis of planning in the region of Bukhara, result of resettlement measures, the essential issues related with the co-operation between the government of Uzbekistan SSR and regional authorities are revealed in the framework of archive sources.*

**KEYWORDS:** *Resettlement, Plan, New Land, Households, Decision, Privilege, Propaganda, Housing, Social Facilities.*

### Introduction

During the Soviet government's resettlement policy, it faced financial, logistical, housing, social facilities, and a number of other problems. The central government has developed a number of measures aimed at solving these problems and put them into practice. However, it took a long time for a mechanism to fully address the problems of resettlement policy to be formed. The plans designed to solve the problems did not take into account the stereotypes and mental characteristics of the republics of the union and the peoples living in them. Republican governments would often have to deal independently with problems that arose during the resettlement policy process. However, the normative and legal documents set by the center limited the independence of the allied republics. In this case, it is possible to witness that the process of timely and positive solution of problems has become incredibly protracted.

During the resettlement policy implemented in Uzbekistan in 1950-1980, there were unspeakable problems. In particular, the planning of resettlement activities, the involvement of migrants in the resettlement process, registration of their documents, transfer from one place to another, relocation of households, freedom and privileges for migrants (providing them with loans, livestock, land for private farming, tax exemptions, housing, etc.) the organization of economic life for new settlers and the mass return of migrants are include such as issues.

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## LITERATURE REVIEW

In 1950, a plan to relocate 1,100 households in Bukhara region was approved from above and submitted to the regional administration for implementation. Under the pressure of the center, the plan approved by the Government of the Republic did not take into account the internal potential of the region. By August 1950, the republican administration realized that it had made a mistake in developing a plan to relocate the households. On August 28, 1950, by the decision of the Council of Ministers of Uzbekistan No. 1539, the resettlement plan of the region was reduced to 500 households [3.P.278]. Despite the reduction of the resettlement plan for the province, it was intended to maintain the overall volume set by the center. That is, the relocation of 16,000 households indicated by the Center for 1950 [5.P.33] while maintaining the plan, a total of 1,100 households in the country were reduced, while 1,100 households were added to Tashkent region [3.P.278]. It is necessary to emphasize that in the years when Stalin ruled the state, the decisions taken in the center would reach regional executive power in a week or two. Although resettlement measures in the Central Asian republics were much slower than in the central regions of the USSR, very deliberately short deadlines were set for the implementation of the decisions. When a comparative analysis of the resettlement plan and the housing plan for mobile farms is made, the discrepancy in this regard becomes apparent. For example, the relocation plan was adopted on January 28, 1950, while the housing plan was adopted on August 28, 1950 [3.P.299]. As a result of the irrationality, the displaced population was accommodated in temporary and abandoned buildings. This led to a mass return of migrants. For example, in Bukhara region this year, 21 of the farms relocated due to housing problems decided to return to their former places of residence [3.P.299]. In this case, of course, the regional administration has made a “worthy contribution” to making the resettlement policy more complex. In other words, the propaganda aimed at attracting migrants from the areas where the resettlement is planned, the explanatory work on the benefits for farms, was completed in a timely manner in the Kazakhs.

### Main part

The issue of selection of relocated households was even more tragic, as the issue was resolved in the cabinet by mutual agreement of the inspector of the regional relocation department, the district party committee and the representatives of the agriculture department. The importance of explanatory and propaganda activities was highly valued by Soviet government officials. For this reason, clear mechanisms have been developed to carry out explanatory work in the areas where resettlement is planned and intended. In the process of attracting and selecting migrants, the resettlement authorities were expected to make effective use of the media: (handouts (leaflet), posters, brochures, photovoltaics, etc.) newspapers, radio, movies, various publications. In the Uzbek SSR, the publication of material on resettlement in the official publications of the central, regional newspapers or district committees was very limited. But in other regions of the Soviet Union, the situation was different. In 1952, for example, an average of eight volunteer organizers worked in each of the Kirov Oblast's resettlement districts in the Russian Federation. There were also three and four radio sessions in each district. In the absence of a radio line, special telephones were connected to the broadcast, and at least 40-50 individuals organized advocacy activities at the meetings [11.P.131]. In the analysis of the reports of the General Directorate of Resettlement, it was noted that public awareness campaigns on relocated farms in Uzbekistan will be organized with the participation of a representative of the regional resettlement department and 15 (non-state) organizers [2.P.42]. But representatives of the Bukhara regional

executive branch and the party body could not secure the participation of the representative of the directly responsible person (representative of the regional resettlement department) in the meetings, imposing public explanatory work on the kolkhozs farms. As a result, the selected households for relocation could not meet the requirements of the government. For example, the official letter sent by the chairman of the Gijduvan district party committee to Nabiev by the Kagan district executive committee is the basis for our opinion. In it: “Khalikov Shirin, a member of the Lenin kolkhoz in the Gijduvan district executive committee of your kolkhoz council, moved to a mobile farm on the Akhunboboev kolkhoz in the Uba desert village council of the Kagan district. Shirinova Orzi, the wife of Khalikov Shirin, and her daughters Shirinova Olima and Munavvara are still working on the Lenin collective farm in your village council. We ask you to instruct the chairman of the kolkhoz to transfer the comrades named in the farm of Khalilov Shirin to the kolkhoz named after Akhunboboev in the village council of Uba Choli, Kagan district [7.P.88]” - said in the archive materials. We can witness that many mistakes were made during the organizational selection process during the entire relocation period. We can witness that many mistakes were made during the organizational selection process during the entire relocation period. For example, in the 1970s, volunteers from Namangan region moved to the 29<sup>th</sup> state farm named after Murodov in the Bahoristan district of Kashkadarya region. For example, in the 1970s, volunteers from Namangan region moved to the 29<sup>th</sup> soviet farm named after Murodov in the Bahoristan district of Kashkadarya region. They were welcomed, provided with jobs, housing, and a decent salary. However, some of the migrants are dissatisfied with the work after working for several weeks and demand to be paid more than their labor, allocating a few hectares of land for the land. When they learned that the state farm did not have this opportunity, they decided to go back. Apparently, in the Namagan region, the selection of volunteers was done irresponsibly, and those who were trying to earn a living did not notice in time” [10.P.56-58], - said one of the sources. The issue of selection is an important component of resettlement policy, which determines the order of selection of migrants, depending on the type of farm established on the new land. Great attention is paid to the selection of exemplary and hard-working population with experience in cotton growing in agriculture. However, mistakes and shortcomings in the organization of advocacy events had a negative impact on the organizational selection process. A 1957 report by the “General Directorate of Resettlement” focused on the issue of organizational selection, saying: “Of the 304 households selected by the Verkhne-Volinsky District Executive Committee for resettlement, 87 were former mobile households, locals, or other collective farms in the district. Those who were transferred to the kolkhozes-B.R) were composed of settlers [2.P.51]. As a result of monitoring the situation in the main resettlement centers, the Resettlement Department was able to identify a number of shortcomings. As a result of monitoring the situation in the main resettlement centers, “The Resettlement Department” was able to identify a number of shortcomings. If the resettlement measures taken in the Republic were analyzed, it was natural that the scale of the problems would increase. Of the 233 households selected for relocation by the Bekabad District Executive Committee, 80 were from the Dzerzhinsky collective farm, specifically the former relocated ones. Similar cases were reported in the collective farms of Mirzachul, Syrdarya and Kuyi-Chirchik districts [2.P.21].

Upon completion of registration and clearance for resettlement, the delivery of vehicles (trains, trucks, buses, etc.) directly to the designated address by the state would begin. The Council of Ministers of the Uzbek SSR entrusted the regional executive committee with the task of

relocating the inter-district farms to a new location. Various organizations in the region have been involved [4,334] in order to transport migrants to their destination. Various organizations in the region have been involved [4,334] in order to transport migrants to their destination. Various organizations in the region have been involved [4,334] (Regional Department of Agricultural Machinery, Department of Agriculture, Department of Agriculture, State Farms, various trusts) in order to transport migrants to their destination.

But there were unexpected problems when the convoys mobilized for the evacuation arrived at the destination.

**Firstly**, the number of migrants turned out to be lower than expected.

**Secondly**, there was a problem with the fact that the property of the farms, whose relocation was envisaged, was not clearly allocated.

**Thirdly**, instead of the households that applied for emigration, those who did not participate in the competition, those households that were not formalized, gathered in the Centers of relocation.

Realizing that the brick had moved from the mold, the district executive committee and the supervisor of the regional relocation department decided to relocate any farm that had gathered by mutual agreement and expressed a desire to relocate. As a result, unexpected problems began to arise. In particular, on June 3, 1950, the chairman of the Executive Committee of Kagan district, Comrade Isabaev, was sent a message by the chairman of the Executive Committee of Gijduvan district, Nabiev. In particular, "I would like to inform you that the Executive Committee of Gijduvan district has sent a letter to you that Turaev Egam, a member of the Lenin collective farm of Gavshun village council in our district, has moved to your district on a mobile farm. Among the things that took the above-mentioned comrade with him was the belongings of Karimov Tokhtani, a member of the same collective farm. That is why the district executive committee asks Karimov to bring Tukhta's belongings from Turayev Egam"[8.56]. From this point of view, it will be possible to draw such a conclusion- that it was not possible to collect settlers in specially allocated areas, as a result of which the technicians went inside the addresses where they live and loaded with direct loads. Otherwise, there would be no cases of taking away something related to the neighbor. It was also questionable whether Uzbekistan adhered to the principle of voluntariness set out in the decision of the Council of Ministers [5.P.112].

The provincial administration has managed to relocate the households, albeit with great difficulty. The next problems are their placement, organization of economic life, allocation of benefits and housing, etc. Mistakes made during the selection and relocation of migrants also had a negative impact on placement. The success of the resettlement policy was assessed by the fact that the resettled population settled permanently in these areas. The resettlement of people living in the same area, ie relatives, neighbors and neighborhoods, is explained by the guarantee of their permanent residence in the new land. This practice has been tested in other regions of the country and has yielded positive results. During the construction of the South Surkhan Reservoir in the 1950s, 8 villages were relocated to the Oguz massif, while during the construction of the Tupolang Reservoir, 1 village was relocated en masse [12.P.107]. However, the provincial administration took a different approach, selecting 3 to 10 households from each collective farm to relocate. We can see an even more complicated situation when thinking about placement (Appendix 1).

From districts	From kolkhozs	Number of selected households	Resettled to district	Households resettled to kolkhozs	Number of households planned to resettle
1950 year					
Gijduvon	Okhunboboev	3	Kogon	Leninism	50
	Kalinin	4		Molotov	50
	Lenin	8		Lenin	50
	Qizil bayroq	4		Stalin (Tutkunda)	50
	Voroshilov	1		Engels	50
	Molotov	15		Stalin (Ubachuli)	50
	Demitrov	2		Telman	50
	Stalin	13		Stalin (Siyospoyon)	50
	1951 year				
Gijduvon	Stalin	4	Bukhara	Stalin	4
	Lenin	5		Communism	5
	Leninism	7		Q. Mahmud	5
	Voroshilov	7		Voroshilov	2
	Axuboboev	1		Lenin	4
	Bolshevik	2			
	Govshun	8			
	Javchari	8			
	1952 year				
Korakul	October	20	Kogon	Tutkunda	49
	Stalin (Sayyot)	5			
	Kuybyshev	5			
	Stalin (Ziyorat)	10			
	Lenin	5		Chorbakr	1
	Stalingrad	5			
	Leningrad	5			
	Communism	5			

Plan for the selection and placement of the population to be resettled in Bukhara region in 1950-1952 [9. 4, 16, 30, 313, 127]

### Results

The disparity of resettlement and placement plans is evident in the table. In 1950, 1,000 households in the province were relocated, but by June, 45 households had applied for relocation and were housed in the district archives. Apparently, it would not have been as if he had also volunteered work on formalization. In addition, the relocation of one, two or three households



from each village may have had a negative impact on the process of adaptation of settlers, and as soon as the relocation measures were taken, there were cases of returning of household. The procedure of registration of the resettled population was introduced in cooperation with the district executive committees and the resettlement department of the regional executive committee. However, a number of problems arise in this regard due to the fact that the normative and legal documents related to the registration do not reach the region in a timely manner, and the documents submitted to the executive committees are not fully understood by officials. The district executive committees are obliged to submit a written report to the region every 10 days on the progress of the resettlement activities and to submit their list the day after the resettlement [4.P.135]. The exact timing of the resettlement was set out in government decisions. However, shortcomings in the planning and selection process also had a negative impact on the implementation of regulations. In particular, 24 hours for the resettlement of the displaced population, 3 days for the allocation of land to the farmland, 10 days for the issuance of loans to low-income Farms, 1 month period for the purchase of cattle, 6 months for the construction and repair of houses were determined. However, it was not possible to complete the census in the region within the specified timeframes. Reporting forms developed by the General Directorate of Resettlement for the registration of mobile farms (Form 636 registration of mobile households), placement (preparation of reports in Form 37) were not submitted to the regional resettlement department in a timely manner. As a result, the Council of Ministers of the Uzbek SSR limited itself to reporting to the General Directorate of Resettlement on the activities of relocated farms by the district executive committees (Figure 4) [1.P.21]. New problems began to arise under the influence of mistakes made in the process of registration of migrants. These include timely provision of housing, credit allocation, use of benefits, tax exemptions, etc. For example, in one of the two letters sent by the Executive Committee of the Bukhara Regional Soviet of Workers' Deputies to the Executive Committee of the Kagan District on April 22, 1952, to Comrade Isabaev: "The resettlement department of the Bukhara regional executive committee asks you to collect and prepare all the tickets for mobile households in the district executive committee for registration. Keep in mind that if the tickets of mobile households are not issued in time, they will definitely be subject to agricultural tax. When all the tickets have been collected, the district executive committee should inform the department"[6.P.18].

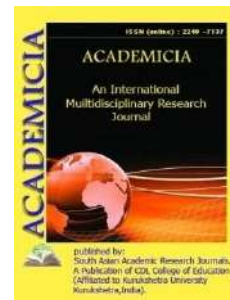
## CONCLUSION

Unfortunately, it was practically impossible to organize the work within the time frames specified in the regulations. As a result, the allocation of existing freedoms and privileges, which had been promised to resettled households and should be the basis for them to live in the new land, has been delayed. In the 1950s and 1960s, planned relocation measures at the regional level did not justify themselves.

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## PHARAOH OF THE WEAVERS OF BAHAUDDIN NAQSHBAND

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### ABSTRACT

*In this article, the life and teachings of Bahauddin Naqshband as a holy text were set forth. The aspects of studying the teaching of Bahauddin Naqshband as a Tatar saint in higher education are highlighted.*

**KEYWORDS:** Weaving, Teaching, Kimhob, Bahauddin Naqshband, Time, Soul, Definition, Shokh Naqshband, Pattern, Dhikr.

### INTRODUCTION

As a result of reforms in the field of education after the independence of our country, it became possible to study the teachings of our ancestors and apply some of them in higher education. This article discusses the teachings of Bahauddin Naqshband and provides information on the life, teachings and creative activities of Bahauddin Naqshband as a weaver in technology and equipment for higher education 5321600-Light industry.

Bahauddin Naqshband was born in the month of Muharram 718 of the Hijra, which coincides in time from approximately March 5 to April 3, 1318 A.D. The deposit of Bahauddin is the village of Kasri Hinduwon near the city of Bukhara. At present, this place is located in the Kagan district of the Bukhara region. After the birth of Bahauddin Naqshband, this village became known as Kasri Orifon and is still known to pilgrims.

The real name of Bahauddin Naqshband is Muhammad. "Bahauddin" is a nickname for his status, achievement and greatness.

“Baho” is an Arabic word meaning: “price”, “beauty”, “light”, “accuracy”, “impeccability”. Muhammad ibn Muhammad al-Bukhoriy has reached such heights that, looking at it, one can see the light, price and beauty of the true faith of Islam, illuminating the thoughts and hearts of those who believe in human God.

The name Shokh Naqshband (ruler of carvers of patterns) was obtained by knitting and drawing patterns on matter - kimkhob (brocade), together with his father. In fact, Naqshband means interweaving a thin thread of patterns of faith, truth and truth, which formed the basis of his teachings, as well as Allah in his heart, and, therefore, the ability to bind the souls of people.

Bahauddin preached: “Naksh gang, badil gang” (whip pattern, pattern in the heart). The true meaning of the name Bahauddin Naqshband was revealed by Alisher Navai in his work “Hamsa”, in the first book “Hairatul Abror”.

Muhammad Porso, in RisolaiQudsia (Treatise on Holiness), wrote the following lines about the excellent qualities of Bahauddin:

He is a light of holiness, a mirror image,  
Answers to questions he is a spring.  
Out of difficulties, he will indicate the ideal  
Clear verb, as if crystal waters  
The flow of poetic speeches and his words.

The father of Bahauddin Naqshband Sayyid Muhammad Bukhoriy ibn Sayyid Zhaloliddin was a craftsman weaver of cloth kimkhob (brocade). Bibi Orif's mother was from the Khojai Khizr clan.

Another three-day-old baby, Bahouddin Naqshband, is brought up by Muhammad Boboi Samosiy and remains his spiritual mentor until the end of his life. Bahauddin Naqshband said: "We received moral education and teaching from Sheikh Muhammad Boboi Samosiy."

Naqshband reached the level of uvais due to spiritual training Abdulhalik Gizhduvoni - KhojaiJahon (died in 1220), the teachings of which were based on the tariqa hodjagon. “This vision became his “second initiation” because Gijduvani ordered Bahauddin to perform a “silent” dhikr, as opposed to a “loud” one, which he held to the end of his life. At the behest of Adbulhalik, Gijduvoni Naqshband meets Amir Kulol (died 1370) and learns from him.

While Naqshband studied the basics of Khojagon with Khoja Amir Kulol, he dreamed of one of the feasts of the Yassaviya teachings of Hakim - Suleiman Bokirgoniy, who sent him to study with the Turkic sheikh Halil. Around the fall of 1336, Naqshband met with Khalilin Bukhara and became his murid. He has been studying with him for 12 years. Bahauddin six years - from 1336 to 1341. serves Khalil. JS Trimmingham writes: "Khalil was the son of Yasavurov of one of the Chigatay khans and from 1341 to 1347 was the Sultan."

In 1341, Khalil became Sultan Khalil and was called Gozonkhan. During his reign, Bahauddin Naqshband continues to serve him and learn from him. After the collapse of the Gozonkhan sultanate, 29-year-old Bahauddin settled in the village of Revartun and devoted the rest of his life to Sufism.

After Khalil - Sultan Khalil, Bahauddin Naqshband studied for seven years (1347-1354) under Amir Kulol, from 1354 to 1360. Serves with Orif Deggaroniy and 3 months studies with Sheikh Kusam. In 1361, he began to create an independent teaching of Naqshbandi.

Bahauddin studied with such well-known sheikhs of the Hodjagontariqah – Abdulholik Gizhduvoni, Hazrat Azizon, Muhammad Boboi Samosiy, Hazrat Amir Kulol and Orif Deggaroniy. He also studied at the feasts of the Yasaviya tarikat - Khalil and Sheikh Kusam, from whom he studied the most advanced thoughts of achieving perfection of a person, on the basis of which he began to develop a new doctrine of improvement - Naqshbandiya. After the death of Amir Kulol in 1370, he independently organizes a new teaching in the tariqa. This doctrine of tariqa, which originates in Bukhara, is called “Naqshbandiya”, after which it becomes the world famous course of the doctrine of tariqa.

The sources cite facts that Bahauddin Naqshband for 22 years was spiritually trained by Hakim Termiziy. In particular, Naqshband received spiritual knowledge from Uvais Karaniy, Mansur Hallodge, Boyazid Bistomy and Zhunaida Bagdodiy.

At the heart of the Nakshbandi tariqah are 11 principles. The 8 principles of the Khojagon teaching were taken in the Naqshbandi teaching and 3 new principles were added to them, which can lead people who do not understand the true purpose of man out of oblivion and darkness, and direct them to the true path, the path of faith in Allah.

Naqshband for the improvement of humanity introduces three new principles:

- “Vukufi zamoni” (awareness of time) - to keep abreast of time and keep up to date;
- “Vukufi adadi” (quantitative awareness) - awareness of the laws of life;
- “Vukufi kalbi” (awareness of the heart) - look into your heart and act as Allah commands the heart, to be able to hear the call of the heart and the voice of the mind.

Naqshband enriched the concepts of tasawwuf about the heart, time and number, discovered new traits and was one of the first to introduce these concepts to perfect a person. The doctrine founded by Bahauddin Naqshband “Naqshbandiya” has global significance. Alouddin Attor, Muhammad Porso, Alouddin Gijduvoni, Yakubi Charkhiy improved this teaching, Khoja Ahror Valiy spread this teaching throughout the world. In the modern world, Naqshbandiya is distributed under the names "Naqshbandiya - Muzhaddidiya", "Naqshbandiya - Holiday".

Bahauddin Naqshband died on Monday night of the third day of the month of Robbiul Aval in the year 791 of the hijra, i.e. March 2, 1389. His grave is located in the village of Kasri Orifon, near Bukhara.

Bahauddin Naqshband knew Arabic, Turkic and Persian. He is considered the pillar of his time, who studied the Koran and hadith, the holiest man and righteous man who received the name of His Holiness Shokh Naqshband during his lifetime. This holy man left the doctrine of Naqshbandi, the work "Avrod" and wise sayings as a legacy.

In St. Petersburg, we were lucky to find and translate a copy of the work "Avrod". And also we managed to learn about four comments on this work. The writings of Bahauddin Naqshband have been preserved in the writings of Muhammad Porso “Risolaikudsiya” and Yakub Charkhiy “Risolaiyusiya”. The quatrains of Bahauddin Naqshband also survived. When asked why he did

not hire servants, he replied: "Slavery and slavery are incompatible things!" The following two bates belonging to him are given in the sources:

"I don't have a carpet, and there is no servant,  
There is no Turk in slavery and no squire.  
I lay in the night, as it should, like a dog,  
Moaning quietly, resting her head on her tail. "

These two bates are also his:

"Nobody we need us anything,  
Suffering for the missing is nothing for us  
Rags on the shoulders, our home is the grave,  
Since rock will overtake us - and mourning is useless to us".

One of his first students, Alouddin Attor, says about the path of Bahauddin Naqshbanda tarikata (the path): "The path of our Khoja was the path of the Fakra, renunciation of earthly goods for the benefit of mankind, loneliness in the name of Allah. His sacred words were filled with philanthropy. His virtue was immeasurable. A hadeeth was often sounded in his speeches: "Ibadat (Divine Service) consists of ten parts, nine of which are the desire for purity, and only one part is prayer."

Therefore, the motto of this teaching is "Dast ba koru, Dilba Yor" (hand in work, and the soul and thoughts about the Lord), "Dast ba koru, tan dar don Bosor" (hand in work, and the body in the market), "Dastba Koru, Madad Az Parvardigor" (hand in work, hope in God). Throughout his life, Bahauddin Naqshband always ate only "halal" food and bequeathed it to his students. The life path and teachings of Naqshband corresponded to the life path of the holiest of the holy people to the Prophet Muhammad (pbuh) and coincides with his moralizing. Therefore, Abdurahman Jamiy wrote the following lines about BahauddinNaqshband:

Mecca and Medina are sealed with holiness,  
Including Bukhara.  
Not All Given the Seal of Holiness  
Holiness became grace for Naqshband.  
You can't meet such a pearl everywhere  
The deposit of this pearl is Bukhara.

In 1993, the 675th anniversary of Bahauddin Naqshband was widely celebrated. In 2017, Decree of the President of the Republic of Uzbekistan No. F-4988 of July 11, 2017 on the 700th anniversary of Bahauddin Naqshband was adopted. From the foregoing, the following conclusions can be drawn: –Bahauddin Naqshband lived in the 14th century in Bukhara, he was educated, cognized the essence of being and the seventh feast (holiest) of Bukhara.

– Bahauddin Naqshband is the largest representative of the tasawwuf teachings and the founder of the Naqshband teachings.



- The work "Avrod" dedicated to the educational and spiritual education of man and his wise sayings have been preserved.
- On the basis of the teachings created by Bahauddin Naqshband, the ideas of industriousness, humanism, enlightenment, and the desire to know life that have not lost relevance in the modern world are promoted.

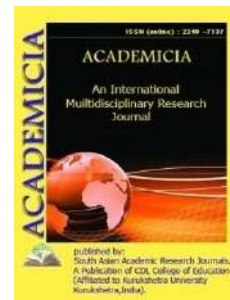
### CONCLUSION

- In conclusion, we can say that in the process of studying the teachings of Bahauddin Naqshband, the results of the work of a student engaged in his craft will increase by 2 times if he performs his profession with an understanding of the value of time, purity of soul, and laws of life. A person who knows the value of time does everything by planning and doing his job. Where there is a person who understands the purity of the soul, gossip is kept aloof.

A person receiving a message from the laws of life develops the ability to see uniqueness in the plural.

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## INNOVATIVE CHANGE IN THE NATIONAL ECONOMY IS THE KEY TO INNOVATION IN ALL AREAS

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### ABSTRACT

*The article discusses such issues as innovative changes in the national economy, innovative activities, the role of innovative strategies in the socio-economic development of the country, the importance of choosing and implementing a long-term strategy for innovative updating of the economy.*

**KEYWORDS:** *National Economy, Strategy, Economic Strategy, Innovation, Social Sphere, Industry, Science And Technology, Scientific Work.*

### INTRODUCTION

One of the priorities of the transition to a market economy is innovative reforms in the economy, the modernization of radical innovations, which are based on ensuring macroeconomic stability, equipping enterprises with new technologies and equipment, and increasing the share of the private sector in the economy. This process, of course, implies the effective use of the country's innovative, economic potential, while at the same time increasing it.

The current state of the country's economy requires accelerating the pace of innovative changes in the national economy.

The experience of developed economies shows that the implementation of a deep, effective innovation strategy can be achieved only through the rational use of economic and natural factors of the country. In the transition to a market economy, the innovative formation of the economy is primarily due to sectors that ensure economic growth, which in turn leads to a reduction in the export of raw materials, the development of its processing, the preservation of foreign currency, and an increase in employment.

These factors, in turn, lead to the strengthening of our country's position in the world community through the implementation of innovative strategies and innovative activities in all areas.

Indeed, the country's active integration into the world economic system, the expansion and liberalization of the economy, and modernization based on innovation require special attention to the problems of ensuring sustainable economic growth in Uzbekistan.

The most general description of our century can be summarized in a nutshell - this is a period of innovation, changes in the life of society as a whole, which will determine the development of human destiny for the next two centuries. It was in this era of radical change that humanity entered the threshold of the third millennium. All the usual aspects of everyday life and the dynamics of society are changing.

The world is changing beyond recognition and requires a new understanding from scientists, long-term strategies of state and political representatives, that is, different thinking from the whole generation. The selection and implementation of a long-term strategy of innovative economic renewal plays an important role in the further development of the Republic of Uzbekistan.

Innovation is the introduction of innovations in any field of activity.

Another important factor in industrial production, such as labor, capital, natural resources and entrepreneurship, is the emergence of innovative resources, but there are some problems with the commercialization of scientific and technical projects, that is, their use for profit in market competition.

Innovation is the introduction of scientific innovations in any field of activity (scientific discoveries, innovations, scientific inventions, constructive projects, and so on), in particular:

- These scientific and technical innovations in the field of science and technology - computer, laser, microwave semiconductor technologies, integrated lines of communication and satellite communications, robotics, providing the operation of global networks of e-mail, mobile communications and the internet;
- In the energy sector - nuclear energy, synthetic fuel and food;
- In medicine, genetic engineering (DNA).

Numerous empirical evidence suggests that technological progress is the main driver of economic growth. In a market economy, small business and entrepreneurship play a central role in the innovation process, and innovation is the main competitive tool in industries with high rates of technological progress.

These observations are not new. In his book *The Wealth of Nations*, Adam Smith emphasizes institutions that support technological progress and economic development. Among economists of the first half of the twentieth century, Joseph Alois Schumpeter (1883-1950) occupies a special place. Its influence on modern economic thinking is no less than on the neoclassical school. It was this scientist who described the mechanism of competition, which stimulates innovation and is the main source of income in excess of the norm.

Schumpeter incorporated the strategic advantages and achievements gained through continuous improvement of the organization, product or production process into the concept of innovation or “introducing new combinations”. He indicated the following five cases:

- 1) preparing a new blessing;
- 2) introduction of a new production method;
- 3) the development of a new market;
- 4) the availability of a new source of raw materials or semi-finished products;
- 5) appropriate reorganization, for example, ensuring a monopoly position.

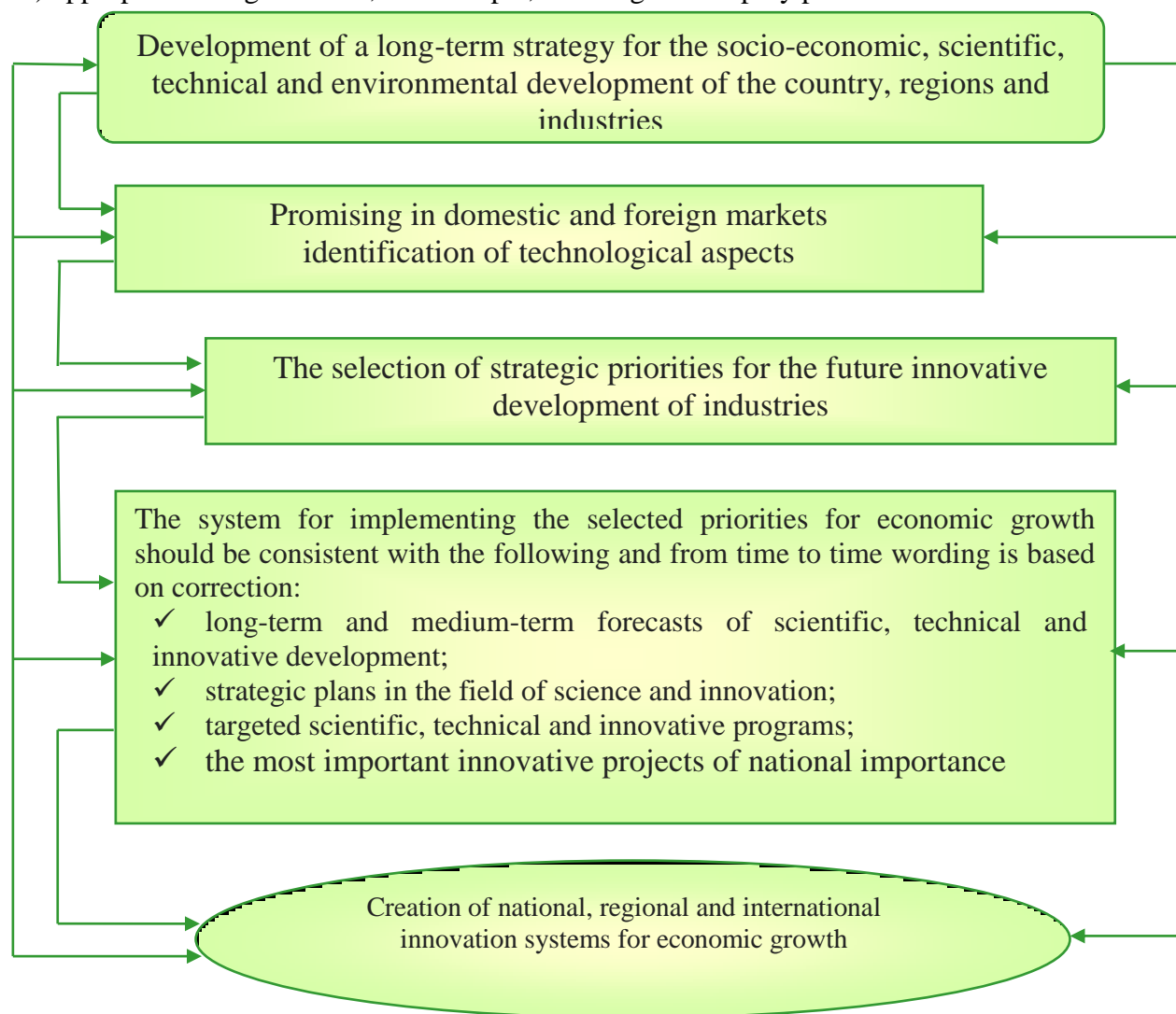


Figure 1. The mechanism and structure of the implementation of innovative growth strategies in achieving economic growth of industries.

It should be noted that the full provision of resources for the implementation of the selected priorities of economic growth is carried out on a multichannel basis:

- 
- budget financing for the development of innovative projects and programs in the non-productive sphere, as well as the most important innovative projects, targeted programs, strategic plans and forecasts, the distribution of budget funds for the entire period of the implementation of programs and projects;
  - providing tax and customs benefits for innovative programs and projects focused on individual priority sectors;
  - creating conditions for attracting private and foreign investment in such programs and projects;
  - organization of innovative and technological expertise of investment programs and projects in industries to give innovative content to investments.
  - In addition, the formation of innovative infrastructure should be focused on the implementation of selected priorities:
  - budget support for the development and expansion of the Central Bank to more actively support innovative projects;
  - the creation of the Republican Innovation Fund and local regional funds to support targeted priority programs and projects of an innovative nature, as well as state insurance companies for priority innovative projects;
  - the use of part of the reserve fund of the Central Bank of the Republic of Uzbekistan in one form or another to support large-scale innovative projects of a priority nature;
  - scientific expansion of scientific, technical and innovative infrastructure through the creation of technology transfer centers, innovative business incubators, innovation centers and so on;
  - creation of multinational companies and strategic alliances on an international basis based on the basic technologies and priorities that Uzbekistan can lead and successfully operate in the global market;
  - involvement of non-governmental organizations, academies of sciences, scientists, engineers, designers and managers in the implementation and promotion of innovative programs and projects in industry;
  - Creation of national, regional and international innovation systems focused on innovation and technological growth to achieve economic growth.

The formation of an effective mechanism of innovative growth in achieving economic growth of industries will allow in practice to realize the strategic and innovative function of the state in a market economy.

A feature of the intensive type of economic growth is that the expansion of production is achieved through a qualitative improvement in growth factors, in particular, the use of advanced technologies and the use of highly qualified and highly productive labor. In this case, the growth rate of the real volume of production will be higher than the rate of change in the total costs of its production.

In the early stages of the development of productive forces, economic growth occurs mainly on an extensive basis. The role of intensive growth factors in saturating production with machines and highly qualified personnel is increasing.

It should also be noted that the type of economic growth can be determined conditionally, since in real economic practice it does not occur in a “pure” form. Intensification is not just a feature of our time.

Intensive economic growth occurs after extensive growth, followed each time by the technological method of production - a method of the relationship of productive forces and qualitative changes in these components.

A number of arguments in favor of a positive future scenario. First, historical experience. Over ten thousand years of history, society repeatedly fell into the abyss, and each time it found the strength and mind in itself to get out of this situation, to step to higher peaks of development.

Secondly, the instinct of self-preservation and reproduction, the desire of each generation to enrich the inheritance left to it and provide it in the best possible way to the next generation, meeting the requirements of the time. This requires a correct understanding of the scale and structure of these requirements and problems, as well as the development and implementation of appropriate response strategies in every country, in every civilization and on a global scale.

Thirdly, the transition to a knowledge society and the formation of the noosphere also contribute to this.

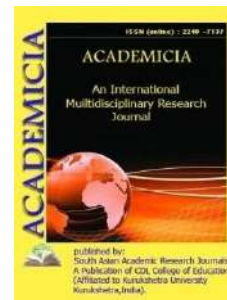
In fact, it is a question of forming a global innovation system that responds to the innovative renewal of society that is taking place in the world.

Thus, at the crossroads of centuries and millennia, humanity is faced with a new theory of foresight, a strategic planning methodology and the need to assess the nature and consequences of basic (and sometimes periodic) innovation clusters in addition to a radically changed worldview (post-industrial scientific paradigm). Thus, the participation of civil society and its institutions - scientific, technical and engineering societies, inventors' unions, professional associations - is also important in the process of innovative creativity. Civil society should influence representatives of the central and local authorities elected by it in order to create favorable conditions for innovation.

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## METHODS OF APPLICATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN EDUCATION AND PROBLEMS...

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### ABSTRACT

*The organization of lessons using ICT in the educational process is the most effective tool in educating students. If each lesson is organized because of ICT using unique pedagogical technologies, this topic will be the most memorable for the student. This article examines the most efficient ways of teaching through the information and communication technologies.*

**KEYWORDS:** *Information Technology, ICT Tools, Interactions And Collaborations, Cooperation, E-Learning Platforms, Infrastructure, Teachers' Policies, Digital Content. ICT in the field of education*

### INTRODUCTION

Schools use a variety of ICT tools to share, create, distribute, store, and manage information. In some contexts, ICT has also become an integral part of educational communication through approaches such as the replacement of whiteboards with interactive whiteboards. The so-called “broken classroom” model is when students use their smartphones or other devices during the lesson and students watch lessons at home on a computer and use the class time for more interactive lessons. When teachers are trained in digital literacy and the use of ICT, these approaches lead to higher order thinking skills, provide students with creative and individual choices to express their understanding, and keep students in the community and in the workplace, which allows them to be prepared for the technological changes that are taking place. ICT planners should include followings: taking into account the overall cost balance, providing the necessary infrastructure and maintenance, coordinating investments with teacher support and other policies aimed at the effective use of ICT.

**Problems and discussion**

Digital Culture and Digital Literacy: Computer technology and other aspects of digital culture have influenced the construction and spread of knowledge and power around the world by changing the way people live, work, play and learn. Moreover, digital culture is increasingly harming the national and global economy. Digital literacy - the ability to search for information, view and produce information, as well as the critical use of new media for full participation in society - has become important for curricula. In many countries, digital literacy is being created through the introduction of information and communication technologies (ICT) in schools. Some common ICT curricula include one laptop per child: Cheaper laptops are designed for 1:1 use in school, with lower power consumption, lower cost operating system, and special software and network functions. However, delivering one laptop per child can be very costly for some developing countries. Tablets: Tablets are small PCs with a touch screen that allow access without a keyboard and mouse. Cheap training programs ("apps") can be downloaded to tablets, making them a versatile learning tool. The most effective applications develop high-level thinking skills and provide creative and individual choices for students to express their understanding. Interactive whiteboards or smart boards: Interactive whiteboards allow you to display, manage, drag, click, or copy projected computer images. Simultaneous handwritten notes can be taken to the board and saved for later use. Interactive whiteboards are associated with teaching throughout the classroom, not with student-centered activities. Typically, if ICT is available for students to use throughout the class, the level of student engagement will be higher. There can be hundreds of books in digital form and they are increasingly being used in the delivery of learning materials. Students - both educated and unwilling readers - have responded positively to the use of e-learning tools for independent reading. Features that can contribute to the positive use of e-learning tools include their portability and long battery life, the ability to respond to text and identify unfamiliar words. In addition, many classic books, the names are provided free of charge in the form of an e-book. Classrooms: A selective classroom model that includes lectures and hands-on activities through home-based computer-based learning and interactive learning can create an expanded opportunity and curriculum. There is little information about the results of teaching students in the classrooms where they study. Students' opinions about the classrooms they teach are mixed, but generally positive, as they prefer joint learning in class to lecture.

**ICT and teacher training**

Teachers need clear opportunities for professional development to assess the formation of teacher training, individual learning, access to Internet resources, and the ability to use ICT to develop student interactions and collaborations. It affects the general attitude of teachers towards ICT in the classroom, but it should provide clear guidelines on ICT teaching and learning in each subject. Without such support, teachers use ICT in skill-based programs that limit students' academic thinking. They are also needed by education managers, leaders, educators, and decision makers to support teachers as they change their subjects. .

**Ensuring the benefits of ICT investment**

Additional conditions must be met to ensure investment in ICT students. School policy should include minimum optimal infrastructure for ICT, including security measures such as stable and affordable Internet access and blocking of filters and sites. Teachers' policies should focus on

ICT literacy, the use of ICT in a pedagogical setting, and disciplinary skills. Successful introduction of ICT requires the introduction of ICT in the curriculum. Finally, digital content should be developed in local languages and reflect local culture. Ongoing technical, human and organizational support for all of these issues is essential for the use and effective use of ICT. Resource-limited contexts: The overall value of having ICT is enormous: teacher and administrator training, connectivity, technical support, and software, among others. In engaging ICT in classrooms, policy should take a growing path, creating and leading infrastructure. In some countries, instead of providing such tools to all students, schools have begun to allow students to bring their mobile technology (e.g. laptop, tablet, or smartphone) into the classroom. Own device. However, not all families have access to tools or service plans for their children. Schools must ensure that all students have equal access to ICT devices for learning. ICT in education includes the basic concepts and skills needed to initiate the pedagogically effective use of ICT to support and improve classroom learning, teaching and assessment.

Technology has many benefits for education, but it must be used wisely. Teachers need to use their experience as educators to make informed decisions about how to integrate technology.

### **General information about the course**

The use of information and communication technologies (ICT) can make a significant contribution to improving the quality of education and its effectiveness. This course is designed for teachers of all subjects who want to increase their knowledge of the use of technology in the classroom. It is important to learn how to use open learning resources, acquire new skills, create model lessons, and be aware of the potential weaknesses of ICT in education.

### **Lesson methodology**

Each module covers different aspects of the use of ICT in education. The course work incorporates your existing knowledge and experience and provides a useful learning environment with a good combination of theoretical and practical knowledge. Cooperation with ICT in the context of exhibitions and international groups will share the importance of cooperation and experience in the use of ICT in education.

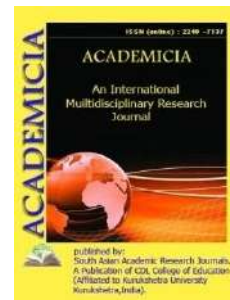
### **Learning Outcomes**

Gain the skills and knowledge needed to create and implement e-learning platforms and incorporate digital technologies into the curriculum, depending on the interdisciplinary approach. You need to be prepared to use materials, practical ideas, and available online programs to support the development of your school or organization. Introduction of information and communication technologies, support of universal access to education. Supporting Open Learning Resources (OER) and an open learning environment, fostering collaboration between the education sectors, including students with disabilities. Develop key competencies such as critical thinking through the media and digital literacy, and the use of ICT. the quality and relevance of general education at all levels. It is necessary to review and develop personal and professional competencies, increase confidence in promoting the use of ICT in education, and support innovative and active pedagogies that respond to social and cultural diversity. A broader understanding of practices, policies, and systems is possible. Having a diverse education is about access to countries, mutual respect, the development of intercultural consciousness and the inculcation of common educational values. Colleagues from different nationalities within the

EU will share their experiences of intercultural learning, exchange views and build a network for future international cooperation. Knowledge of foreign languages, expansion of professional vocabulary and development of a wide range of language diversity in the EU.

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## FROM THE HISTORY OF TRADITIONAL PERFORMANCES AND NATIONAL MUSIC IN BUKHARA FOLK FESTIVALS

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### ABSTRACT

*The article analyzes the role of Puppet Theater, artistic traditions, as well as compliance of the ancient and modern styles in the Bukhara folk festivals. The information, given in historical sources, on nationality and the fascination of Bukhara puppetry and folk rope-walking is studied in comparative typological plan.*

**KEYWORDS:** *Traditional Performances, Puppet Theaters, National Culture, Seasonal Rites, Holiday Of Mehrzhon (Mehrzon), Holiday Of Navruz.*

### INTRODUCTION

During the years of independence, as in all spheres of social life, there have been radical changes in cultural life. Extensive opportunities have been created for the revival and development of national cultural traditions.

First of all, this was evident in the development of theatrical art, new theaters were built and put into operation. In 1991, state puppet theaters opened in Fergana, in 1993 in Khiva, and in 1994 puppet groups were opened in Kashkadarya and Namangan regional theaters. The Youth Theater in Andijan was transformed into the Andijan Youth and Children's Theater named after Abbos Bakirov in 1994. In August 1993, the Turkiston Palace was opened in Tashkent [4; 528]. In 2014, the 100th anniversary of the theater was widely celebrated in Uzbekistan.

Bukhara's ancient national cultural traditions, folk festivals and celebrations, theatrical performances and puppet theater reflect the social life of the people.

Bukhara has an integrated traditional system of celebrations and performances, with festivals and ceremonies taking place throughout the year, even a month. We classify the seasonal ceremonies of Bukhara people into the following categories:

- 1) winter rumors;
- 2) spring ceremonies - Navruz, shohmoylar (double issue), tulip or red flower festival, mud holding, "Sust Khotin";
- 3) melon festival from summer ceremonies, "Tea momo", etc .;
- 4) Autumn ceremonies - "Oblobaraka", "Yo Haydar" wind-calling ceremony, grape festival, etc. associated with the harvest. These performances are mostly theatrical.

### **Main part**

Navruz is a New Year's holiday celebrated at the beginning of the year, at the same time of day. It is based on the mythological views of the peoples of Central Asia that the ceremony can have a positive effect on productivity [2, 127-128]. These days, the seven sacred foods that adorn the festive table, including sumalak, halim, goja, the cooking of various dishes from spring greens, the special attention of the rulers to the farmers, the beginning of spring field work - all testify to the organic connection of Navruz with farming culture. The holiday of Navruz was associated with the religion of fire-worship, so in the early Middle Ages, Navruz and its associated rituals, games and performances were held in Zoroastrian temples. On the eve of spring, in the last month of winter, ceremonies were held to encourage the heat of the sun, and the Feast of Tabernacles was celebrated. "On this day, people lit big bonfires in their homes, sat around them, ate and had fun. Such a ceremony was held in connection with the supposed end of the winter cold "[6; 99-b.]. Information about such holidays can be found in Narshahi's book "History of Bukhara".

During the reign of Amir Muzaffar, Navruz was officially celebrated for almost two months. Shirbudin Park in the eastern part of Bukhara hosted festivals, various performances, national wrestling competitions. During the reign of Amir Abdullah Khan, Navruz festivals were reduced to one month Sadridin Ayni's memoirs provide detailed information about another ten-day campaign [1; 198-p.].

In Bukhara, the holiday of red (red rose) is widely celebrated: "In the shrine of the most holy place Hoja Bahaiddin were held great feasts, entertainment, celebrations" [3; 39-p.]. The celebration lasted a month. "From morning till evening people sang, danced and played musical instruments" [8; P. 32]. During the holiday, performances of puppets and clowns were staged, puppet theaters were staged, sales and fairs were held, and so on.

Among the autumn holidays, Mehrjon (Mehrgon) is celebrated especially solemnly. Undoubtedly, all the festivities were theatrical, with entertainment, ceremonies, performances, spectacles, and folk festivals combined with dance. City squares and out-of-town special areas have been set aside for the celebration of national holidays, mainly in Shirbudin Park. In addition to musicians and singers, drummers, clowns and rompers also performed at the festivities. All performances by musicians, singers and artists were organized and directed by celebrities and bakvuls who preserve traditions.



Bukhara's puppet theater and folk art have captured the hearts of people with their natural magic and charm. Bukhara's theatrical art flourished in the V-VII centuries.

Cultural ties between Turan and China were strengthened in Budapest, and theater troupes were sent to China from Turan, including Bukhara. According to Chinese chroniclers, the Chinese Imperial Palace housed several groups of singers and musicians from Bukhara (Ango), Samarkand (Qanga). There were many women among them. They played on nine musical instruments. To this day, "masi" is a type of dance [7; 121-b.].

Among the musicians and artists of Bukhara, the great poet, musician, composer Mavlonov Najmiddin Kavkabi had a great reputation. He dedicated his treatise on music to Ubaydullah, the khan of Bukhara in 1702–1711 [2; P. 128]. He founded his own puppet theater and music school.

According to sources, the Bukhara musician and other performers have traveled not only throughout Central Asia and India, but also in large and small cities in Russia. For example, in 1784–1785, Orifdorboz from Bukhara exhibited his art in Moscow.

The Moskovskie Vedomosti newspaper regularly reported on his performances in the square in front of the Kremlin. In 1796, a performance was staged in Moscow with trained elephants moaning in Bukhara.

In the XIX century in other cities of the Bukhara emirate there was a revival in the art of puppet theater and folk performances. In the first half of the XIX century, about forty families of artists lived in the Darvozai Oglon district of Bukhara. There were not only musicians, but also puppets, clowns, dancers. Demezov, the head of Alexander's mission in Bukhara, wrote in October 1834 about their way of life: Talented representatives of the puppet theater served in the Ark, the winter palace of the Emirate of Bukhara. They played music on the drum at the top of the Ark Gate during an event of national importance or on holidays. The musicians there consisted of eight drummers and eight trumpeters [5; 137-b.].

There was a group of clowns in the palace of the Emir of Bukhara. They combined puppet theater with their performances. The clown troupe was first led by Sayfullo Mashara (1797-1867) and then Full Mashara (1842-1916). The full troupe includes Ergash, Sa'di, Khaliq, Murad ink, Abdurauf aksakal, Abdurasul korfarmon, Said mirzaboshi, Kili Abbas, Hamro garmon, Ota Ashraf mavrigi, Usto Qudrat, Sharif bozinger, Egamberdi chotboz. They are all genuinely talented and have been able to skillfully combine puppet theater performances with music and play [2; P. 134]. The puppet theater troupe showed their art to foreign guests at the Emir's palace and took part in feasts and celebratory programs of great officials. Normally, each group worked independently, but their joint efforts were not expected. For example, on March 4, 1879, the Russian ambassador IL Yarovsky was shown a five-hour theatrical program. The basis of the program was a puppet theater [9; 330-b.].

The Russian ambassadors, led by VV Krestovsky, were shown a program consisting of two parts: one was the clowns; in the second, the puppets performed. In this way, he was able to attract a number of musicians, two clowns, five puppets and two puppets. The clowns performed a number of pantomimes, imitations, as well as comedies such as "Eshakavdosi" and "Dalollik". "It should be noted that, - says VV Krestovsky, - all the jokes of clowns, dancers did not go beyond the bounds of etiquette out of respect for the place of performance, in some games they were limited to a slight gesture [2; 136-p.].

Palace gangs (rickshaws) sometimes performed at Registan Square near the Ark. Such demonstrations, which attract thousands of spectators, have been dubbed chavkiide. Often dancers, clowns, gatekeepers performed. They were guarded by soldiers. In one of such performances, Mahmoud Dorboz-led Dorboz, Jora and Abdukholik clowns, and dancers holding sticks performed their art, attracting about fifty thousand spectators.

In the twentieth century, the most stable in the traditional performing arts of Bukhara are dances, circus performances, celebrations associated with family celebrations and theatrical ceremonies. At this time, performers were divided into three categories:

- 1) artists who served and created in the palace;
- 2) artists who lived and worked among the people;
- 3) Sufism - artists associated with the Naqshbandi sect.

With the help of Fayzulla Khodjaev, a European-level theater was established in Bukhara in 1922. This theater includes all areas of the industry. Artist and director Mannon Majidov - Uyghur was invited from Tashkent. The foundation of the Bukhara Puppet Theater was formed by graduates of the 2nd Moscow studio: P.Rakhmonova, H.Khojaeva, O.Hasanov, M.Musaev, B.Khojaev, A.Olimova, B.Jamolov, J.Kuldashev. In 1931–1932, the theater troupe was headed by director Ya. Bobojonov.

For many years, the creative team of the theater named after S. Ayni has been mastering the artistic traditions of Bukhara theatrical art, constantly looking for ways to combine old traditional and new, modern, artistic styles. The best performances of the theater continue the traditions of maqom, dance and puppetry.

After the independence of Uzbekistan, Bukhara is in the process of reviving national traditions in life, customs and culture. The state theaters and dorboz groups operating here successfully continue the traditional art of Bukhara, regularly updating their repertoire with folk works. We have the opportunity to summarize this scientific article on the peculiarities of the development of traditional folk art in the land of Bukhara as follows.

During the reign of the Shaybanids and Ashtarkhanids, Bukhara was one of the main centers of the art of high master music. It is here that due to the favorable historical conditions, the interaction of spiritual cultures not only of the Central Asian region, but of the Middle East in general was observed. A great example of this is the magnificent series of maqoms in Bukhara at the end of the XVIII century - "Shashmaqom". This process is reflected in many pamphlets, literary and poetic texts in the field of music, which have survived to our days.

"Shashmaqom" (six maqoms) is a collection of more than 250 classical examples of musical instruments and songs. Bukhara maqoms, a complex creative product of many generations of composers, reflect the genetic and typological commonality of sister cultures. At the same time, they reflect the local features of Bukhara music in great depth and detail. It is no coincidence that I. Rajabov, a major researcher of Uzbek maqom, called this huge series "the musical encyclopedia of the Uzbek and Tajik peoples."

Bukhara Shashmaqom includes such positions as Buzruk, Rost, Navo, Dugoh, Segoh, Iraq. Each of them, in turn, consists of sections "instrument" - "difficulty" and song - "prose", and the sections, in turn, are divided into relatively complete parts in terms of form and content. Status is

the main unifying key factor of the overall composition, while the metrorhythmic organizational dynamics of the components create an astonishing variety. The philosophical, poetic, didactic, Sufi lyricism of Persian and Turkish classical poets such as Rudaki, Ibn Sino, Jami, Navoi, Fuzuli, Bedil, Babur, Nodira, Mashrab was used as the poetic text of the samples of songs.

Famous Bukhara scientist, thinker, playwright, statesman A. Fitrat (1886-1967) made a great contribution to the study and popularization of "Shashmaqom" in the new socio-political conditions. His works on national and spiritual heritage, in particular, "Uzbek classical music and its history", published in 1927 in the old Uzbek alphabet, contributed to the formation of the Bukhara School of Maqomology. Thanks to the efforts of A. Fitrat, the text of the musical performance of "Shashmaqom" was recorded for the first time in the history of pan-European music by VA Uspensky, who visited Bukhara in the early 20s of the XX century. Bukhara "Shashmaqom" was recorded for the first time in Europe. It was a really good job

This record, performed by elderly maqom singers Ota JalolNosirov and tanbur player Ota Giyas, Abdugani, was published in 1924 by the Ministry of Education in Bukhara. In particular, A. Fitrat's book "Uzbek classical music and its history" describes the theory, history and stages of development of national music. In recent decades, academician YunusRajabi (1897-1976) was engaged in collecting samples of maqom and improving their notation. . The result of his many years of work in this field was the publication of the series "Shashmaqom" in 1966-1975 in six books, each of which was dedicated to a separate status. In 1959, Yu. Rajabi formed an ensemble of maqom players under the auspices of the Republican Radio. In the performance of this creative team since the 60s, many copies of the gramophone record "Shashmaqom" were released. Various interpretations of "Shashmaqom" in solo and ensemble performances have appeared, and the Bukhara style, which is distinguished by its original mastery and strict academic style, is still considered a classic. Domullo Halim Ibodov and Levi Bobojonov are the great representatives of this school.

- For the people of Bukhara since ancient times, culture, in particular, art has been an integral part of their way of life;

- It was found that the musical world of Bukhara has its own traditions, both theoretically and practically;

- It turned out that the spiritual world of Bukhara is the reason for the unique originality of folklore and music;

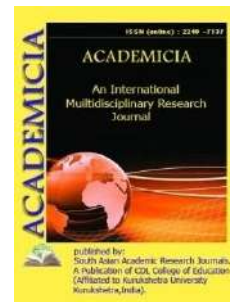
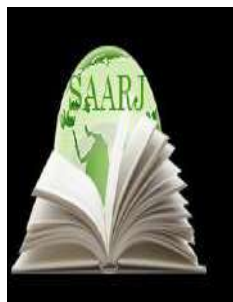
## CONCLUSION

In the land of old and young Bukhara, a huge reserve of traditional folk art is still hidden. The history of Bukhara is very ancient. In this region, which has undergone such a long historical development, various aspects of the traditional art of a very rich people are concentrated. The study of local features of traditional folk art will always remain relevant.

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## EVOLUTION OF LANDSCAPE TEACHING AND ITS THEORETICAL FUNDAMENTALS

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### ABSTRACT

*The article presents the ideas that contributed to the formation of the science of landscape science and landscape theory, as well as some comments on the life and scientific work of scientists who developed it.*

**KEYWORDS:** I.V.Vernadsky, V.R.Williams, G.N.Visotsky, B.F.Dobrinin, L.N.Babushkin, N.A.Kogay, P.Gulamov, M .Umarov, Yu.Sultonov, A.Abdulkosimov, L.Alibekov, A.Rafikov, Sh.S.Zokirov, O.Rahmatullaev, S.Abbosov, P.Baratov, H.Vahobov, A.Nigmatov, I.K.Nazarov , N.Sabitova, Biogeography, Soil Science, Landscape Science, Landscape Education.

### INTRODUCTION

Landscape studies the natural geographical complexes that exist objectively on the Earth's surface. Its emergence as a science is inextricably linked with the creation of landscape doctrine. Hence, the development of science and the doctrine on which it is based covers long historical periods. In short, a number of natural sciences and their teachings have played a key role in landscape and landscape teaching.

To date, scientists of our country have studied, described and written many works and articles on landscape and landscape doctrine. In particular, the well-known landscape scientist Yu.Sultanov noted the importance of biogeography and soil science for landscape science, and climatology and geomorphology for landscape education.

**Main part.** In the following pages Yu.Sultanov discusses the development of landscape in Uzbekistan VMChetirkin, LNBabushkin, NAKogay, P.Baratov, A.Saidov, L.Alibekov,

M.Umarov, P.Gulamov, S.Nishanov, Scientists such as A.Abdulkasimov, M.Kuzibaev, T.Jumaboev noted their contribution [4].

The same ideas and comments can be read in the textbook "Landscape" prepared by Sh. Zokirov and H.R. Toshov [1, pp. 49-50].

Of course, in the history of landscape science LN Babushkin, NA Kogay, P. Gulomov, M. Umarov, Yu. Sultanov, A. Abdulqosimov, L. Alibekov, A. Rafikov, Sh.S. Zokirov, O. Rahmatullaev, S.Abbosov, P.Baratov, H.Vahobov, A.Nigmatov, I.Q.Nazarov, N.Sabitova, more than a dozen scientists have written scientific works and most of them continue their scientific research today.

Also, geographers of higher educational institutions of our country, such as the National University of Uzbekistan (Sh. Sharipov, R. Ibragimova), Tashkent State Pedagogical University named after Nizami (N. Alimkulov, I. Abdullayev), Bukhara State University (H.R. Toshov) it is worth noting that research is ongoing.

It is very important to study the lives and scientific heritage of the above-mentioned landscape and the representatives of science, who played an important role in the formation of the doctrine of landscape in it. Of these, the life and scientific heritage of IV Vernadsky, VR Williams, GN Vysotsky, AI Voeykov, BF Dobrinin play an important role in the fate of landscape and landscape teaching.

Vernadsky Vladimir Ivanovich (1863 - 1945) - a great naturalist, mineralogist [2, p. 185]. Founder of modern geochemistry and biogeochemistry. VI Vernadsky studied at St. Petersburg University and listened to lectures by Mendeleev, VV Dokuchaev, AI Voekov and PA Kostichev. He worked as an associate professor and professor at Moscow University until 1911. He is a full member of the Academy of Sciences. VI Vernadsky was actively involved in the establishment of several scientific institutions, such as the Meteorite Committee, the Russian Commission for the Study of Natural Productive Forces, and was recognized as their organizer.

He was the founder of the Ukrainian Academy of Sciences and the first president from 1919 to 1921. VI Vernadsky enriched and extensively studied the teachings of the natural sciences. His biosphere theory is close in content to the concept of landscape or the term geographical crust. VI Vernadsky was the first to discover the unique geochemical role of living organisms in the development of life on Earth. According to VI Vernadsky, the biosphere gradually passes into a new stage of development - the noosphere, as a result of active human activity. VI Vernadsky's idea of the geochemical interactions and interconnectedness of organisms in the environment developed the doctrine of landscape geochemistry. He inherited great scientific works from the great scientist. They have been reprinted several times. The following works are especially popular among readers.

"Discovery of a naturalist" ("Naturalist's observation") from 2 books "Space and time in the inanimate and living nature" M., 1975., ("Existence and time in inanimate and animate nature"), "Scientific Thinking as a Planetary Phenomenon".

Williams Vasily Robertovich (1863 - 1939) - a well-known soil scientist, a senior specialist in meadows. Many years of scientific and pedagogical activity of VR Williams are connected with the Petrovsk Academy (now the Agricultural Academy named after KA Timiryazev). He has been a full member of the Academy of Sciences since 1931. The doctrine of the unity of soil-



forming processes belongs to V.R. Williams. The appearance of soil zones and types is a statistical condition of the unit of dynamics of the process of soil formation according to V.R. Williams. V.R. Williams has shown that landscape development occurs after freezing due to internal causes (soil and plant development) regardless of external causes such as climate change. That is: tundra - forest - swamp - steppe - desert.

One of his great services was that of V.R. Williams, as a pastoralist, devoted his main activity to the study of the landscapes of Cairo.

Visotsky Georgiy Nikolaevich (1865 - 1940) - geobotanist, soil scientist, hydrologist and natural geographer. GN Vysotsky graduated from the Petrovsk (K.A. Timiryazev) Agricultural Academy. At the invitation of VV Dokuchaev, in 1892-1897 he took part in "separate" expeditions to study forests and water resources in the steppes of Russia. He is a scholar of steppe nature.

G Vysotsky showed that the reduction of forest area in the steppes depends on the zoning, but here the sharp magnitude of the eruption from the amount of precipitation is the main factor. He wrote a natural geographical monograph on adolescence. In the field of landscape theory, GN Visotsky was one of the first to note the need to create typological maps (phytotopological). Fanga introduced the terms placard, gley, microrelief.

The following works are popular.

O karte tipov mestoproizrastaniya // Sb. Sovremennyye voprosy russkogo selskogo khozyaystva. SPb., 1904.

About fitotopologicheskix kartax, sposobax ix sostavleniya i ix prakticheskom znachenie // Pochvovedenie. 1909. № 2.

Ergenya // Tr. Bureau of Applied Botany, 1915. T.8.

Voeykov Alexander Ivanovich (1842 - 1916) - climatologist and geographer. He studied at the University of St. Petersburg and listened to lectures in Heidelberg and Göttingen.

AI Voeykov's 50 years of scientific and social activity are inextricably linked with the Russian Geographical Society. He set up a meteorological commission in front of the community. At the initiative of AI Voeykov in 1891 the journal "Meteorological Information" ("Meteorological Bulletin") was founded. He also worked at the University of St. Petersburg. AI Voeykov made many trips throughout Russia and to Western Europe, America, Old Asia, South and Southeast Asia. He was well acquainted with the basic landscapes of the earth's surface. He has authored more than 1,700 books and articles on a variety of topics in natural geography and economic geography.

He wrote the monograph "Climates of the Earth, a feature of Russia" (1884), which formed the basis of modern climatology. He pointed out that the geographical environment is integral and indivisible, emphasizing that climate is an integral part of it.

AI Voeykov introduced the "method of ratios" ("ratio of humidity in ice, atmosphere, etc.") in geography. AI Voeykov's contribution to the creation of the doctrine of snow cover and the development of agricultural meteorology was great.

Boris Fedorovich Dobrinin (1885 - 1951) - geomorphologist, geographer-geographer, student of

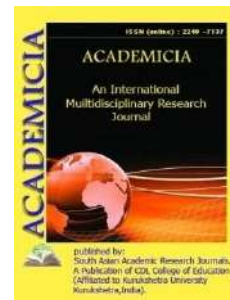
DN Anuchin. He studied at Moscow University. BF Dobrinin was a professor at Moscow, Tbilisi and Kiev universities. The scientist worked as an editor in the natural-geography section of the Great Atlas (1st edition), as an editor-consultant in the natural geography of the Great Encyclopedia (1st edition). BF Dobrin traveled to the Russian Plain, Crimea, the Caucasus and a number of foreign countries (Italy, Spain, France, Switzerland, Mexico). He wrote textbooks on natural geography. B.F. Dobrinin's works on landscape ("Landshafty Dagestana". 1924. Kn.1-2.) Are also known.

## CONCLUSION

The idea of geochemical interactions and interrelationships of organisms in landscape evolution (VI Vernadsky), the doctrine of the unity of soil-forming processes (VR Williams), the idea of creating typological maps (phytotopological) (GN Vysotsky), the geographical environment the idea of integrity and indivisibility and that climate is an integral part of it (A.I. Voeykov) was of great importance. Works on landscape (B.F. Dobrinin) played an important role in the further development of science.

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## THE IMPORTANCE OF COCHLEAR IMPLANT IN THE EDUCATIONAL SYSTEM OF CHILDREN WITH HEARING DISORDERS

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### ABSTRACT

*This article discusses the fact that cochlear implantation is the most effective means of social rehabilitation of children and adults with hearing impairment, medical-pedagogical-psychological prospects for the restoration of their ability to hear and understand speech.*

**KEYWORDS:** Cochlear, Implant, Deafness, Hearing Loss, Integration, Localization, Rehabilitation.

### INTRODUCTION

The very rapid development of technology in the world today opens the door to many opportunities for people with disabilities as well. The formation of the cochlear implant system for those with a single hearing impairment has given many people the opportunity to use their hearing as well as healthy people and the happiness of speaking through speech. It is not a spontaneous system. First of all, it is necessary to look at the theoretical basis of this process.

It is known from the science of deaf pedagogy that today the main criterion is to integrate deaf and hard of hearing children into the society of healthy and hearing people on the basis of education. In Uzbekistan, most children with hearing impairments are enrolled in special education institutions. Today's scientific and technological progress also creates opportunities for them to study in general secondary education. The formation of a cochlear implantation installation system is one such possibility. The analysis of this process reveals the following on the basis of the installation of cochlear implantation:

- speech comprehensibility increases by 10-12% even in noisy conditions;
- the localization of the sound source in space is improved;
- in the context of reverberation, the comprehensibility and separation of speech increases when talking to several speakers at the same time;
- Children quickly learn to hear and distinguish different sounds, accumulate vocabulary faster;
- sound and speech sound more natural;
- Children perceive sounds from different angles, not from one side;
- listening process requires less effort and less fatigue.

Studies today show that the earlier cochlear implantation is done, the better the results can be observed. According to IV Korolyova, it is advisable to perform the operation as soon as the child reaches the age of 2-3 years, from the day when he notices that his hearing is reduced and the hearing aid does not help him. The earlier the child is operated on, the sooner the problems in his speech development will be eliminated. [1.38]

The term "cochlear implant" is a scientific and methodological term used for preoperative screening, client preparation, surgery, postoperative rehabilitation and cochlear implantation. Once the technology is installed in the human body, electrical impulses come to the external microphone, the nervous system receives these signals. (An implant body is placed under the skin; an electrode goes to the shell; an external speech processor transmits the sound coming through the microphone to the audio processor). [5.64]

In sensory deafness, healthy hair that transmits sound is rare or the cochlear implant is completely injured. Therefore, the sound vibrates and does not reach the nerve impulse. When hearing is reduced due to a decrease in the number of healthy hairs, special hearing aids show positive results, i.e. it does not matter that there is no reduction in healthy hair tissue at all when installing a cochlear implant.

In this regard, in the 60s of the twentieth century it became possible to implement the idea of solving the problem of neurosensory deafness. The transmission of sound through electrical signals passes directly to the auditory nerve and to the damaged or dead hair tissue. [6.45]

Early diagnosis of abnormalities in a child's development before cochlear implantation is important.

One month after cochlear implant surgery, the processor begins to adjust and turn on (external part) after the stitches are finished. But this period can be delayed for some time. This is determined by the work plan of the cochlear implant adjuster and the degree of closure of the sutures. The cochlear implant does not allow full reception of sounds. In this case, the electrodes coming to the auditory nerve through the implant pass through a very small amount of hair that vibrates into a normally functioning shell. Sounds to a child with a cochlear implant are heard slightly differently from the sounds that healthy hearing children are accustomed to in the early stages. When a cochlear implant is used systemically, it takes time to learn to hear the sounds and speech of others. The rehabilitation period, which is conducted through a special program, will be continuous. However, it allows the surrounding sounds to be heard after the cochlear implant is opened. It is of interest to the development of cochlear implants in children.

Often, experts recommend wearing a speech processor and a hearing aid to the operated ear and adjusting both the same. But implanted children do not want to wear a hearing aid after the speech processor is turned on. In such cases, experts do not force the child and his parents to wear hearing aids. [2.10]

First of all, the cochlear implant is adjusted by specialists. First, a cochlear implant processor is connected to a computer with special devices. The child is given a cochlear implant. The transmitting device is placed on the implant. They program the processor. Second, a signal is given to the processor at the lowest level and the signal is gradually amplified. When the alarm starts to sound, the alarm limit is set and programmed. The cochlear implant canal in each ear should be programmed separately because the auditory impulse is different in the left and right ears. Third, the signals to the processor are fed alternately to the other electrodes. The main goal is to have the same level of impact on all electrodes based on the signal height differentiation. Fourth, the normal hardware operating mode is turned on and the operation of the programs is checked. If necessary, it is raised or the implant is lowered. Fifth, if the result is not positive, the setting is reset. There will be no painful situations during the adjustment. The tuning duration is designed for about an hour a day and lasts for several days. (It is not possible to adjust at once. The brain must learn a new incoming method. Each adjustment expands the volume and range of sounds.) The next adjustment time is done in agreement with the adjuster. This depends on the individual characteristics and adaptability of people who have received a cochlear implant. [4.33]

When a child with a cochlear implant learns to speak, at what age he underwent surgery, how well he develops speech, and whether the rehabilitation period is active, depends on what parents are doing during this period. Healthy children begin to speak at the age of two if they have the opportunity to hear the sounds around them, and if they hear voices and speech from birth. Children with hearing impairment develop speech in the same pattern (sound, word, phrase, sentence) after cochlear implant surgery. In this process, the speech therapist and the deaf pedagogue work together. The deaf educator develops listening skills: working on oral speech formation, speech comprehension, and written speech. A speech therapist uses methods to correct speech defects. Every specialist should pay attention to the correctional work and materials carried out by a colleague. The postoperative training period for a child with a cochlear implant can be one to five years or more. Training depends on the age at which hearing is lost, the timing of cochlear implant placement, the development of preoperative speech, individual characteristics, and parents. [3.21]

With children and adults after cochlear implant surgery several different specialists carry out habilitation and rehabilitation work (Audiologist (adjusts the speech processor), deaf pedagogue, speech therapist, psychologist).

Rehabilitation of children with cochlear implants in many countries (Europe, America, Austria) is carried out in specialized centers. Rehabilitation centers also study the causes of hearing loss (hereditary, meningitis, pneumonia, genetic diseases).

Specialists of such a rehabilitation center also identify cases that are not possible for a cochlear implant:

- if the hairy tissue is damaged as a result of deafness or the tissue in the shell is dead, the auditory nerve is damaged, the central parts of the auditory analyzer are damaged, the hearing loss is after a neuritis complication of the auditory nerve;

-calcification and ossification of the shell. In this case, there is a lack of calcium salts or bone growth, which prevents the electrodes from passing into the shell. There may also be a chance that the operation will fail;

In sensory deafness, people have lived in "silence" for years, have not used hearing aids at all, and have worn less even after the appearance of these hearing aids. In this case, the branches of the auditory nerve are damaged or die.

Therefore, children with hearing impairment are thoroughly analyzed before cochlear implant surgery, and this process includes:

- Audiological examination of the child before cochlear implantation;
- tonal audiometry (checking for hearing loss of sounds of different frequencies);
- acoustic impedancemetry (examination of tympayumetry);
- electrocochlography;
- promontorial test-examination of the condition of the auditory nerve;
- vestibulometry examination of the patient's somatic condition, mental development, health and speech;
- check speech discrimination.

There are even probable cases that can occur after surgery, and they can be as follows:

- paralysis of the facial nerve after surgery;
- disorders of taste;
- vestibular disorders (dizziness, nausea, vomiting, headache)
- increased noise in the ear;
- condition of ossification (process of bone formation) and calcification (accumulation of calcium salts in soft tissues or organs) of the shell together with implantation. [5.53]

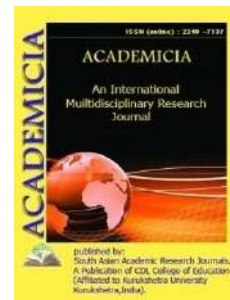
**In conclusion,** today the development of science and technology is leading to the improvement of the use of modern instrumental diagnostic methods in the preparation of children with hearing impairment for cochlear implant surgery. Also in the field of medicine the use of technical means such as computer and magnetic resonance imaging, electroencephalography, rheoencephalography is gaining popularity. In general, cochlear implantation is the most effective means of rehabilitating hearing and speech formation in children and adults with hearing impairment, and of course, everyone has the right to enjoy universal human rights and technological advances while alive.



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## EXISTING APPROACHES TO THE DEVELOPMENT AND IMPLEMENTATION OF WATER USE PLANS AND IMMEDIATE MEASURES FOR WATER USE

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### ABSTRACT

*The shortage of water resources in the irrigated agriculture of Uzbekistan is equally related not only to the unilateral interest of neighboring countries, but also to the extent to which it is used effectively at the national level. Water distribution between water users and farms is based on systematic and commercial water use plans. Their theoretical basis was first developed by academician A.N. Formed by Kostyakov.*

**KEYWORDS:** *Irrigated Agriculture, SIU, Irrigation Norm, Decade, Water Use Plan.*

## INTRODUCTION

The internal economic plan of water use of farms is an integral part of the business plan. Therefore, the correctness of the water use plan of the farm depends on the efficient use of land and water resources, labor resources, material, technical, financial and other resources. In addition, the quality structure and implementation of the water use plan will depend on the reclamation, ecological, sanitary-epidemiological and social conditions of the farm. The internal economic plan of water use is the basis of the systematic plan. Therefore, it is necessary to carefully study the natural-economic conditions for the current year when considering the internal economic plan of water use of farmers and other farms. In our and foreign countries' economic experiences, we can see that the domestic economic plan for water use is applied for the growing season and the calendar year. There are also long-term water use plans for farms for the next 3 or 5 years.

This method of the scientist is still used today in the development of water use plans for farms, including SIUs. Professor N.A. Yanishevsky proposes the following formula:

$$m\omega_{дек} = Q_{дек} t_{дек}; \quad (1)$$

Here:  $m$  - irrigation rate of the crop,  $m^3 / ha$ ;  $t_{дек}$  - duration of irrigation of the crop in one decade (ten days),  $\omega$  - area of the crop in question, which is planned to be irrigated in the period of  $t_{дек}$ ;  $Q_{дек}$  is the planned consumption of water net,  $l / s$ , which is transmitted to the crop for a period of  $t_{дек}$ . The formula follows:

$$Q_{дек} = \frac{m\omega_{дек}}{t_{дек}}; \quad (2)$$

$\omega_{дек} = \frac{\Omega}{T}$  Given that, we pour into the above formula and characterize the following We do:

$$Q_{дек} = \frac{m\Omega t_{дек}}{T t_{дек}}; \quad (3)$$

or 
$$Q_{дек} = \frac{m\Omega}{T}, l / s; \quad (4)$$

Planned decade (ten-day) consumption and gross water volume (taken from the irrigation system control channel) are calculated from the following formula:

$$Q_{дек.бр.} = \frac{Q_{дек}}{\eta_{сист}}, l / s; \quad (5)$$

Here  $\bar{\eta}_{сист}$  - is the efficiency of the water user's irrigation network, which starts at the main gate of the irrigation system control channel and ends at the irrigation area,

$$\eta_{сист} = \eta_{хк} \eta_{вхр} \eta_{ферм} \eta_{вр.ор.}; \quad (6)$$

Here  $\bar{e}xk$ ,  $\bar{e}vvr$ ,  $\bar{e}ferm$ ,  $\bar{e}vr.or$  - FIK ti of the farm, domestic and farm channel.

$$W_{\text{дек.бр.}} = Q_{\text{дек.бр.}} \cdot t_{\text{дек.}}, \text{ m}^3; \quad (7)$$

The limit water consumption per decade allocated to the SIU is calculated on the basis of the limit coefficients set by the Irrigation Department:

$$Q_{\text{дек.лим.}} = K_{\text{л}} Q_{\text{дек.бр.}}, \text{ l / s}; \quad (8)$$

The duration of the water cycle is equal to  $t_v = 10-15$  days. Professor X.A. According to Akhmedov, if irrigation is delayed for 5-7 days during the period of cotton seed formation, the loss of seed elements and a decrease in yield will reach 10-30%. If we take this figure in relation to the total irrigated area, on the average cotton yield of the republic (which is 1.5.mln and 20ts / ha), then it will not be difficult to calculate the damage. This is about 3 million tons of cotton or about a million tons of cotton fiber. Market price of cotton fiber, in the USA 1 kg If we take into account that the losses of Uzbekistan are 15-20 million dollars. USD.

In irrigated farms, crop rotation areas receive irrigation water at a constant rate in accordance with the water use plan. The sequence of irrigation is carried out between alternating planting areas. Water circulation takes place between a single water user.

Scientific research institutions are engaged in the study of optimal regimes of irrigation of agricultural crops. These regimes are now obsolete in many irrigation systems due to water scarcity and the reason for the prospects for the expansion of irrigated lands.

It is necessary to set such irrigation standards that, taking into account the entire water-land balance, it is necessary to find a cost-effective hydromodule, in other words, which will allow to produce the maximum product per unit volume of water.

Statement of KPZ value for decades of growing season of agricultural crops on the example of Oltinkuz farm of Bukhara region.

The size of the irrigated area of agricultural crops over the decades of the growing season is determined as follows:

$$F_{\text{дек}} = K_{\text{нз}} F_{\text{нет}}, \text{ га}; \quad (9)$$

Here,  $F_{\text{нет}}$  is the area under agricultural crops of a given farm and is defined as follows:

$$F_{\text{нет}} = F_{\text{хл}}^{\text{нет}} + F_{\text{пшеницы}}^{\text{нет}}, \text{ га}; \quad (10)$$

Here  $F_{\text{хл}}^{\text{нет}}$  - area under cotton, ha;  $F_{\text{пшеницы}}^{\text{нет}}$  - area under wheat, ha; Irrigation of cotton fields in the given decade is carried out in the following form:

$$F_{\text{хл}}^{\text{дек}} = K_{\text{нз}}^{\text{хл}(\partial)} F_{\text{хл}}^{\text{нет}}, \text{ га}; \quad (11)$$

Here,  $K_{\text{нз}}^{\text{хл}(\partial)}$  - cotton irrigation coefficient.

Similarly, the value of the coefficients of irrigation assignments for the remaining agricultural crops is also determined. According to the results of the calculation, the statement of irrigated

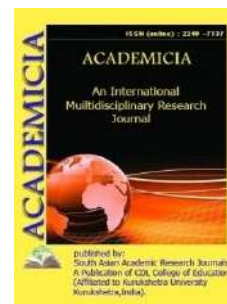
areas of agricultural crops is made in decades of the growing season and the schedule of irrigated area. The amount of irrigation water transferred to each crop over the decades of the growing season is determined. It depends on the size of the irrigation area and the irrigation norm.

### CONCLUSION

As a result of the research, our conclusion is that the magnitudes of irrigation norms should be considered as constant and as variables of irrigated lands. The efficiency of irrigation water increases due to the economically coordinated sequence of irrigation of crops, which determines the emergency period of irrigation of the irrigation source, and then differs according to water consumption. According to the scientist's proposal, first of all, it is necessary to stop the supply of water to relatively low-value crops.

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## INTERPRETATION OF MOTHERLAND IN KHABIB SA'DULLAS' LYRIC WORKS

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### ABSTRACT

*This article analyzes Khabib Sadulla's poetry and his scope of the theme, particularly, ideas of patriotism. Besides, poet's poems and lyric features of his works are studied and conclusions are drawn. A work of art can rise to the level of a work of art only if it combines the spiritual, psychological and philosophical synthesis of socio-political reality, the development of the period and the fate of man and the people.*

**KEYWORDS:** Poetry, Lyro-Epic Genre, Musical Drama, Figurativeness, Nature, Motherland, National Character, Spirituality.

### INTRODUCTION

For a long time, the land of Namangan has always been the land of great poets and thinkers such as Zakhiriddin Mukhammad Babur, Mashrab, Fazliy, Nodim Namangoni, Is'hakhan Ibrat, Sufizoda, Usman Nasir, Nabikhan Chustiy. The talented, skillful folk poet Khabib Sa'dulla became a worthy successor of these great creators. His name is well-known among the people, and he is a poet who has further enriched Uzbek poetry, prose and drama with his masterpieces.

Khabib Sadulla was born on April 5, 1942 in the city of Namangan. His first collection of poems, "Okeandan shabada" (Breeze from the ocean), was published in 1969. After that the followings were published: "Bahor bilan suhbat" ("Conversation with Spring") (1975), "Muloqot" ("Dialogue") (1979), "Yana ostonangda" ("On the Threshold Again") (1982), "Ehtirom" ("Respect") (1984), "Nur qadri" ("The Value of Light") (1988), "Ko'chamdan jonon o'tganda" ("When the pretty passed by my street") (1992), "Usmonatlas" (1984), "Bog'lar yurtin bolasimiz" (1988), "U poroga tvoego" (in Russian). The poet's two-volume "Selected Works" (2002) was published. Contemporary issues are reflected in the short stories and journalistic



articles in the collection “Tong musaffo bo’lsa” (“If the morning is clear”). His ideologically and artistically well-written epics such as “Tug’ilgan yilim” (“My Year of Birth”), “Onaizor”, “Tirik qurbonlar” (“Living Victims”), “Zamin sadosi” (“Earth's Voice”), “Yettinci qit’a” (“Seventh Continent”), “E’tiqod” (“Faith”), “Chust rivoyati” (“Chust Narrative”), “Jarohat” (“Injury”), “Adib taqdiri” (“The Fate of the Writer”), “Usmonatlas” made an important contribution to the development of the lyro-epic genre in Uzbek literature.

Khabib Sadulla was able to demonstrate his dramatic skills by composing the musical drama “Yusuf va Zulayho” (“Yusuf and Zulayho”), the plays “Mehr Quyoshi” (“Sun of Affection”), “Rahmat, ig’vogar” (“Thank you, provocateur”).

The poet’s poetry is extremely diverse in terms of subject matter. The most important aspects of the poet’s lyrics are the boundless love for the motherland, the glorification of independence, the glorification of human freedom, the promotion of human qualities, the image of nature, responsiveness to current issues, a creative approach to classical traditions.

In Khabib Sadulla’s works, the theme of homeland has a special place. After all, the theme of the Homeland in poetry is as old as life and as young as life; it is constantly growing. At a glance, its boundaries, its history, change places; in such places you see the spirit of the period, of social progress, of the life and destiny of the people. At such times, you can be sure that in each period, poets will open the horizons and edges of this theme, will contribute to a certain degree of poetic experience in the interpretation of the theme of the Motherland. Khabib Sadulla also brings to his poems the boundless respect and attention to our great ancestors, and to the essence of his poems he instills feelings of motherland, national pride, love for his language and history. There are the followings in the poem “Ona tilim” (“My native language”):

*Сенинг нафосатинг кўрсин, деб олам -*

*Навоий сарф этди бутун умрини.*

*Буюк Ҳиндистонда шоҳ бўлганда ҳам,*

*Бобур сенда битди дардли шеърини(1,47).*

*(Navoi spent all his life to demonstrate your beauty to the world*

*Although Babur was a ruler in India, he wrote his poem)*

Thinking about our native language, Navoi spent his whole life singing to the world about the infinity of the subtleties of our language, which fascinates people so much that Babur, who established a great kingdom in India, wrote his poem in this language. In the poem, respect for our mother tongue is mixed with a sense of love for the Motherland. Indeed, the concepts of the language of the homeland and the nation are inextricably linked.

A work of art can rise to the level of a work of art only if it combines the spiritual, psychological and philosophical synthesis of socio-political reality, the development of the period and the fate of man and the people. It is natural that the synthesis of thoughts and feelings in the lyrics is manifested in a unique way. This is manifested in the poet’s ability to come to deep philosophical generalizations from the essence of ordinary life events, to see and find the signs of the future in our present reality, to generalize them. In this sense, I can say that in the lyrics of Khabib Sadulla, a bright future is placed side by side with the image of a perfect man:

*Ўт қўймоқ бўлдилар муқаддас туйғу -*

*Буюк келажакка, комил ишончга.*

*Бақавли сўндирмоқ бўлдилар мангу*

*Тош отиб кўкдаги боқий қуёшга(378).*

The poet's lyrical protagonist believes in the future of his homeland, the eternity of his independence, and compares it to the sun. It indicates that malicious enemies cannot achieve their intentions. The Motherland will never forgive such people:

*Она оқ қилганга ер чидар балки,*

*Ота оқ қилганни кўтарар замин.*

*Кимники оқ қилса Ватани, халқи,*

*Уни ўз бағридан итарар замин(1,379).*

This, firstly, shows that the poet's attitude to the socio-philosophical, spiritual and moral issues of the time has deepened in recent years, and secondly, it shows that it is becoming more diverse today.

In poetry, "avoiding" complex imagery does not mean an absolute abandonment of figurativeness. Khabib Sadulla manages to vividly portray aspects of life that others may not have noticed, through simple and attractive, but beautiful figurative expressions and images of a "finding" nature. In this sense, it can be said that the poet's lyrics differ sharply from the poems of other creators in that they are free from complex imagery. But the gloom of the intense tones, which are reflected in the depth of his dark thoughts, his reflections, represents the radiance of colors, which, in turn, provides a deep imagery in the poet's poems.

Khabib Sa'dulla creates a series of magicians and poems from a set of unique imagery, dark metaphor, colorful adjectives, simple and straightforward but resonant words for his lyrics. Simple and straightforward in his lyrics, the words familiar to every reader attract your attention as a vivid image of human spiritual experiences.

In Khabib Sa'dulla's lyrics, poems about the homeland have a significant place. This is determined by the nature of the lyrical hero, as mentioned above. Khabib Sa'dulla's lyrical protagonist is characterized by a restless and anxious heart that burns, worries about the fate of humanity and the globe, the present and future of his homeland. The poet creates images that interpret the bright future of the Motherland and the people in harmony with the past and the present.

In the 70s and 80s of the twentieth century, a number of books by the author were published. His collections such as "Dialogue" (1979), "On the Threshold" (1982), "Respect" (1984) were published. They contain the best poems and ghazals, and epics of Habib Sa'dulla. These books are a reflection of the poet's genuine growth and development in the field of literature, his enthusiasm, skill and courage.

In the development of society, each generation is more or less different from the previous generation in certain respects. But the sense of homeland, truth, goodness, beauty, which is the most sacred for mankind, is always passed down from generation to generation as a sacred

tradition. In every age, every generation remains faithful to these sacred traditions with their deeds, words, beliefs and thoughts. Today is history for the future. Powerful and magical word art gives eternity to our days, moments, and times. As a result of the power of the poetic word, future generations will be aware of the socio-political realities of each epoch, the life and destiny of the people, their personal worries and thoughts, their joys. In the series of life of generations he sees the points of connection between his life, destiny and interests, and his research.

Someone imagines the image of the homeland in the sunlight, someone in the tree, someone in the image of the earth. When you see human footprints on the ground, buried graves, you think about the meaning of life, transience and eternity. It becomes more sacred, more revered. After all, human skin and human blood have been shed on this soil, and both hot and cold breaths of people have joined it. In a word, man has taken root in this soil. The root of cotton growing from this soil is the root of Uzbek life, the whiteness of cotton is the face of Uzbek. After all, it is also the steamy faces that give color to the soil. It is from these soil images that the image of the glorious Motherland grows in the poet's poem:

*Умрини ўтказиб баҳона билан,  
Кузакда лаб тишлаб турса бўйни хам.  
Қадрин ўлчамаса хирмони билан,  
Пахтакор саналмас унақа одам(262).*

In some of the poet's poems, reason prevails over emotion, and in some of his poems, life is portrayed as an exhortation, in which case, often, the image, the symbol, is pushed aside.

*Бас, эркак бахтига излама мезон,  
Ҳақиқатдай жўндир эркакнинг бахти.  
У - губор қўнмаган покиза виждон.  
У - бош омонлиги, билак қуввати(1,301).*

It can be said that the images and concepts of the images in today's lyrics about the Motherland are extremely rich in modern scientific and technical innovations, and are gaining momentum due to the concepts of time and the fate of the world. New words are being absorbed into the layer of poems. Khabib Sadulla skillfully uses the modern word "idora"(office) in the following poem "Dehqonga ta'zim"("Bow to the Farmer"), which does not cause discomfort in the reading and meaning of the poem:

*Идоранинг тор хонасин тарк этиб гоҳо  
Бағри осмон далаларга кетгим келади.  
Даласидай кўнгли ҳам кенг деҳқонлар аро  
Юракдаги дардларимни айтгим келади(1,337).*

Emotions, scenes of feelings, deep thoughts and observations imbibe their philosophical and spiritual essence in the verses. After all, the filling of tulips burning like coals on the first spring holiday is not just a jolt in the wind - it is a song in the wind of the motherland; in the care of cotton, in the work of cotton, a drop of coral spilled from the forehead of a hardworking farmer

is not sweat - it is a verse of life, of destiny; his body is not an ordinary figure, the face of Alpomish, the work he does is not for himself, but for the future of the motherland. In the lyrics of Khabib Sadulla, the images of Uzbekistan - Motherland - people - nature appear in front of our eyes as an open book in general harmony. The main theme of Khabib Sadulla's poems is the motherland, Uzbekistan. In fact, the Motherland, the people, the nature - these are the concepts that originated in one land. Loving the Motherland alone is impossible without loving the people and nature. On the ground of love for the motherland, the cotton fields, the grandfather farmer, the village where he was born and grew up, the beautiful and charming corners, the great and powerful concept and love of the Motherland are manifested:

*Хузурингга талпинаман азамат деҳқон,  
Ўргангали сендан Меҳнат, Поклик, Ҳимматни.  
Алтомишдай келбатингда кўраман аён,  
Ўзбекистон - келажаги буюк давлатни(1,338).*

In the poet's thoughts, not only the past and history, but also the future is connected with the Motherland, with the lives of future generations. It is impossible for a person in his maturity not to think about who will be in charge of this world after him, what will happen to future generations in the future. These melodies are full of the meaning of mourning for the Motherland, the destiny of humanity.

In creating the image of the homeland, Khabib Sadulla often focuses on the principles of addressing the history of our people, striving to understand the basics of national character, reviving, restoring childhood memories, appealing to nature, aesthetic approach to the landscapes of the homeland. In the poems of the poet, the image of the Homeland, with its inner and outer essence, in particular, flows from the virgin memories of childhood imaginations and provides the basis of lyrical character, the vitality of feeling and perception of the world:

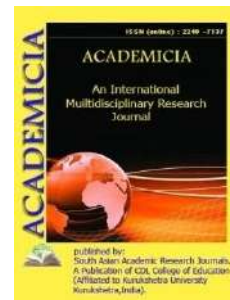
*Шу боис ёшлигим қўмсаганим пайт,  
Мен азим Тошкентни тавоф этаман.  
Бундан Дўстлик, Поклик, Вафо, Садоқат,  
Ёшлик сабогини олиб кетаман(14).*

Khabib Sadulla, public writer of Uzbekistan and the hero of Uzbekistan, died in 2005. The poet's fiery poems and epics, journalistic short stories and articles have made a worthy contribution to the treasury of Uzbek literature. Undoubtedly, his creative work, especially in the spirit of love for the Motherland, plays an important role in educating a spiritually mature generation.

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## **A DESCRIPTIVE STUDY TO ASSESS THE LEVEL OF ASSERTIVENESS, SELF-ESTEEM, STRESS AND ACADEMIC ACHIEVEMENT AMONG ADOLESCENTS OF KASHMIR**

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### **ABSTRACT**

*The main objective of this study is to measure the level of Assertiveness, Self-esteem, Stress, and Academic achievement among adolescents of Kashmir division of Jammu and Kashmir State. The sample of the study comprised of 120 high school students divided equally into two groups, i.e. 60 male students and 60 female students within the age range of 12 to 19 years. They were administered by Rathus assertiveness schedule (RAS), Rosenberg self-esteem (RSE), perceived stress scale (PSS), and academic achievement scale. The data was collected with the help of questionnaire and analysed with the help of statistical tools such as mean, Standard Deviation ( $\sigma$ ), and student's 't'-test, computed with the help of SPSS. The results of the study confirmed the expectation that there is significant difference in the level of assertiveness among students. The findings also revealed that there is a significant difference in self-esteem and in the levels of stress among students. In addition to that results reflected no significant difference in academic achievement among students. From the findings of the study, it is concluded by the researcher that some intervention techniques should be used in future researches for such adolescents to increase the level of assertiveness among them. So that it helps them not only in becoming assertive but also in increasing their self-esteem, academic achievement and reducing their stress level.*



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**KEYWORDS:** *Assertiveness; Self-esteem; Stress; Academic achievement; Adolescents.*

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## INTRODUCTION

According to the UNICEF report (2011), 1.2 billion adolescence stands at the crossroads between childhood and the adulthood world and around 234 million of them live in India. About one-quarter of India's population is adolescence. The word adolescence is derived from the Latin verb 'adolescere' that means "to grow into maturity". Peterson, 1988 has defined adolescence as a phase of life beginning in biology and ending in society. This means that it cut across every phase of life and thus become very important. So it is the fact that this stage is considered very important because many significant changes happen during this period of time.

As we know it is the time when adolescents have to establish their social positions and are exposed to a wide range of new social situations. They came into contact not only with friends, but also with other persons to learn and develop new social roles without the direction of their parents (Ingles et al., 2005). It is a crucial period of life span which has not been fully understood by the parents, teachers and the society as a whole. It is the time when individuals face new challenges and new opportunities. While some adolescents do not negotiate these challenges positively and develop personal and social problems which lead towards their maladjustment. The increase in attention towards adolescents is due to the recognition of this group as a significant proportion of the total population and also as the future leaders and guardians of the nation's development.

The problems during adolescence have a great impact on self esteem as it is the period during which a new identity is formed. It plays an important role in one's psychosocial development. Hence, this age is considered very important, because several significant changes take place during this period of time. It is characterized by rapid physical growth, significant emotional, psychological and spiritual change and it is the wonder years in human life because they are the future source of any development nation. Infact, it is the most sensitive critical periods of life for development of lifelong perceptions, beliefs, values, and practices. The adolescent struggles with the developmental tasks of establishing an identity, becoming a contributing member of society, and selecting a vocation (Ansari & Stock, 2010).

Before adulthood, it is important to develop a healthy self-esteem among adolescents because during this stage they feel lot of pressure to fulfill their goals in education (Ansari & Stock, 2010). Infact it is the crucial part of life where they have to build their career and to maintain challenges of shifting from adolescence to adulthood and to deal with various tasks of academic life (Colic, Baric, & Satalic, Lukesic, 2003). He has to adjust himself with varying and sometimes conflicting demands from his parents, teachers, playmates and the community. He is told to take the responsibilities, to show some judgment and to take decisions and then he is treated as a child and is expected to be submissive and obedient to his parents and teachers. It is rightly said by (Hall, 1904) that adolescence is a period of 'stress and strain'. If the personality development at various stages has progressed fairly well, adjustments are not then difficult. Otherwise, many persons enter this period as shy, nervous and timid individuals. So in helping them to reduce such shy behavior in adolescents it is important to shape their behavior.

Therefore, it becomes necessary to study & understand it not only in terms of a boy or a girl but in terms of all adolescents and in what respect they are alike or different. And it also becomes

important to know what kind of changes occurs in this period physiologically, psychologically & socially.

### **Aim of the Study**

The present investigation was undertaken with an aim to study the level of assertiveness, self-esteem, stress and academic achievement among the Adolescents of Kashmir.

### **Objectives of the Study**

- ✓ To measure the level of Assertiveness and Self-Esteem among the Adolescents of Kashmir.
- ✓ To measure the level of Stress and Academic achievement among the Adolescents of Kashmir.
- ✓ To measure the level of Assertiveness, Self-esteem, Stress and Academic achievement among Kashmiri urban and rural adolescents.

### **Hypotheses of the Study**

- ✓ There is no significant difference in the level of Assertiveness and Self-esteem among the Adolescents of Kashmir.
- ✓ There is no significant difference in the level of Stress and Academic achievement among the Adolescents of Kashmir.
- ✓ There is no significant difference in the level of Assertiveness, Self-esteem, Stress and Academic achievement among urban and rural Adolescents of Kashmir.

## **RESEARCH METHODOLOGY**

The research design for present study is qualitative in nature. Purposive sampling technique was used for data collection.

### **Participants**

In this study 120 students were selected, divided into two groups i.e. 60 male students, and 60 female students. From 120 students 30 boys students and 30 girls students belongs to rural areas and remaining 60 students (30 boys and 30 girls) belongs to urban areas of Kashmir. The age range of the participants was 12-19 years.

### **Measures**

Following measures were used in the study;

**The Rathus Assertiveness Schedule (1978)** used to study the assertiveness of adolescents. It is a standardized tool comprising 30 situational statements for which the subject is asked to rank the degree to which each statement is characteristic and descriptive of his/her behaviour ( -3 to +3) yielding a total assertiveness score between -90 (least assertive) and + 90 (most assertive). The tool was administered individually to each student and care was taken to see that the adolescents filled the questionnaire without discussing. There was no time limit for completion of the scale.

**The Rosenberg Self-Esteem Scale (RSES)** developed by Rosenberg (1965). It is a 10- item self report measure of self-esteem based upon satisfaction of one's self and life. The scale consists of five positive items and five negative items and need to be scored accordingly by reversing the

value of either the positive or negative item responses. Typically, each item is answered on a four point Likert scale ranging from "strongly disagree" to "strongly agree. The internal Consistency ranges from .77 to .88 with test retest reliability ranges from 0.82 to 0.85. The scale ranges from 0-30. (0<15 low self esteem), (15: 25 within normal range of self- esteem), (+25 high self esteem).

**Perceived Stress Scale – 10 item version** developed by Cohen et al., (1983). It is a self-report scale designed to measure the perception of stress. The scale consists of 10-items; each item is answered on 5-point scale. In each item, students will be asked to indicate by circling how often you felt or thought a certain way. (Response values: 0=never, 1=almost never, 2=sometimes, 3=fairly often; 4=very often). To score this measure, reverse the scores for the positively stated items (items 4, 5, 7, and 8), such that a score of 4 will become a score of 0, a score of 3 will become a score of 1, and so on. Next, sum the reverse-scored items with the remaining 6 items. Scores range from 0 to 40. The Reliability of PSS was .78-.86. This scale has no diagnostic cut-offs. Higher scores correspond to a higher level of perceived stress.

**Academic Achievement:** This scale developed by Anderson et al., 2016, measures academic adjustment of the student. This scale represents three components/ three dimensional construct of academic adjustment which is academic life style, academic achievement and academic motivation and it comprises 9 items. Responses are elicited on 5point scale. The test-r test reliability of the academic adjustment is .84. With regard to the study, the researcher will apply the academic achievement dimension of the above said scale.

#### Statistical Techniques Used:

In the present study the Researcher used the following statistical techniques:

1. Descriptive Analysis (Mean, Standard Deviation)
2. Differential Analysis (t-value, F-ratio)

#### Data Analysis

**TABLE 1 DESCRIPTIVE AND DIFFERENTIAL ANALYSIS OF MALE AND FEMALE STUDENTS ON ASSERTIVENESS AND SELF-ESTEEM**

Variable	Gender	N	Mean	Std.deviation	t	Sig.
Assertiveness	Male	60	13.60	14.67	<b>2.07*</b>	<b>0.05</b>
	Female	60	6.60	21.61		
Self-esteem	Male	60	19.60	3.86	<b>3.81*</b>	<b>0.05</b>
	Female	60	17.60	3.60		

The above table indicates that the mean score regarding assertiveness of male students (13.60) is high in comparison to the mean value of female students (6.60). The t-value is found to be 2.07, which is significant at 0.05 level. The above table also depicted higher mean value (19.60) of male students as compared to mean value (17.60) of female students. The t-value is found to be 3.81 which is also significant at 0.05 level.

**TABLE 2 DESCRIPTIVE AND DIFFERENTIAL ANALYSIS OF MALE AND FEMALE STUDENTS ON STRESS AND ACADEMIC ACHIEVEMENT**

Variable	Gender		N	Mean	Std.deviation	t	Sig.
Stress	Male	Female	60	20.46	4.27	4.52*	0.05
			60	23.48	2.90		
Academic achievement	Male	Female	60	11.95	2.27	1.01	
			60	11.53	2.23		

Table 2 reveals that the mean value regarding stress of girls (23.48) is high in comparison to the mean value of boys (20.46). The t-value is found to be 4.52, which is significant at 0.05 level. Moreover above table also depicted that mean value of academic achievement among female students is (11.53) and male students (11.95) which is not significant at 0.05 level.

**TABLE 3 DESCRIPTIVE AND DIFFERENTIAL ANALYSIS OF URBAN AND RURAL STUDENTS ON ASSERTIVENESS AND SELF-ESTEEM**

Variable	Residence	N	Mean	Std.deviation	t	Sig.
Assertiveness	Urban Rural	60	12.98	17.25	1.70*	0.05
		60	7.21	19.81		
Self-esteem	Urban Rural	60	17.46	03.58	2.36*	
		60	19.13	04.13		

It is evident from the table 3 that the mean score of urban students (12.98) on assertiveness is more than the mean score of rural students (7.21). The t-value is 1.70, which is significant at 0.05 level. In addition, above findings also depicted higher mean score (19.13) of rural students on self-esteem as compared to the mean score (17.46) of urban students.

**TABLE 4 DESCRIPTIVE AND DIFFERENTIAL ANALYSIS OF URBAN AND RURAL STUDENTS ON STRESS AND ACADEMIC ACHIEVEMENT**

Variable	Residence	N	Mean	Std.deviation	t	Sig.
Stress	Urban Rural	60	21.11	04.43	<b>2.43*</b>	<b>0.05</b>
		60	22.83	03.17		
Academic achievement	Urban Rural	60	12.16	02.00	<b>2.09*</b>	
		60	11.31	02.41		

Table 4 presenting the mean, SD, and t-value of urban and rural students on stress and academic achievement. According to the findings, significant differences found on the scale of stress among urban and rural students (urban mean= 21.11, rural mean= 22.83, t= 2.43). While the

mean score of urban students on academic achievement is more than the mean score of rural students (urban mean=12.16, rural mean= 11.31,  $t= 2.09$ ), which is significant at 0.05 level. Hence our hypothesis is rejected.

## DISCUSSION

Present research was done to explore the level of assertiveness, self-esteem, stress and academic achievement among Kashmiri adolescents. During the analysis on the basis of gender, it was retrieved that male adolescents had higher assertiveness score as compared with female adolescents as shown in Table 1. In the literature there are studies that have similar results like Chandler, Cook & Dugovics (1978) and Adejumo (1981) who found men to be more assertive than women. But Parray & Kumar, (2016) and Rathee, (2015) reported no significant difference in assertiveness with respect to gender. As for as self-esteem score the findings revealed that male participants had higher self-esteem as compared with female participants. These findings are consistent with (Ozsaker, 2012 and Gull et al., 2012) who reported that male participant had higher self-esteem as compared with female participants. The findings of the table 2 reveal that there is significant difference between male and female students in their level of stress as findings depicted that female students had higher stress as compared to male students. In addition to that the findings also revealed that there is no significant difference between male and female students in their academic achievement.

While discussing the findings between urban and rural students in their assertiveness and self-esteem with respect to residence it is depicted from the findings that urban students had higher assertiveness as compared to rural students. The findings of this study are in consistent with previous studies (Prakash & Devi, 2012 and Parray & Kumar, 2016) who reported urban students are more assertive than rural students. Moreover the findings also revealed that rural students had higher self-esteem as compared to urban students.

During the analysis it was also ascertained by the researcher that the rural students scored higher stress as compared to the urban students. Moreover regarding academic achievement there is a significant difference between urban and rural students. As findings depicted that urban students are better in their academic achievement as compared to rural students.

## CONCLUSION

From the above discussion the researcher concludes that there is greater need of prevention for adolescents of Kashmir especially rural adolescents. The findings suggested that the students of Kashmir are facing problems especially in rural areas. There is lack of assertiveness, academic achievement along with high stress level among rural adolescents and also a very less opportunities, carrier options and other facilities as compared to their urban areas.

Finally it can be concluded that there should be some intervention techniques (assertiveness training) which will help the adolescents of Kashmir especially rural ones to become assertive and to express themselves and it will help them to increase their self-esteem, academic achievement and reduce their stress level to a great extent.

## Suggestions and recommendations

The present study gives some suggestions for the future researchers, who are interested to conduct researches in the same area. The sample size of the present study is limited to only 120

students taken from only two schools. In future researches the sample size should be large and should be taken from different districts of Kashmir so that we should better understand the problems of the adolescents of Kashmir. In addition to that some demographic variables e.g. socio economic status, parent's education, parents job should be included in future studies. As we know there are several studies in this area but there is dearth of studies from the conflict zone especially in Kashmir. So there should be more studies on this topic in future.

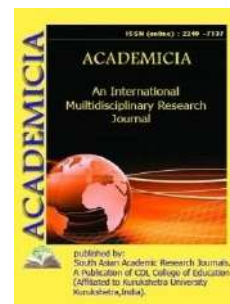
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## ANALYSIS OF PROVERBS AND APHORISMS IN “KUTADGU BILIG”

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### ABSTRACT

*“Kutadgu Bilig”, one of the most important works of post-Islamic Turkic Literature written by Yusuf Has Hacib in 1069, has a great distance between today. Nevertheless, most of the ideas about the main purposes of the work, manners, labels, education, and the relationships between the various social classes still apply today. In the study, the positions of the postas in Kutadgu Bilig in reflecting the educational content of the work, ideological-scientific value, cultural linguistic features, educational importance in society and public life are in question. The importance of the meanings in the text of the phrase, the educational-spiritual value, the psychological and genetic principles of the content of the meanings are interpreted. Special emphasis was given to researching aspects of aphorisms related to folk literature, especially proverbs used in “Kutadgu Bilig”, and the common features of sums and proverbs were examined. The purpose of this research is Kutadgu Bilig in the context of phrases and proverbs Evaluate. In this context, the examples of aphorisms and proverbs in Kutadgu Bilig have been determined and these couplets It was evaluated as a source. Ethnography and phenomenology methods were used in this work.*

**KEYWORDS:** *Kutadgu Bilig, Didactic Works, Folk Literature, Aphorism, Proverb, Uzbek Proverbs, Turkish Proverbs, Metaphors.*

### LITERATURE REVIEW

“Kutadgu Bilig” written by Yusuf Khas Hajib is the first literary epic written in Turkish. The work is an invaluable treasure that, with its deep meaning that has lived on for centuries, serves to pass on spiritual values to future generations. Scientists around the world have done a lot of research on this work. The first study of the semantics of words used in “Kutadgu bilig” was made in 1820 by Yu. Klaprot. In 1823, J. Amadee published a part of the manuscript in the “Journal Asiatique”, giving information about the Viennese version of the “Kutadgu bilig”. In

1870, H. Vamberi published parts of the epic. V.Radlov, S.Malov, A.Samoylovich, S.Ivanov, A.Kononov researched the work. R.R. Arat was one of the first to create a critical text and index of the work. G.Blagova compared the materials of "Kutadgu bilig" with "Boburnoma" and analyzed its morphological features. R.Arziev defended his dissertation on the lexical and stylistic features of "Kutadgu bilig". Turkologists such as E.Bertels, A.Valitova, A.Bombachi, Li Chi, B.Sultanov, A.Kasieva conducted scientific research on the work. Scholars such as G.Abdurahmanov, K.Karimov, H.Nematov, H.Dadaboev studied the lexical-semantic, syntactic features of the work. B.Tukhliev, H.Abdullaev, S.Ibotov, Z.Sodikov, D.Tashpulatova studied the epic from the literary point of view. Ahmad Zaki Validi and Abdurauf Fitrat, orientalists, should be mentioned in popularizing "Kutadgu Bilig". In Uzbek linguistics, Q. Karimov's contribution to the linguistic study of "Kutadgu Bilig" is significant. Scientists such as E.Fozilov, E. Umarov, O. Jo'raev, H. Boltaboev also conducted scientific research on the work "Kutadgu bilig". Kutadgu Bilig is an important work on which a lot of research has been done. The aphorisms and proverbs in the book have also been studied by many researchers. However, the forms of aphorisms and proverbs in modern Uzbek and Turkish have not been studied comparatively. The relevance of the study is thus determined. In the study comparative, comparative-historical methods were used.

## METHODOLOGY

Qualitative research is a type of research in which qualitative data collection methods such as observation, interview and document analysis are used, perceived, and a process for realizing events in a realistic and holistic manner is followed. (Yıldırım & Şimşek, 2006) In our study, information was collected using ethnography and phenomenology methods of qualitative research and interpreted as relevant. The sources that will shape the research are generally qualitative works. Therefore, a theoretical way of working was generally adopted. Therefore, preferred works as sources in the literature written about proverbs and sayings were examined. Couplets containing aphorisms and proverbs in "Kutadgu Bilig". The value of these couplets, which have been identified, has been revealed for today as well as for the period they were written. It is important to state that our main goal is to benefit from the magnificent works of our peoples, to know the meanings of the aphorisms and proverbs, to remember the advice of our ancestors and our personality.

## RESULTS

The didactic content of Yusuf Khas Hajib's "Kutadgu Bilig" is determined by its aphorisms. Aforizmlar taniqli ijodkorlar, mutafakkirlar tomonidan yaratilgan hikmatlar bo'lib, ularning negizida xalq donishmandligi yotadi. Aphorisms are proverbs which were told by famous writers, poets and thinkers. They are based on the wisdom of the nation. In general, proverbs and aphorisms are often difficult to identify. It is clear that folk proverbs are formed, first of all, in the form of aphorisms. Folk proverbs are also realized through the speech of some folk sage. That is the reason why we feel common in folk proverbs and aphorisms. "Kutadgu Bilig" contains aphorisms that are in line with the content of popular Turkish proverbs. These proverbs are still important. A number of aphorisms in the work reflect proverbs based on life experience. In such aphorisms, the conclusion is referred directly to the judgment of the listener. In this study, the aphorisms in the "Kutadgu bilig" are classified into seven groups.

## INTRODUCTION

It is important to research the text of ancient literary works in terms of philology, language and speech, thoughts of speech culture, examples of folk literature, and to educate the youth in all respects as mature, highly intelligent. The “Kutadgu Bilig”, written by Yusuf Has Hacib, is one of the educational works that serve to raise the personal spirituality of our literature, reflecting Eastern-style worldviews. There are also many proverbs and aphorisms in the work. In fact, it is a little difficult to distinguish proverbs and sayings. Proverbs are spoken by wisdom among the people and first they are shaped in the style of aphorisms. Therefore, there are many similarities between proverbs and aphorisms. Proverbs are used both in basic and side meanings, and meanings are used only in the basic sense.

In “Kutadgu Bilig”, there are meanings that are meaningfully close to proverbs used by Turkic people. The results on the basis of life experiences are expressed in these meanings.

Many features of the “Kutadgu Bilig” such as its importance in Turkic people’s culture, literature, the significance of this being as a common literary work for Turkic nations, the educational role in the history of world nations, linguistic features and the author’s talent attracts attention. The significant role of the aphorisms in reflecting the educational content of this work, its ideological-artistic value, lingvopoetic features and its role in society and public life, the thematic classification of the aphorisms, its literary features, the expressing degree of the characteristic properties, the linguistic value of words which express cultural and national meanings in the aphorisms are also very important.

## APHORISMS IN “KUTADGU BILIG”

Special emphasis should be given to aspects of aphorisms used in “Kutadgu Bilig” related to Turkic folk literature, especially proverbs, and the common features of words and proverbs. Attention should also be paid to the literary symbols in the work, the features which show the skills of Yusuf Has Hacib, examples of metaphors, metonymy and other literary arts, semantic features of the character describing human character and other features, and the degree of influence. Today's importance, educational-spiritual value, psychological and genetic principles of the content of the postans are very important in terms of linguistics. We can classify the aphorisms in the work in terms of meaning:

1. Aphorisms about genetics.
2. Aphorisms about human psychology .
3. Aphorisms about the education and etiquette.
4. Aphorisms about human character.
5. Aphorisms about speech culture.
6. Aphorisms about science and scientists.
7. Aphorisms about social relations.

### *1- Aphorisms about Genetics*

Some aphorisms in “Kutadgu bilig” are related to genetics, that is lineage. For instance, Örüñ süt birlä kirsä ed’gü qılıq, ölüm tutmağınça ewürmäs yoriq (Yaxshi qiliq oq sut bilan kirsä,

O'lim kelib tutmaguncha o'z tarzini o'zgartirmaydi) [If good habit is taken through the mother's milk, it will not change until the Death comes]. The main meaning of this is actively being used today as "Sut bilan kirgan jon bilan chiqar". It is in the same sense with the proverb (If something is taken through the mother's milk it comes out only if the death comes). This psychological, genetic basis is related to the character and psychology of human beings. *Huy canin altındadır* (The temperament is under life), *Güzele kırk günde doyulur, iyi huyluya kırk yılda doyulmaz* (You can be fed up with a beautiful person in forty days, whereas you will not fed up with a good behaved person in forty years), *Huylu huyundan vazgeçmez* (A person will never give up his character), *Sütle giren huy, canla çıkar* (If something is taken through the mother's milk it comes out only if the death comes), *Yüz güzelliği hamamdan eve, huy güzelliği Urum'dan Şam'a* (The external beauty will be known only by the family, a beautiful temper will be seen from Urum to Damascus), *Yüzü güzel olanın huyu (da) güzel olur* (The face of the person, whose character is also beautiful, will also be beautiful). The same meaning is expressed in the proverbs mentioned above. The inner world of man is endless emotions, the sum of experiences, many of which are genetic. For this reason, the character of man creates natural, unchanging habits as well as features that will affect the social environment. The word "Sut" (milk) units with the words like "tug'ilish" (born) and "jon" (life) and "o'lim" and creates logical opposition in relation to (death) thoughts and increases the degree of influence.

## 2-Aphorisms about Human Psychology

Some aphorisms in the "Kutadgu Bilig" are related to personal psychology:

Buşaqlıq bilä erkä öwkä yawuz, bu ikki bilä tutçı emgär et öz (Anger and wrath are enemies of man, because of these two people are always tormented (9, 326). Buşaqlıq (buşaq+lıq) – öwkä the use of words in the sense of anger and wrath is related to the peoples' ideas about the occurrence of anger in the lung. For this reason, it would be appropriate to accept these words as linguistics with cultural knowledge. Kaşgarlı Mahmut noted that the word *kisskä* was used in the sense of anger. (3, 148). This aphorism's meaning is close to the proverbs of Uzbeks "Jahl chiqsa(kelsa) – aql ketadi", and Turks *Öfkeyle kalkan zararlar oturur* (If the person stands angrily, he sits with harm), *Öfkede akıl olmaz* (There is no mind in anger), *Keskin sirke kabına (küpiñe) zarar(-dır)* (Sharp vinegar damages own container) . If it was emphasized in the aphorism that anger was an enemy to man, it was stated in the proverbs that the angry person could not control himself and hurt himself. *Sabr tubi – sariq oltin /Sabrning tagi sariq oltin*, *Sabr qilsang, go'radin halvo bitar* The patience, which is meaningfully close to the proverbs [The end of the patience is yellow gold], is also related to the psychological state of man:

*Qachon qahring kelsa, o'zingni tut, sabrli bo'l, Sabrli kishining sevinchi oldida* [Try to keep calm when you get angry and be patient as the happiness of the patient is ahead.] [9,1304.beyit] The impaired man's degraded work is getting better. Patience is what one wants. If there is any problem, anxiety in human life, then these torments come with joy and happiness. Patience is the ornament of man. Patiently, the human finds his way to the sky. When he is angry, the human loses his mind. A person who can control himself when he gets angry is considered willed. It is recommended to be patient in Turkish folklore through these proverbs *Allah sabırlı kulunu sever* (Allah loves his patient servant), *Sabır acıdır, (acı ise de) meyvesi tatlıdır* (Patience is bitter, (despite its bitterness) its fruit is sweet), *Sabırla koruk helva olur, dut yaprağı atlas* (The leaf of mulberry is silk), *Sabreden derviş, muradına ermiş* (Patient dervish became happy), *Sabreyle*

*ishine, hayır gelsin başına* (If you want to have goodness be patient), *Sabrin sonu selamettir* (The end of the patience is goodness). The proverb “Eve kirme ishke sabr qil serin, Eve qilmish ishlar o’kunchi yarin” resembles the proverbs of Uzbek “O’ylamay qilingan ish, Boshga keltirar tashvish”, (The work done without thinking well will bring trouble), *Shoshmasang tez yetasan, Shoshgandan o’zib ketasan* (If you are not in hurry you will reach fast, you will outstrip the man who are in hurry). The proverbs in “Kutadgu Bilig” such as “Qamug’ ishte evme serin o’z baqa, Serimlug kishiler tegir arzuqa”, “Serinse kishi o’z tilikin tapar, Serib turdachi er o’run qush tutar” are close meaningfully close to the Uzbek proverbs to the Uzbek proverbs “Sabrning tagi – sariq oltin” (The end of the patience is golden), “Sabr etgan yetar murodga, Besabr qolar uyatga” (The man who is patient will be happy whereas the man without patience will be embarrassed).

### 3- Aphorisms about the education and etiquette

The aphorisms in “Kutadgu Bilig” are also related to the character and manners of human beings. “Körü barsa dunya kölikä sanı, yeðärsä qaçar qačsa eðrär seni”. [If you pay attention, the world is like a shadow, if you follow your foot, you run, if you run, it will follow your foot.] (9, 3488). This is equivalent to the proverb of Uzbeks “Sen boylikni quvlama, boylik seni quvlasin” [You should not pursue the wealth, it should pursue you]. In aphorism, the world (wealth) is likened to shadow. According to the analogy, the meanings of instability, mortality and disloyalty in wealth are expressed by “Kölikä säni”.

“Rizqli, mard kishi uchun mol-dunyo (hech) kamaymaydi, Tug’ilgan [ya’ni bunyod bo’lgan] oqqush uchun don (hech) kamaymaydi” [For wealthy and brave man, wealth never decreases. “For the swan which was born” (that was, created), grain never decreases.] [9,2020.beyit]. These aphorisms are meaningfully close to these actively used proverbs “Har kim o’z rizqi bilan tug’iladi” [Her insan rızkıyla doğar] [Everyone borns with own sustenance]; “Har kimning o’z rizqi bor” [Everyone has their own sustenance]; Tishni bergan Xudo rizqini ham beradi [God who gives the tooth also gives a sustenance]. There is a lot of wisdom about the birth of everybody in their own culture in the eastern culture, in every child, in every family, in the creation of each person with his own will. It was stated in this aphorism that a person cannot enjoy the pleasure of someone else, and that every person can have the amount of blessing that God gives. “Og’ilxonada buzoq tug’ilsa, ariq bo’yida o’ti unadi” [If the calf is born in a shed, the grass will grow near to him.] *Ağilda oğlak doğsa, Yaylada otu biter* [If the calf is born in a shed, the grass will grow in the pasture.] In the aphorism and proverbs, Eastern ideas are expressed about the spreading of the sustenance of the baby from the time the baby was born, collecting this sustenance throughout the life of the human, and the inability of someone else to receive the sustenance given by Allah to another. “Tarīylay erür dunya elig qutī, tarīsa orar er tirilgū otī ” [Happy ruler, this world is a field, if plants grow, everyone will harvest own food] [9, 1378]. In the couplet, the world is likened to the field, and it is emphasized that everyone will reap what they sow and eat their own sustenance.

### 4- Aphorisms about human character

In the poses of Kutadgu Bilig, it is not only contented to express precious ideas based on life experience, but also it is recommended to pay attention to the result, and advises the reader: *Qoraga yaqinlashma, ey asli oq, Oqqa qora tez yuqadi, ko’ring* [Do not close to the black as you are originally white because the black infects the white fast] [9,4136.beyit]. “Yomonga yaqinlashsang, balosi yuqar, Qozonga yaqinlashsang – qorasi” It is close to the essence of the



proverb [If you close to the bad their bad deeds infects you, if you get closer to the pot with its black you can get dirty]. Yaxshi bilan yurding – yetding murodga, yomon bilan yurding – qolding uyatga It is reminiscent of the proverb [If you are a companion of a good person you become happy, If your companion is bad you can be embarrassed]. The inner world of those who are friends with good people, and who are in good people's conversations also turns towards goodness. If a good person becomes a friend of a bad person, he can start doing bad things soon. Do'sting kimligini aytsang, men sening kimligingni aytaman Proverb [If you tell me who your friend is, I will tell you who you are] is common.

The proverb “Yaxshi yeydi oshini, yomon yeydi boshini “ [The good one eats a meal while the bad one eats his own head] is close to the essence of the proverb “Yaši qisqa esiz ökünçün qarir, uzun yašliy eđgü ökünçsüz yorir [It is stated that the age of the evil is short, he ages with regret, whereas the life of the good is long, he lives without regret] [9, 342]. If the young, strong person is bad, he will age with regret, no matter how old the good person will live without regret. The semantic contrast constitute with words *goodand bad* in the proverb and “ökünçlög – ökünçsüz” in the aphorism.

“Etiglig az eđgü üküštä kökü, telim tüšti artaq üküš sü” [Disciplined minority is better than undisciplined majority, There is a lot of confusion with many soldiers] (9,2304.) The use of the words *az-ükuš* in the meanings of few and many served to emphasize the idea: “Disciplined minority is better than undisciplined majority.” [Ахмедов Б. 2007: 3] This idea is close to the opinion of Amir Temur “A single person who knows his job well, is brave and diligent, decisive, enterprising and vigilant is better than thousands of careless people”. [Ahmedov B. 2007: 3] This conforms to the proverb of the Uzbek “Oz bo'lsin-u, soz bo'lsin” [Can be less but should be good]. “Dushman birgina bo'lsa ham zarari ming-mingdir, Minglab do'sting bo'lsa ham ozligi birga tengdir[ya'ni bir kabi ozdir]” (Even if there is one enemy, its harm is thousands, even if there are thousands of friends, they are equal to one (that is, as little as one). (4087)Do'sting mingta bo'lsa ham oz, dushmaning bitta bo'lsa ham ko'p [Even if you have a thousand friends it is still less, even if you have one enemy it is more .] This proverb and aphorism encourages you to be careful in social relations, to be friends with people.

### 5- Aphorisms about speech culture

Some aphorisms are related to the culture of speech: Uquşqa biligkä bu tılmaç tıl, yaruttaçı erni yoriq tilni know [Know that the interpreter for education and science is a language, the fluent language makes people happy] (QBN, 158; 13a7). The person is developed and become valuable thanks to his language. The word in couplets “tılmaç” formed the metaphor. Aphorism Boshga balo tildan kelar It is close to the proverb [the trouble comes from tangle ].

*Yaxshi so'zga ilon inidan chiqar, yomon so'zga pichoq qinidan chiqar* [with sweet words the snake comes out from the hole, with bad words the knife is taken from the sheath] this proverb is reflected in these aphorisms: “Ayızdın ara ot ara suw čiqar, birisi yapuylı birisi yıqar – Sometimes the water, sometimes the fire comes out of the mouth, one of them treats, the second one breaks down (9, 2646.beyit)”. There wonderful metaphor is used. The word that comes out of the mouth is expressed with the features of fire and water. As emphasized in the work, the bad word always destroys crops like fire, that is, it breaks people. The good word is like clear water. Where the water is, various blessings are there. The good word spreads goodness seeds to people's hearts. The contrast in the thoughts of water constitutes the metaphor.



Aqar suw teg ul bu tilin eḡgü söz, qayuqa bu aqsa čečäk ündi tüz [The beautiful word that comes out of the mouth is like flowing water, wherever this water flows, flowers bloom there.] [9, 2648.beyit]. The word combination “eḡgü söz” is compared to “aqar suwa”. The blossoming flowers near to the flowing water, filling the realm with goodness, has been compared with the words of the beautiful word.

The beautiful meaningful, deep ideas in “Kutadgu Bilig” were written thanks to hadiths. In the couplets we have examined, we have seen that wise people are compared to the land which is with water, and wise words are compared to life-giving water. In the hadiths about science learning, science is compared to rainwater, and those who learn science are compared to the ground. It is stated in the hadith that rainwater is life-giving.

Süčig sözlük (sweet language) envoys are considered to have the virtues: Sözi bolsa yumşaq šakar-teg süčig, süčig sözkä yumşar uluy ham kičig [If the word is sweet, like sugar, it softens everyone.] [9, 2626.beyit]. Here süčig (sweet) used the word metaphorically, süčig söz (sweet words) šakar (sugar) is compared to “The painful (bad) word removes the man from his religion (with the sweet word snake comes out of his hole) while sweet words makes the snake come out from his hole”. Kaltak yarasi bitadi, tez esdan chiqadi, Til bilan so‘ksa bitmaydi, zahri abadiy qoladi [The wound which is made by stick will be treated and it will be forgotten quickly, if it is wounded from the tongue, its poison will remain eternal] [9,2541.beyit]. “Tig‘ jarohati bitar, til jarohati bitmas” [the wound made by knife will be cured, whereas the wound made by the tongue will never be healed] is appropriate to the proverb above. Warnings like this encourage every person to be very careful, because that is the goal. “Proverbs are the common property of a nation. A nation made the lessons learned from the rich life experience proverb, so that it wanted to inform, warn and criticize people. [Aksoy, Ömer Asım, 1988:10]

### **6- Aphorisms about science and scientists**

The period in which Yusuf Has Hacib lived was the flourishing period of the Karakhanid denasty. In this period, much attention was paid to learning science, and scientists were also respected. It was recommended by the author to learn science, to be patient in every job, not to rush. In many places of “Kutadgu Bilig”, the importance of science in human and social life has been mentioned and the words of knowledgeable people have been compared to water: “Bilimlining so‘zlari yer uchun suv kabidir, Suvni oqizilsa, yerda anvoyi ne‘matlar unadi” [The words of the knowledgeable are like water for the ground. Many plants grow as water flows.] [9,958.beyit]

Water are the source of life for nature, human and all living things. Smart people are necessary for society and the state as much as water and air. One wise and an intelligent person is better than thousands of mindless people. The mindless person is very dangerous for society. Because he has no mind. Therefore, malevolent people can easily get what they want. The smart and wise man is determined. No power can turn him down in his own way. The language of the scholar must be free to speak. The fame of the wisdom person will never decrease like the water of the flowing water. Knowledgeable human is like a place where plants grow. Wherever foot is placed on this place, water comes out of it. The heart of the ignorant is like a desert. Even if the river

water flows there, it does not fill. This is close to this proverb Bilimli ming yashar, bilimsiz bir yashar [the smart ones live thousand years, while the ignorant ones live a year].

“Zakovat ko‘rki tildir, bu tilning ko‘rki so‘zdir, Kishining ko‘rki yuzdir, bu yuzning ko‘rki ko‘zdir” [The ornament of intelligence is language, the ornament of this language is the word, the ornament of the person is the face, the ornament of the face is the eyes.] [9,271.beyit]. According to what people say, it is possible to understand his science and his worldview. The ornament of the mind is the word, the ornament of the person is the face and the ornament of the face is his eyes. If his word is good, he will be respected. This posy reminds one of the proverb of Uzbek folk literature “So‘z ko‘rki – maqol, yigit ko‘rki – soqol” [The ornament of the word is a proverb, the ornament of the man is his beard].

### 7- Aphorisms about social relations

In “Kutadgu Bilig” Yusuf Has Hacib also paid attention to neighbors and neighborhoods. It is stated that the person who wants to buy a house should learn who the neighbors are first, because if the neighbor is bad, there is no peace in life. A good neighbor becomes better than a relative. A close idea can be seen in these Turkish proverbs: *Ev alma, komşu al* (Do not buy a house, buy a neighbor), *Hayırlı komşu, hayırsız akrabadan iyidir* (A good neighbor is better than a unthankful relative), *Kem dileme komşuna, kem iş gelir başına* (Do not wish bad things to your neighbor, they come to your own head), *Komşu ekmeği komşuya borçtur* (The neighbor's bread is a debt to the neighbor), *Komşu hakkı, Tanrı hakkı(-dır)* (Neighbor's right, is God's right), *Komşu komşunun külüne (tütününe) muhtaçtır* (Neighbor is in need to the neighbor's ash), *Komşuda pişer, bize de düşer* (Cooked meals in the neighbor's house, comes to us as well), *Komşun kör ise sen kıpa bak* (If your neighbor is blind you should also adapt to this), *Komşunu iki inekli (öküzlü) iste ki kendin bir inekli (öküzlü) olasın* (Wish to your neighbor two cows, if you want to have a cow), *Sırça köşkte (evde) oturan, komşusuna taş atmamalı* (The person who lives in glass castles should not throw a stone at his neighbor), *Yaman komşu, yaman avrat, yaman at; birinden göç, birin boşa, birin sat* atasözleri boşuna söylenmemiştir (A bad neighbor, a bad wife and a bad horse: leave from one of them, break up with her, sell the last one). As “Each proverb is a treasure in which the culture of society is hidden and a guide that guides people. The societies' lifestyles, customs and traditions, perspectives on life, value judgments and cultural structures have been included in proverbs in the form of experiences and transferred to future generations as advice.” [Aynur Öz Özcan, 2009:1]

“Uy olmoqni istasang, qo‘shnilarini surishtir, Yer olmoqni istasang, suvini surishtir” [If you want to buy a house inquire about your neighbors, If you want to get a place, inquire about the water of this place ] [9,4444.beyit]. In Uzbek folklore has proverbs like “Bir qizga yetti qo‘shni ota-ona” [Seven neighbors are regarded as parents of a girl], *Hovli olma, qo‘shni ol* [You should not buy yard but you should buy neighbors], “Yon qo‘shni – jon qo‘shni [A close neighbor is a life neighbor], “Yomon qo‘shni yovdan yomon” [A bad neighbor is worse than an enemy] [10,126]. This means that neighbors, neighboring issues were of great importance in the lives of our people.

### CONCLUSION

As we can see, proverbs and aphorisms in “Kutadgu Bilig” have not lost their importance today. We can explain the importance of the aphorism in the work as follows:

- Aphorisms are similar to proverbs in that they are based on a certain experience, related to events in social life. They are distinguished from proverbs with the author's own approach;
- There are words reflecting to the culture of the people and the thoughts of the worldview. For this reason, aphorisms are significant in expressing national values and cultural relations;
- Aphorisms have linguistic units that reflect the development periods of a particular language;
- Written statements make it possible to express thoughts, ideas, and reach future generations through proverbs.

Researching proverbs and aphorisms in “Kutadgu Bilig” is also very important in terms of our people's worldview, understanding their spiritual values, and examining the changes in our vocabulary.

As you can see, proverbs and aphorisms in Kutadgu Bilig have not lost their significance till nowadays. “Kutadgu Bilig”, which is regarded as one of the most valuable works of Turkic literature in the period of Islam and has been translated into many languages of the world, has an extremely important place in the world culture and literature. For this reason, the 950th anniversary of the writing of Kutadgu Bilig by Yusuf Has Hacib was included in the 2019 UNESCO Memorial and Celebration Anniversaries program.

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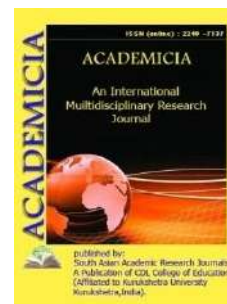
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## THE BASICS OF STUDENTS' HEALTHY LIFESTYLES AND THE ROLE OF PHYSICAL EDUCATION IN ENSURING HEALTH

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### ABSTRACT

*In this article, speech goes on health, which is the World Health Organization (WHO) defines as a state of complete physical, spiritual and social well-being, and not just the absence of an illness or physical defect. Moreover, some signs of health, such as (balance with the environment, breadth of adaptive capabilities, functional reserves, level of working capacity) are quantified, others (degree of physical, social, spiritual well-being) are discussed.*

**KEYWORDS:** *Sport, Health, Exercises, Lifestyle.*

### INTRODUCTION

Health is defined as the ability to self-preservation, self-development and self-improvement. Health is the ability to:

- ❖ resist external and internal influences, diseases, damage, aging and other forms of degradation;
- ❖ adapt to the environment and their own capabilities;
- ❖ increase the duration of life;
- ❖ produce and grow full-fledged offspring;
- ❖ improve the capabilities, properties and abilities of your body, as well as the quality of life and the environment.

Most often in the definitions of health there are several signs:

1. The absence of disease;
2. The normal function of the body at all levels of its organization;
3. The ability to fully perform basic social functions;
4. Complete physical, mental and social well-being, harmonious development of the physical and spiritual forces of the body;
5. The dynamic balance of the body, its functions and environmental factors;
6. The ability to adapt to constantly changing living conditions in the environment (adaptation).

Some signs of health, such as (balance with the environment, breadth of adaptive capabilities, functional reserves, level of working capacity) are quantified; others (degree of physical, social, spiritual well-being) are descriptive. Scientific and technical, social progress brings not only goodness, but also leads to environmental pollution, increases the requirements for stress resistance, necessitates the assimilation of a large information flow, reduces the amount of physical activity of a person (lack of exercise), which together leads to poor health.

There are several gradations of health:

1. **Absolutely healthy** - all organs and systems function in accordance with the environment, there are no painful manifestations in them.
2. **Almost healthy** - the observed some deviations in the state of health do not significantly affect well-being and performance.

More than 1000 years ago, Avicenna identified 5 degrees of health and illness:

- 1) The body is healthy to the limit;
- 2) The body is healthy, but not to the limit;
- 3) The body is not healthy, but not sick;
- 4) The body is in good condition, quickly perceiving health;
- 5) The body is sick to the limit.

Along with "static health", "dynamic health" is becoming increasingly important. "Healthy" - one who has good "dynamic health" and is able to perform certain physical activities.

In the system of state educational institutions, pupils, learners and students by health level are divided into basic, preparatory and special medical groups.

Many scientists consider the most common components of health. Traditionally, following the WHO definition, in most cases, the following are distinguished:

The components of health are physical, mental, and social.

**Physical health**, which provides power relationships with the outside world, is a person's ability to use his physical body, his organs and systems for self-preservation.

**Mental health** determines a person's ability to use the image of the outside world, control their emotions and behavior, cope with stress and use them to improve health.



**Social health** consists in the ability to form and use for self-preservation the subjective ideas of other people about the outside world and their role in it. This component reflects social ties, resources, ability to communicate and its quality.

Biological, social, and natural factors influence human health. Of great importance is heredity - the ability of the body to preserve and transmit to posterity the characteristic features, structural features, functioning and individual development. The concept of "health" includes a person's ability to adapt, i.e. adequate changes in functional parameters, ensuring the preservation of performance in new conditions. Compensatory reactions are aimed at maintaining homeostasis and is defined as:

- 1) Health is the state of the body,
- 2) Health is determined by internal and external factors, especially social,
- 3) Health - a state of equilibrium with the environment and has a quantitative and qualitative degree.

A person's attitude to health is manifested in the actions, deeds, experiences, judgments of people regarding factors that affect their physical and mental well-being.

The forms of manifestation of the attitude to health can be adequate (reasonable) and inadequate (unreasonable, careless), but since in real life such a polar alternative is practically excluded, we should talk about the degree of adequacy of the attitude to health.

The criterion for a measure of the adequacy of attitude to health can be the degree to which a person's actions comply with the requirements of a healthy lifestyle, as well as the normatively prescribed requirements of medicine, sanitation and hygiene, and whether the individual's self-esteem matches the physical and mental health status.

**Health as a need for a cultured person.** The need for health, given to us at a biogenic level in the form of the need for self-preservation, transforming as a person socializes, develops and becomes a need for health as a means of fulfilling other life needs (in material well-being, achieving other goals, etc.).

As the individual develops culturally and spiritually, the need for health becomes an independent value. The stronger spiritual needs, the higher the person's responsibility for their physical ability to realize them.

There is a group of needs that are themselves, to one degree or another, met in the process of fitness classes. This may include the need for outdoor activities, restoration of working capacity and health, communication and collective activity, moral and aesthetic development, recognition by other people and self-affirmation, etc. The more developed these needs are, the greater will be the need for physical education and sports.

**Student's lifestyle and its impact on health.** Physical culture acts as a necessary part of students' lifestyles, because it is an integral part of universal human culture, the area of satisfying vital needs in physical activity, solves the problem of physical perfection, and solves the problems of rational use of free time.

Everyday academic work, test-examination sessions (2 times a year), training practices - all this requires a student to be very diligent, good health, positive psychophysical preparedness. The

volume of students' workload in faculties and courses, as well as in specialization, varies considerably. It is determined by the complexity of the studied disciplines, the level of preliminary preparedness of the student and his attitude to study. Sociological studies show that 6-8 hours per day are given for training sessions. Self-training requires from 3 to 5 hours, and during the examination session - 8-9 hours a day. Thus, the total study time of students is 9-12 hours a day. This is a rather large psychophysical load on the body of a young man. The volume of physical activity in students of the Faculty of Physical Culture, in the process of daily practical exercises, in total significantly exceeds the physical load in comparison with students of other faculties.

A significant part of students with insufficient theoretical training in healthy lifestyle issues often rely on a fairly quick natural recovery of the young body. Most students have this feature, but you need to know the elementary patterns about the consequences of the endless exploitation of the young body, violating the elementary rules of the study and rest regime. According to research materials, up to 60% of students are self-taught in the late hours and, as a result, many have a sleep disorder that has been observed for all years of study at the university. In 87% of students living in dormitories, going to bed is delayed until late at night. Hence the extremely insufficient duration of night sleep occurs. Sleep normally should last from 7 to 8 hours, which is observed only in 15% of students. There is a complete disregard for the diet, when up to 21%, students go to classes without breakfast, with irregular intake of hot food. The calorie content of food, its volume and quality are not regulated at all.

Great overloads and a "barbaric" attitude towards your body sooner or later make themselves felt. They are manifested in reduced working capacity already at the end of the semester, when the greatest mobilization of forces is necessary for the successful development of all the training material for the test-examination session. The exam period is not just a test of knowledge, it is a test of the health of the whole organism of a young man.

For example, special observations showed that during the exam session, the heart rate of students steadily rises to 80–92 beats / min, at a rate of 68–72 during normal training sessions. On the day of exams, before entering the audience where the exam takes place, the heart rate increases to significant levels, reaching 144 beats / min, blood pressure rises, breathing becomes uneven and, therefore, oxygen saturation decreases. It would seem that it was during this period that it is necessary to pay special attention to the correct mode of work and rest, to the use of active recreation, compensating for low physical activity and great mental fatigue.

In practice, during the examination sessions, about 90% of students become violators of elementary patterns. Dramatically limited students stay outdoors. There is a systematic lack of sleep, a rare and irregular meal and as a result, after the session, some students have colds and other deviations in their health status. All these "ordinary" diseases (flu, tonsillitis, acute respiratory infections, etc.) are the result of a decrease in the body's protective capabilities due to overstrain during the session, the result of significant violations of the proper mode of academic work and life, as well as a consequence of a general lack of physical activity (physical inactivity).

At the same time, students who regularly go in for sports and do not interrupt their studies even during the exam period, more safely pass through these difficulties of their student lives.

Students involved in systematic physical education and sports and exhibiting quite high activity in them develop a certain stereotype of the daily regimen, increase confidence in behavior, observe the development of prestigious attitudes, and high vitality. They are more sociable, express readiness for commonwealth, rejoice in social recognition, are less afraid of criticism. They have higher emotional stability, endurance, they are more prone to optimism, energy, among them there are more persistent, decisive people. This group of students is more inherent in a sense of duty, integrity, self-discipline. They successfully interact in work that requires constancy, tension, more freely enter into contacts, are more resourceful and sociable, leaders are more common among them, they are more able to self-control.

These data emphasize the solid positive impact of systematic physical education and sports on the character logical characteristics of students' personalities.

Educational and free time is an inextricable whole. It is no coincidence that they say: "As you rest, you will work!" Students' free time is about 2-3 hours per day. Of course, the conditions in which they live, study and relax, have a significant impact not only on the structure of free time, but also on their performance, health status.

Sociological studies have revealed that students of special educational institutions use their free time in different ways. Comparing the budget for free time of student athletes and students who are not involved in sports, we clearly see the greater clarity of the regime of work and rest in the former.

Students-athletes, whom the very essence of sports training forces to constantly monitor their health, already put themselves in relatively better conditions. By consciously following the rules of a healthy lifestyle, athletes are less likely to violate sleep, nutrition, more often are in the air, so they have a great harmony between mental and physical stress. They do not need to be convinced of the dangers of smoking and alcohol, since they know very well how this can affect their well-being and performance. As a result, they are less likely to get sick, switch more easily from one type of activity to another and, despite the additional time spent on sports training, have higher resistance to various stressful situations, as well as increased overall performance during the school year.

Calculations of the impact of risk factor groups on health have shown that 50–52% are related to lifestyle, 18–20% are heredity, 20% are environmental and environmental effects, 10–12% are health-dependent factors.

It is established that the influence of the individual components of the student's lifestyle, taken as 100%, is very significant. So, sleep mode accounts for 24-30%, diet mode - 10-16%, motor activity mode - 15-30%. Accumulating during the school year, the negative consequences of such an organization of life are most pronounced by the time it ends.

Unfortunately, not all students have the right idea of a healthy lifestyle. Many believe that for this it is enough to abandon bad habits. Some students express doubts about the justification and the ability to play sports and study well. In this matter, you must first decide which athletes to talk about. Candidate students for masters of sports spend more than 20 hours a week on training and competitions and, in addition, go to sports competitions and training camps for more than 1.5–2 months during the year. The total time volume of work in this case is approximately equal to or slightly exceeds the established weekly volume of classroom studies of students at the

university. And when you consider that athletes of this level conduct 2-3 trainings a day, you still need time to travel to the place of training and recovery procedures. Thus, the total time spent by athletes increases significantly. Therefore, we can say that the most significant minus in the attempt to combine the active functioning of a student in sports and his professional development as a specialist in a particular profession is based on a catastrophic lack of time for successfully solving these two independent tasks within the established periods of study at the university. Almost one or the other task will not be completed, and possibly both.

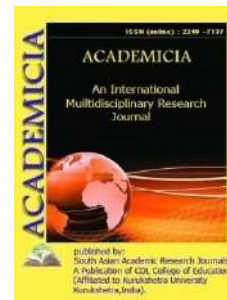
A different picture is noted among representatives of mass sport. These students study in their educational institutions, compete for their faculty, university, national team of the city, region. These students have the priority of mastering their chosen profession over sports success. Sport in this case is an assistant in becoming a professional employee.

Specifically conducted studies indicate that student athletes of the II — III grades, who spend 6–12 hours a week on training, study better than students who are not involved in sports; student athletes of I category and candidates for master of sports, training for 12-20 hours per week, study in the same way as non-athlete students. Only student candidates for master of sports study worse than the average university student. But the worst performance, the most missed classes, frequent departures on academic leave and a high frequency of cases of expulsion from the institute are among students of a special medical group and exempted from practical classes in physical education.

One of the factors that significantly reduces the adaptive abilities of students is physical inactivity. If earlier physical inactivity, physical weakness was noted in middle-aged and older people, then at present it is observed quite often among young people, students, and schoolchildren. The main reason is low motor activity. 20-30% of students entering the institute cannot swim. Over 25-35% of university students are weakened by their health and poor physical fitness. In extracurricular activities, students' physical-sports activity is low.

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## **PATRIOTISM AS A MEANS OF DEVELOPING HARMONIOUSLY DEVELOPED YOUNG GENERATION IN THE MILITARY SYSTEM**

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### **ABSTRACT**

*In this article patriotism is discussed as a citizen's spiritual heritage, the most important element of social consciousness, the foundation of social and state systems, the foundation for strengthening the unity of a federal state. Patriotism is one of the main signs of national harmony in society, and a sense of patriotism has always been a necessary component of the educational process. For any country at all times, bursts and downturns of national unity were characteristic, and the strength of the country was to a very large extent determined by the sense of patriotism of its people.*

**KEYWORDS:** *Patriotism, Statehood, Military System, Education, Secondary Schools*

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### **INTRODUCTION**

At present, in Uzbek society, feelings of spiritual unity and patriotism have again become really in demand. Therefore, the relevance of this article we see in the analysis of the strengths and weaknesses of the military - patriotic work carried out in individual regions relatively recently, so that this experience of educating pre-conscription youth helped to develop measures to restore and strengthen the spiritual foundations expressing the common interests of all layers and groups in Uzbekistan, strengthened the credibility of the central authorities, local authorities, and, ultimately, would facilitate the approval and support of young people both native and foreign policy of our state.

The revival of Uzbek statehood on the basis of Uzbek national-spiritual identification, the recognition of the country's national interests, required the restoration of a system of patriotic and military-patriotic education on completely new foundations. The peculiarity of the current state of affairs has put on the agenda the creation of a system of patriotic and military-patriotic

education on the basis of previously practically tested and understandable common spiritual values.

The problem of modernizing the entire system of military-patriotic education in the educational system is associated with the identification and preservation of the best traditions of patriotic education accumulated by pre-revolutionary and Uzbek schools, updating its content, designing new technologies with justification of organizational and pedagogical conditions for increasing the effectiveness of patriotic education in educational systems.

The most significant achievements of patriotic upbringing experience accumulated by the pedagogical school for modern times are reflected in the writings of A.L. Aronova, V.A. Rodrodny, B.C. Ilyina, N.M. Konzhieva, I.F. Vydrina. Problems of military-patriotic education, training of a soldier-internationalist are considered in the works of A.G. Bazanova, A.V. Drumshchikova, G.V. Sredina, A.N. Vyrshchikova, A.A. Cherkasova and others.

However, in the works of these authors, the dependence of the content of military-patriotic education, its forms and methods on the results of the process of diversification of education, the existence of various types of organizations engaged in military-patriotic education using regional characteristics are not fully shown. Analyzing the scientific literature on this topic, a number of dissertation studies based on the modern experience of organizing military-patriotic education, it is difficult not to notice a number of contradictions:

- between the needs of society, the state in the personality of a citizen-patriot, as a bearer of national cultural and historical traditions, and the process of predominant orientation of young people to other moral and material, sometimes artificially implanted, values;
- Between the desire to form democratic ideals, ideals of the rule of law in the socio-political consciousness and the inadequate level of patriotic and civic consciousness of a significant part of the population, including pre-conscription youth;
- Between the needs of high school students in knowing the historical truth about their Motherland and the content of the curriculum of the main humanitarian disciplines, sometimes insufficiently truthfully and objectively reflecting the past and present;
- Between the desires of pre-conscripts to take part in socially significant activities and the real possibilities for involving students in military-patriotic activities;
- Between the pace of improvement, the introduction of new educational technologies and the ability of state institutions, public organizations to introduce new technologies in the field of military-patriotic education.

A natural question arises: how should approaches to the design, content, organization of military-patriotic education be changed in order to increase its practical orientation and effectiveness? The search for an answer to it was the topic of our article.

Our purpose is the assessment, generalization and scientific and pedagogical understanding of the experience of military-patriotic education of preprincipled youth in the state institutions and public organizations.

The organizational and pedagogical experience of military-patriotic education of high school students and pre-conscripts will be more positive if we:



- show the importance of the patriotic moods of Uzbek society for strengthening the country's defense capabilities, as well as factors affecting its condition;
- reveal the content and features of military-patriotic education in modern conditions as part of the system of patriotic education;
- analyze the basic concepts of patriotism that have developed in modern Uzbekistan, as well as explore the possibilities of their use in military-patriotic education of pre-conscription youth;
- To investigate the attitude of pre-conscripts and high school students to the activities of military-patriotic education conducted with them;
- to reveal the orientation and effectiveness of military-patriotic education of pre-conscription youth carried out by state institutions and public organizations.

To solve the tasks, a complex of theoretical and empirical methods was used: analysis of scientific literature, documents, pedagogical experience; questioning, testing, ranking, studying the results of activity, stating and formulating an experiment; systematization and qualitative analysis of experimental data, their graphical interpretation. The study was carried out in three stages.

The first stage was associated with a theoretical analysis of philosophical, historical, sociological, psychological and pedagogical, regional studies literature, the development of research programs, and the definition of a conceptual apparatus.

The second stage- conducting the study itself on the basis of assessing the degree of effectiveness of work on military-patriotic education conducted by state institutions and public organizations (associations) of its role in shaping the patriotic consciousness of pre-conscripts.

The third stage - completion of the research work, analysis of the data obtained, generalization of the results obtained, preparation of the article.

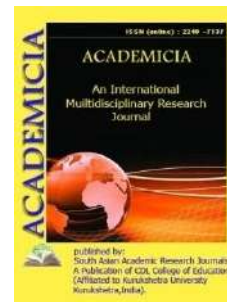
In conclusion, the study of literature on patriotic education, a comparative analysis of the state and prospects of ethnic self-preservation of the diaspora showed:

1. The education of students in the spirit of patriotism and friendship of peoples in the diaspora is an urgent psychological and pedagogical problem of modern pedagogical theory and practice of education.
2. The problem of educating young people in the spirit of patriotism and friendship of peoples in the diaspora has not been studied enough and requires scientific understanding, theoretical, and methodological development.
3. In the education of youth in the spirit of patriotism and friendship of peoples in the conditions of life of the diaspora, it is necessary to take into account the psychological and pedagogical features of family education.
4. The national school plays a decisive role.
5. The national diaspora is a phenomenon of the spiritual and moral life of society.
6. The implementation of the theoretical foundations of the education of patriotism and friendship of peoples among students in the diaspora is possible when developing a model of the pedagogical system and introducing an approximate methodology for solving this problem based

on the above logic of constructing the educational process, which in turn requires the implementation of an experimental test.

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## OGAHI PATRIOTIC PERSON

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### ABSTRACT

*Ogahi lived during the Russian occupation period. The article analyzes Ogahi's depictions of the struggle against the invaders in contemporary art. Battle scenes are rare in the play. But through the spiritual resistance of Ogahi against a whole war, the psyche of the people was revealed. The article tries to explain this situation.*

**KEYWORDS:** *Historical Novel, Historical Personality, Generalized Image, Specific Features Of Images, Image Psyche And War, Symbolic Images, Khiva Khanate, Russian Invasion, Patriotism And Betrayal.*

### INTRODUCTION

In the 19th century, the son of the great historian, poet, scientist, translator and statesman Erniyozbek, Muhammad Riza, nicknamed Ogahi, grew up in Khorezm, a center of high culture and cultivating a pleiad of great scholars. Ogahi is the second most prolific writer in the history of our literature after Alisher Navoi.

The work "Traces of a hurricane or Ogahiy" consists of two parts. The first part describes the causes of the war, the individual characteristics of each image, their specific features. The second part of the novel describes the war processes, the siege and occupation of the Khiva khanate, and describes the tragic situation of the Khiva khanate after the war in harmony with the Ogahi psyche. "During this period, the people of Khorezm were oppressed by the local rich and the Russian invaders. Nevertheless, cultural and educational work developed in the khanate. Ogahi's enlightenment contributed greatly to this. Ogahi's political lessons to Feruz are still relevant today."

The work begins with an image of spring. But these are not the traditional beautiful spring lines. This symbolic image of spring seems to be a sign of the future catastrophe of the Russian state

for our people. For example, in the first days of spring, Khorezm was invaded by a group of birds of prey. This bird says, "It cannot stand alone, it does not hesitate to eat what it sees in its eyes, it does not get enough of what it eats, it bites what it does not touch, it pollutes its destination, no one has seen it before, no one knows its name, it is yellow. The reader is able to see the image behind the symbolic symbol through these symbols.

Especially with the yellow color of this bird, we understand that the oil is meant by the Russian invaders. Another disaster in the image of spring is the symbolic image of the "blackbird". This image has generalized a number of images through its specific features. That is, the calamities that traitors bring to their people are revealed through this symbol of the "blackbird". For example, we can see this in the following passage. "It came from the cemetery inside the castle," he said. He began to gnaw at the stone walls, the columns of text below. Apart from the old courtyards, the new courtyards also started to be comfortable. Only after he collapsed did the blackbirds enter the houses and find out which roof had pierced which wall. There was no way to prevent the disaster or do anything about it. "It is important that the blackbird came out of the castle. In this way, the author is referring to traitors from within the country. Because with this sign his other signs become clear. Based on these signs, we see the images hidden behind it, the traitors. The "Soriqarga" symbolizes the leaders of the Russian invasion, while the "Karakurt" symbolizes Malanghan, Shomurod Inoq, Amir Tora, Kara Sardor, the poet Zamoniyy and Otajon Tora as traitors who destroy the country. The images of Ogahi and his entourage, King Feruz, Abdumalik Tora, Yaqubjon, Boboqul, and Siddiq, are portrayed as brave patriots who sacrificed their lives for the country.

## MATERIALS AND METHODS

At a time when the Russian army was in danger, Prince Abdumalik of Bukhara was pleased with Tora's visit to Khiva. Because he was well aware that the purpose of this visit was an alliance. With the Emirate of Bukhara under Russian occupation, there was no other reason for the visit. The phrase "His body is as light as a bird" is also used for this visit. The reason is that Ogahi, who correctly assessed the strength of the Russian army, was worried that one day the fate of Bukhara would fall on Khiva. However, due to Malanghan, the commander of Abdumalik Tora, the alliance agreement was annulled. It is emphasized that Ogahi is a strong politician. He is the first to notice that Malanghan has betrayed him. The reason for this betrayal was that von Kaufmann had thrown a large bone in front of Malanghan. Von Kaufmann focused on finding traitors, including Saidazamboy, one of Tashkent's richest men, and several castle governors, who carried out their plans with their own hands. It should be noted that the author created the image of Malanghan with complexity.

The reader finds it difficult to understand the true intent of this image. It seems that the author justifies this image in some ways. In particular, he seems to be still fighting for his country throughout the play. This can be explained by the process after Malanghan's interview with General Maneev, a representative of von Koufman. For example, he thinks he can help his people by overthrowing Amir Muzaffar, who is now an enemy to his people. In the current situation, fighting Russia is tantamount to self-immolation. But in any case, he left his comrade halfway. There is no excuse for betrayal.

The author has shown great skill in contrasting images of patriots and traitors. He contrasts the image of a slave boy, Boboqul, who was brought from another country in his youth, with traitors,

to the images of those who sold their homeland. Babakul's sister Anna will not leave her beloved homeland and return to her homeland with her sister. He says he is now in his homeland, in the arms of his family. This, in turn, reflects the image of Boboqul as an example of traitors under the guise of "blackbirds".

## RESULT AND DISCUSSION

The second part of the work describes the siege of Khiva. Each event is described in the same way as Ogahi's mental state. OgahiPahlavon thinks about Mahmoud Puryoivali's footsteps. "Did he get hurt? If a brick moves, people think it's a sign of decline. Let not the pillars of faith be broken, nor let the tower of faith be broken "(p. 107). We know that Pahlavon Mahmud was a great man. He is the teacher of all wrestlers. That begs the question. Why does Ogahi think of Pahlavon Mahmud's footsteps instead of caring for his people, innocent people? Because it is of special importance to the people. If a calamity befalls him by the enemy, the spirit of the people will be broken. In other words, Pahlavon Mahmud was a pir for the fighters along with the fighters. And for those who are defending their homeland during this war, it is one of the pillars of our great past. Literary critic P. Shermammedov in his article gives the following opinion about Pahlavon Mahmud. "It's very legal," he said. Because the vices of Pahlavon Mahmud, such as arrogance and lowliness, ignorance and ignorance, stupidity and envy, are very alive. The fight against these evils has not stopped.

"By this time, Ogahi had been repeatedly told that he was getting older and that his health was deteriorating. This is in conflict with Ogahi's actions during the siege and the war. Ogahi will fight the enemy to the last breath, even if he loses his strength and health. When Khiva khan Feruzkhan was betrayed by his uncle and brother and did not open the gate, Ogahi went on a hunger strike. When Sheikh-ul-Islam and Qaziqalan, who acknowledged Ogahi's courage, came to see him, the reason for Ogahi's hunger was reflected in his speech. "First of all, it is necessary to head to the fortress," said Mawlana. (p. 121). Apparently, Ogahi was crushed for internal turmoil. This is how he fought against those who betrayed the khan by claiming the throne.

This rebellion of Ogahi, who is revered by all and considered a master by kings, certainly does not leave anyone indifferent. Even General Kaufman, the leader of the Russian army. In his conversation with Commander Maneev, the following sentences are important. "If he was really on a hunger strike," he said. "It's called Ogahi." He is a true patriot if you know. He dared to slap us in the face. Do we have such a brave poet, I mean Russia? "(P. 148). Kaufman's claim that there are no such patriotic poets in Russia is a recognition of Ogahi's courage in the homeland. King Feruzkhan also says the following about Ogahi's courage. "MawlanaOgahi is an inexhaustible genius who knows the sorrow of the hand as his own sorrow. The fact that he did not taste the salt from the beginning to the end of the siege was not just a simple rebellion, but an obvious curse on those who came naked to the cursed ones with a sword, if I had the courage and heroism. , so be it "(p. 164).

Ogahi experiences such thoughts about the pain of addiction. "If you eat bad food, it will pass with medicine, and if you pass it, you will vomit." But you can't get rid of the whey of addiction. The world is full of comfort, but there is no cure for addiction. On the contrary, the more comfort, the greater the pain "(p. 160). Reflecting on freedom, Ogahi said, "Thank you for the wind that blows under your feet. How many are stuck in bed? " That is, it is a great thing that the wind blows under your feet, but if the Freedom of Man is violated, the wind will not taste.

Through von Kaufmann, Emperor Alexander had heard a great deal about Ogahi's poems and works on history. Therefore, the emperor invited Ogahi to St. Petersburg to see him. Ogahi tells Maneev, who brought the news, that he can only go on one condition. "... The books are our eyes, the pure blood that flows from our veins..., I am ready to go to St. Petersburg if necessary, but not to see our property, no, if I want to bring them, I will go, I will go "(p. 212). It is clear that Ogahi puts spiritual wealth ahead of material wealth. That is, the people believe that the state needs spiritual wealth first of all.

Ogahi, who witnessed so many trials and the conquest of Khiva, is confused. He thinks that every tragedy is the result of the actions of bad people. "The deficit of the wicked can strike at anything" (p. 230). Ogahi encounters a potter on his way to St. Petersburg. Kalandar tells Ogahi that he has been searching for the "Land of Flying Horses" for twenty years and tells the story of the horses. This story makes Ogahi think. He seems to have found the answer to the question, "Why were the invaders punished and the horses punished?" "This means that the wheel will continue to rotate until the invaders turn to stone," he concluded.

During the trip, Ogahi encounters rabbits. After talking to the mysterious potters, Mawlana says that there is a more horrible rabbit than these rabbits. And this well is inside man. It is concluded that neither the earth nor the sky can withstand the torment of slavery caused by the enslavement of one person to another, especially the enslavement of a free people. In the following verses, however, Ogahi sounds as if he has once again brought up the people left behind.

Vayronko'ngullarnikaramganjiilaobodqil, Gar istasanghaqlutfidinbo'lg'aysangama'murganj.

## CONCLUSION

At the end of the work, the great thinker Muhammad Reza Ogahi's deeds for the people are listed one by one, and he is sent on his last journey by the people who love and respect him.

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## LINGUISTIC METHODS IN SENTENCE ANALYSIS

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### ABSTRACT

*The present article is devoted to an actual theme of modern linguistics –linguistic methods in sentence analysis. More attention is paid to the linguistic methods in syntactic analysis of a sentence, the basic principles of comparative study of languages at the syntactic level and linguistic methods used in the analysis of tenses. Theoretical parts of the article is proved by examples.*

**KEYWORDS:** *Method, Sentence, Syntactic Units, Subject, Predicate, Syntactical Unit, Component, Linguistic, Speech Components, Analyze.*

### INTRODUCTION

It is well known that in the development of modern linguistics, there is a growing interest in the problems associated with the comparative analysis of language material. It is known that the correct use of specific linguistic methods in the study of any level of language and their application in comparative-functional research requires special attention from the researcher. If we focus on the processes of syntactic analysis of speech, in general linguistics, there are cases when the problems of syntactic content are derived from word forms, lexical meanings, and the opinions of linguists are contradictory. While some researchers recognize lexical meaning as the basis of grammar, others deny it; third groups of linguists do not recognize lexical meaning as a linguistic category.

### MATERIALS AND METHODS

In Roman linguistics, the syntactic analysis of a sentence is approached differently. In particular, in the analysis of a particular syntactic view, the component-by-component analysis itself has several views. For example, A. A. Hill is based on the principle that the definition of tag memes, the division of a sentence into tag memes into minimal functional segments, involves the

division of the sentence into parts [3, p.285]. Z.S. Harris, on the other hand, prefers the use of chain analysis, that is, the method of dividing the sentence into elementary parts and dividing it into adjuncts based on distribution [4, p.302], R.E.Longacre performs chain analysis by analyzing it directly into participants [8, p.165]. Due to the ideas of transformational grammar in linguistics, methods of segmentation and distribution analysis have emerged and developed. N. Chomsky (1997) in the development of the mentioned linguistic analysis methods; R. E. Lees (1960); P. Roberts (1964); E. Bach (1964); A. Hathaway (1967); The efforts of scholars such as P. S. Rosenbaum (1967) had a significant impact.

Today, there are distributive analysis, direct participant separation method, several types of transformation, substitution, derivation, component and syntax separation methods in small syntax analysis, and analysis of them into components and syntaxes is common to our research goal. Distinguishing language layers from each other, the correct and effective use of analytical methods in determining their relationship will be important. For example, when using the distributive method, linguists focus on three aspects of it:

- a) Additional or complementary distribution;
- b) Distribution of comparative contrast
- c) Free exchange distribution [8, p.172].

The distributive method was mostly used at the morphological (additional, contrast) level of the language, while the free substitution distribution was used only in word combinations. When the indirect division method is used, this method is mainly analyzed by modeling the morphological expression of those participants at the syntactic level by first dividing the speech device into the largest participants (Np + Vp) and then dividing them into smaller participants. This is just a synthesis of the external device of speech at the morphological level. This linguistic method returns speech analysis from the syntactic level to the morphological level of the language.

It is well known that in the development of modern linguistics, there is a growing interest in the problems associated with the comparative analysis of language material. In this case, the researcher's focus is on general linguistic research methods in the comparative analysis of the system of related and non-related languages. E.A. Shchebetenko argues that "... the method of linguistic analysis should theoretically be able to justify the commonalities and differences in languages when comparing the general and subsystems or microsystems of specific languages" [9, p.18]. Q. Yusupov clearly outlined the sections of comparative linguistics (comparative-historical, typology, comparative linguistics and comparative typology) and defined their main tasks. [12, p.115].

In our research, we replace the term transformation with the experimental method, because the linguistic experiment allows us to reveal the cases of relevance (proportionality) of the syntactic units in the sentences being analyzed.

#### **For example:**

All the time we heard the cattle in the woods [5, p.15];

I didn't think a long time about it [5, p.18].

How long did we hear the cattle in the woods? We heard  $\Rightarrow$  the cattle long in the woods;

I didn't think a long time about it I didn't  $\Rightarrow$  think then about it When didn't I  $\Rightarrow$  think about it?  $\Rightarrow$  How long didn't I think about it?  $\Rightarrow$  I didn't think long about it;

When the sentences are analyzed on the basis of the experimental method, it appears that the action represented by the syntactic units at the cut-off point has been continuous for a certain period of time.

Differential syntactic features of syntactic units are distinguished on the basis of defined syntactic relations, and their morphological expression is visually described in component models. This method allows to analyze the syntactic relations of units representing the state of time, as well as their component composition, without going beyond certain limits in clarifying the deictic states of temporality in the microtext.

**Compare:** He read the book for hours. [10, p.25];

He read the book occasionally. [10, p.28].

He read the book for hours He read the book then;

He read the book for hours When did he read the book?

In this syntactic unit, the elements long or how long can be used instead of the element for hours:

He read the book for hours He read  $\Rightarrow$  book long How long did he  $\Rightarrow$  the book?

He read the book occasionally by replacing the occasionally syntactic unit in the sentence with, sometimes from time to time, day after day, etc., or by questioning,

He read the book occasionally  $\Rightarrow$  He read the book sometimes;

He read the book occasionally  $\Rightarrow$  How often did he read the book?

When these sentences are compared with the sentence He read the book throughout the night, it is clear that there is both temporality and continuity in the content of the compound throughout the night. In experiment method syntax in this syntactic unit throughout the night combination **when?** By putting an interrogative pronoun or replacing this compound with an adverbial element **then**:

He read the book throughout the night  $\Rightarrow$  When did he read the book? He read the  $\Rightarrow$  book then.

In order to determine the continuum syntax, the long or how long compounds replace the out through the night combination:

He read the book throughout the night  $\Rightarrow$  He read the book long  $\Rightarrow$  How long did he read the book?

Linguists focus on only three aspects of the method of distributive analysis:

1. The addition distribution,
2. The contrast distribution,
3. The free exchange distribution.

However, if suffixes and contrast distributions are widely used at the morphological level of any language, that is, if the lexical units in a sentence are limited to comparing the meanings of form-

forming suffixes, free-exchange distributions are the same in meaning or content, different in form. At the syntactic level, distribution is determined by the syntactic position of the syntactic units representing the object selected for research in the sentence structure based on the defined syntactic relationships, and the languages are compared according to the same syntactic position in the sentence structure. That is, the differential syntactic features of syntactic units and their morphological features are determined using the method of modeling, as well as differential syntactic-semantic features of components, which opens a wide way to distinguish isomorphic and allomorphic cases in their system relations and their comparative-functional study.

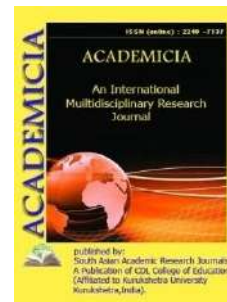
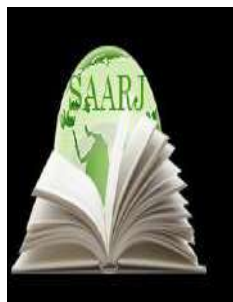
## CONCLUSION

We all know that the linguistic methods used in the analysis of sentences in modern linguistics are of great importance. In the process of analyzing sentences in the system of related and non-related languages, we analyzed them using several different linguistic methods. Today, there are distributive analysis, direct participant separation method, several types of transformation, substitution, derivation, component and syntax separation methods in small syntax analysis, and analysis of them into components and syntaxes is common to our research goal. Distinguishing language layers from each other, the correct and effective use of analytical methods in determining their relationship will be important.

It is well known that in the development of modern linguistics, there is a growing interest in the problems associated with the comparative analysis of language material. In this case, the researcher's focus is on general linguistic research methods in the comparative analysis of the system of related and non-related languages.

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## THE COGNITIVE METAPHORIZATION OF THE CONCEPT “CORONAVIRUS” IN ENGLISH, SPANISH AND UZBEK PUBLICISTIC DISCOURSE

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### ABSTRACT

*The present article is devoted to linguistic investigation of metaphor formation process of the concept “coronavirus” in the English, Spanish and Uzbek publicistic discourse. The authors give examples of metaphors in the analyzed languages, which characterize this infection, dangerous for the whole world.*

**KEYWORDS:** *Coronavirus, Pandemia, Infection, Metaphor, Concept, Publicistic Text, Social Network, Global problem.*

### INTRODUCTION

Undoubtedly, the lexeme “coronavirus” has lately turned into one of the most frequently used words in mass media. The authors make an attempt of description of the conceptual metaphors representing coronavirus in English, Spanish and Uzbek publicistic discourse. The material for the research was taken from the channels of the social networks such as Telegram «Coronavirus España», “Koronavirusinfouz”, Kun.uz, from the websites [hbr.org/2020/03/understanding-the-](https://hbr.org/2020/03/understanding-the-)

economic-shock-of-coronavirus, pub.med.gov serving for publishing the news from the official sources.

First of all, we'll examine the structure of the notion "concept" for the realization of such a research. It is well known than the structuring and representation of knowledge are the result of concepts which aren't close units [1, p. 287]. The concepts constantly interact with each other, reflecting the dynamics of processes occurred in the modern world on the whole and in the separate socio cultural spheres [5, c. 53]. We can observe the same thing in the concept "coronavirus". The concept forms groups around the point of consciousness, on the base of which the associations are formed. Obviously, on this occasion, it causes negative, horrifying associations connected with this word.

The concept is a certain semantic formation of our consciousness which functions as an effective unit in mental process and points at the results of cognitive activity as quanta of knowledge. It is realized by the verbal means which serve as the markers of mentality and are characterized by national and ethno-cultural peculiarities [2, c. 15]. However, the concept "coronavirus" as though "overstepped the limits" and raised to the global level. So, this definition of concept is not very perfect for the object of the present research.

Summarizing the expressed standpoints about the definition of the notion of "concept", we'll dwell on the generalization of M.R.Galieva which certifies that the concept is:

- a difficult, multidimensional, many-sided, at the least, three-components mental formation which includes the conceptual, figurative, value, emotional-evaluative, associative, connotative features;
- An abstract, cognitive processed idea which is marked by national-cultural specificity;
- An unit of conceptual picture of the world, a product of human cognitive consciousness, the mean of the perception of outward things;
- a fundamental cell, a peculiar concentrate, gene, the "clot" of culture in human mental world, a human cultural and etymological memory which is the keeper and transmission medium of cultural information [3, c. 10].

The word "coronavirus" researched in this article completes the conceptualization process by means of metaphoric recomprehension. As a consequence, there appear the conceptual metaphors which form new senses reflecting the great threat of this infection. Along with it we should note that metaphors play a significant role in the formation of concepts. The production of metaphors is more than just a linguistic phenomenon, it is also a deep cognitive process with a constructive nature [4, c. 88-89].

It is the opinion of Ortega-y-Gasset that the metaphor is practically unique way for detecting and substantially determining the objects with high level of abstraction. He wrote: "Our conception of the world depends on our notions about consciousness and predetermines our morals, our politics, our art. It turns out that all the knowledge of Universe filled with life rests upon a tiny, light body of metaphor" [5, p.77]

In opinion of G.Lakoff and M.Johnson, metaphors run through all our life not only in language, but also in thought and in action. Our ordinary conceptual system in the context of which we reason and act, is essentially metaphorical (Lakoff, Johnson, 1980:3). They choose in English the



systems of metaphors based on points of view accepted in English-speaking countries to certain objects of designation and called such metaphors conceptual.

The term “conceptual metaphor” in the interpretation of G.Lakoff and M.Johnson allows to share the language means of expression and cognitive process on their base, namely the comprehension of one phenomenon in the terms of other phenomenon. G.Lakoff and M.Johnson emphasized three models of concepts based on metaphors: 1) structural metaphors describing one phenomenon metaphorically regulated by way of other phenomenon, as TIME IS MONEY or IDEAS ARE PLANTS; 2) orientational metaphors constructing the concepts through the spatial notions and relations as inside – outside, deep – shallow, central – peripheral; 3) ontological metaphors introducing abstract phenomena (emotions, ideas) and actions as a material substance, for example, “I’m slowly getting into shape” (Lakoff, Johnson, 7-32).

The metaphors of concept “coronavirus” founded by us in publicistic discourse of different languages belongs to the model of structural metaphors.

Coronavirus is described in the press of all the countries in all the world. So, for example, Spain which is nowadays on the second place of the total number of coronavirus-infected (180 659 on 16.04.2020), is no exception. In Spanish press the lexeme “coronavirus” has a big possibilities of metaphorization. We discovered the following conceptual metaphors of researched concept:

1. CORONAVIRUS – A DESTRUCTIVE POWER, paralyzing each activity and work, pursuing the humans everywhere, causing a fear: “Los autónomos cobrarán este viernes 17 de abril “el paro” por cese de actividad debido del coronavirus” (eldiario.es, 13.04.2020). “Todo lo que hacemos mal en el supermercado sin darnos cuenta de que acecha el coronavirus” (El Diario, 5.04.2020); “El coronavirus acecha a las farmacias” (El país, 1.04.2020). This metaphor arises from the fact that the coronavirus caused a significant damage to all the spheres of society life in all countries of the world. “La crisis del coronavirus golpea los negocios” (ABC, 7.04.2020); «Así ataca el coronavirus en los casos más letales” (El país, 11.04.2020). The lexemes “golpear”, “atacar” – to beat, to attack emphasizes the application of power by coronavirus. In the next example the abilities of coronavirus for overcoming of many obstacles are shown. «El mismo día del Brexit, el coronavirus ya ha superado al SARS (www.eldiario.es, 08.04.2020)». A large quantity of people died of this illness turned into the victims of coronavirus independently of their nationality. “Muere víctima del coronavirus, el actor de doblaje Salvador Vives” (www.huffingtonpost.es, 30.03.2020). In this connection coronavirus is a reason of fear and panic by all the humanity: “El pánico al coronavirus agita la xenofobia contra los franceses en Alemania” (La Vanguardia, 12.04.2020).

2. CORONAVIRUS - THREAT. The concept coronavirus is compared with a check in chess, in other words represents a threat for the whole world: «Coronavirus, jaque al mundo globalizado” (Vocable español, 807, 2020). The comparison with a trip emphasizes the unexpectedness of appearance and expansion of coronavirus threat: ¿Será el coronavirus la zancadilla que haga tropezar a una economía mundial? (Vocable español, 807, 2020).

3. CORONAVIRUS – LIVING CREATURE. There is a variety of this metaphor such as CORONAVIRUS – INFANT being in cradle. «Miles de personas salieron el miércoles a Wuhan tras el levantamiento de las medidas de cuarentena que han mantenido la ciudad, cuna del coronavirus” (ABC, 13.04.2020). As it is well known, coronavirus appeared for the first time in Chinese city Wuhan named in the press language “cradle of coronavirus”. This metaphor

emphasizes that coronavirus as each living creature came into the world in tiny size and its size increased considerably in the process of its growth and development.

4. CORONAVIRUS – WATER. This metaphor includes such varieties as CORONAVIRUS – STREAM: “La riada del coronavirus va a poner en su sitio algunos sueldos mastodónticos de algunas estrellas” (Merca2, 4.04.2020). The coronavirus is compared with an avalanche, stream in this example. Initially the lexeme “riada” in Spanish is connected with water and means “water rise, high water” causing destructions. The appearance of this metaphor is connected with the fact that the impetuous water stream can penetrate without hindrance into all the places with destructive consequences, as a coronavirus. The metaphor CORONAVIRUS – WAVE is also included here. Pies de plomo en China: preocupación ante una 2ª oleada de contagios de coronavirus (www.elconfidencial.com, 31.03.2020). These both varieties of metaphor “CORONAVIRUS – WATER” have negative destructive features.

5. CORONAVIRUS - LIGHTNING. The flash-like, high speed of coronavirus expansion promoted the comparison of coronavirus with a lightning. “España pierde empleo ... a la misma velocidad con la que se propaga el coronavirus, como un rayo” (ABC, 7.04.2020).

6. CORONAVIRUS - ENEMY. Undoubtedly, the damage and negative consequences of coronavirus entailed its perception in human consciousness as an enemy, and it is essential to defeat and conquer him. “...aumento significativo de ataques virtuales contra organizaciones que combaten el coronavirus” (www.publico.es, 04.04.2020); “El CEO de Twitter donará 1.000 millones de dólares a la lucha contra el coronavirus” (www.eleconomista.es, 08.04.2020).

Now we'll examine the conceptual metaphorization of coronavirus in English publicistic discourse:

1. CORONAVIRUS - EVIL: “Coronavirus is evil...”. (hbr.org/2020/03/understanding-the-economic-shock-of-coronavirus).

2. CORONAVIRUS – CRISIS AND THREAT for all the humanity: “... a new public health crises threatening the world with the emergence and spread... (pub.med.gov.).

3. CORONAVIRUS – MARCH AROUND THE WORLD: “The coronavirus continues its march around the world...” (hbr.org/2020/03/understanding-the-economic-shock-of-coronavirus). This metaphor evolved from the expansion of coronavirus in all the world.

4. CORONAVIRUS – TROUBLING STORY FOR PEOPLE: “troubling story for people” (hbr.org/2020/03/understanding-the-economic-shock-of-coronavirus). Analyzing this metaphor, we can say that all what is going on at present seems not real, as if it happens in a story written in a book or shown in a movie. Because of it coronavirus is perceived by people as a troubling story.

The problem of coronavirus in all the world is also widely covered in the mass-media of Uzbekistan. The lexeme “coronavirus” has also great metaphor-forming possibilities in publicistic discourse and is metaphorized in the following way:

1. CORONAVIRUS - TRIAL. The coronavirus is compared in Uzbek press mostly with a trial send down from heaven for all the humanity. This trial will show as far the nation can overcome this trial being united and solidary: “Koronavirus pandemiyasi butun insoniyat uchun Yaratganning bergan bir sinov” (The President of the Republic Uzbekistan Sh.M.Mirziyoyev),

“Dunyo – sinov. Virus ham sinov”, “Virus xalqning qay darajada XALQ bo’la olganini ko’rsatadi” (kun.uz, 12.04.2020); «Aytildan gaplarga quloq solsak, tartibni buzmasak, koronavirusni osonlikcha engib o’tamiz” (qalampir.uz, Zafarbek Solijonov). For overcoming of this trial it is necessary the unity not only of one nation, but also of all the world: «Virus nafaqat o’zbek xalqi, balki butun dunyo xalqlarni yanada jipslashtirayotgandek” (kun.uz, 04.04.2020). The valuable experience for the future will be acquired in the process of this trial: «Koronavirus davri shu jihatdan, juda sodda va aniq tajriba bo’lib, hatto jamiyatshunoslikda amaliy dars sifatida o’rgatiladigan ob’ektga aylanmoqda” (kun.uz, 05.04.2020).

2. CORONAVIRUS - THREAT. Undoubtedly, coronavirus is an immediate threat and danger for the life and health of person. Koronavirus: Janubiy Osiyo tahlika ostida (kun.uz, 12.04.2020); O’zbekistonga koronavirus kirib kelishi odamlarda ozmi-ko’pmi vahima hissini uyg’otdi (kun.uz, 31.03.2020).

3. CORONAVIRUS – DISASTER appeared spontaneously and suddenly. “Yaratganning o’zi xalqimizni va butun insoniyatni bu ofatdan tezroq ozod qilsin” (The President of the Republic Uzbekistan Sh.M.Mirziyoyev).

4. CORONAVIRUS – LIVING CREATURE having a destructive aims and feeling emotions such as a joy and sadness: «Virus, bu – ongli mavjudot. Vauningmaqsadi – xalqlarnizabtetish. Onglimavjudotningesaxursandqiladiganvaunixafaqiladigannarsalaribo’ladi.

Bundavirusningyo’linito’suvchinarsauniranjitadi, ungayo’lochuvchiomilesa – xursandqiladi” (kun.uz, 12.04.2020).It is interesting to observe the animalistic conceptual metaphor CORONAVIRUS – HORSE, because the Uzbek lexeme jilovlamoq – to bridle, to curb is used with respect to virus. Koronavirus epidemiyasini jilovlaganlar: Tayvan, Kanada va Janubiy Koreya tajribasi (kun.uz, 04.04.2020)

5. CORONAVIRUS – MIRROR reflecting the togetherness of society, the ability of resisting this negative phenomenon. “Virus – jamiyat yuziga tutilgan oyna” (kun.uz, 12.04.2020).

6. CORONAVIRUS - CHAIN. The gradual expansion of virus infection, when the contagion of one person is interrelated with the contagion of several persons, is a reason of the perception of coronavirus illness as a chain. “..uyda qolish orgali Siz kasallik tarqalish zanjirini uzishingiz, demakki kimningdir hayotini saqlab qolishingiz mumkin” (kun.uz).

7. CORONAVIRUS – ENEMY, INVADER, and it is necessary to defeat him. The reason of appearance of this metaphor is the expansion of coronavirus in all the world.Koronavirus nafaqat Xitoyini, balki butun dunyoni egallashini kutganmidingiz (kun.uz, 13.04.2020); Koronavirus ustidan g’alaba qozonayotgan shifokorlarimiz sharafiga (kun.uz, 31.03.2020).

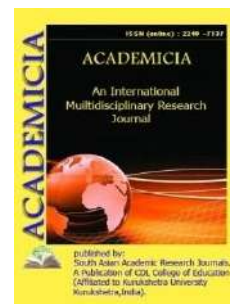
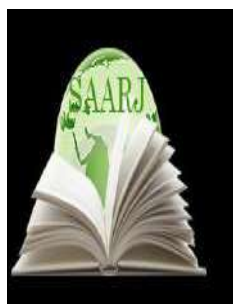
8. CORONAVIRUS - OBSTACLE: «Agar virus kirib kelmaganida edi...” – koronavirus orzungizga to’siq bo’la oladimi?” (kun.uz, 30.03.2020).

Our modest linguistic research showed that coronavirus in the shortest possible time turned into a whole concept. The threat and harm of coronavirus is transmitted in the language with the help of vivid and uncommon metaphors. As our Respected President Shavkat Miromonovich Mirziyoyev pointed, we’ll overcome this illness.

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## THE CHARACTER OF OGAHYIY IN THE DRAMA

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### ABSTRACT

*This article analyzes the works of Ogahiy, a representative of the classical literature of the XIX century, which are covered in modern fiction. Komil Avaz's drama "Ogahiy" is a scientific study of the character traits, universal thoughts and spiritual experiences of the Ogahiy character.*

**KEYWORD:** *Muhammad Erniyozbek O'G'Li Ogahiy, Khiva Khanate, Russian Invasion, Historical Drama, Historical Image, Conflict, Dramatic Character.*

### INTRODUCTION

Ogahiy is a brilliant representative of the classical literature of the XIX century, with his historical, artistic and translated works sheds an indelible light on the spirituality of the Uzbek nation. Ogahiy was born in 1809 in the village of Qiyot near Khiva to a "mirab" (mirob – water supervisor) family. The author himself wrote: "We are the descendants of Amir Eshimbi, one of the hundred tribes living in Khiva."

Ogahiy had lived and worked during the reigns of 8 khans of Khiva: Muhammad Rahimkhan I (1806-1825), Allakulikhon (1825-1843), Rahimqulikhan (1843-1845), Muhammad Aminkhan (1845-1855), Abdullaxon (1855-1855), Sayyid Muhammadkhan (1855-1864), Muhammad Rahimkhan II (1864-1874) Kutlug Murodkhan (1855-1855).

His nickname is Ogahiy, which literally means "alert" ( uzb: ogoh-sergak). Ogahiy created a school of translation studies by translating more than 20 works of world literature and culture into Uzbek. Ogahiy is the author of 5 historical works.

"As a historian, he wrote poems dedicated to Khiva khans and great historical figures. The poet's poem "Qasidai nasihat" is a clear example of this. The work is dedicated to Feruz. In his sermons, Ogahiy provides guidance on how to govern the kingdom, and how to govern the



country and the people with justice. This poem is written in the genre of masnavi and vividly expresses the poet's political and enlightenment views.

According to the poet, any head of state should have all the positive qualities to strengthen power. The king must be generous, courageous, just, zealous, generous, imaginative, pure-minded, cultured, considerate of the poor. The ruler argues that if he possesses these qualities, his power will be perfect and his country will be prosperous. According to the poet, the king should stay away from lust, conspiracy and gossip, ignorance, laziness, oppression, slander and materialism. The khan of Khiva listened to Feruz Ogahiy's advice on governing the state, wrote his wise verses on marble stones and placed them in his petitions, and did many good deeds.

Among the scholars V.Zakhidov's "History of Uzbek literature" (Uzb: O'zbek adabiyoti tarixidan) in 1961, K.Munirov's "Ogahiy - scientific-literary activity"(Uzb: Ogahiy – ilmiy – adabiy faoliyati) in 1959, and "Historical works of Munis, Ogahiy, Bayani"(Uzb: Munis, Ogahiy, Bayoniyning tarixiy asarlari) in 1960, R.Majidi's 1963 A number of scientific works, such as "Ogahiy's Lyrics" (Uzb: Ogahiy lirikasi) were published. The list goes on and on. Because there is a lot of scientific research on Ogahiy's work. Ogahiy's work has been studied not only in Uzbekistan, but also in Azerbaijan, Turkey, the United States, Russia and many other countries.

Kamil Avaz has also done a lot of research and art on Ogahiy's work. In particular, in the drama "Ogahiy" he covered the life and creative processes of Ogahiy. The drama consists of two parts. The first part describes Ogahiy's youth, his romantic experiences, and his encounters with rivals who did not see him. The second part of the drama depicts his courage in the face of the Russian invasion in his old age. Drama differs from other literary genres and genres in that it depicts the image much more vividly.

If this image is a historical figure, it adds a lot of responsibility. Because the more or less the reader knows about historical figures, the more he or she will form an idea about them. Indeed, "Literary character is not a copy of real human life, but a relatively broad concept of character in fiction, which embodies both real life and the imagination of the artist, the ideal, and can express reality through the creative character".

The drama depicts the events of 1839-1840 and 1873. About thirty characters took part in the play. They are united by the main idea of the century - the defense of the homeland. The events and plots revolve around the main characters. The main characters in the drama are Ogahiy, Feruz and Sanamjon. The author tried to give a certain idea in the image of these images. In particular, the image of Sanamjon reflects the ideas of pure sincere love and devotion to the land. Feruz has always been a symbol of courage and bravery. And in the image of Ogahiy, we see that it embodies all the qualities put forward in the drama. Because at the center of the work is the image of Ogahiy, all the lines are connected with this image.

The work begins with a dialogue between the characters in opposition to Ogahiy. The author was able to create a special conflict by seeing Ogahiy as an enemy and gossiping about him. As a result of their conversation, it was revealed that Ogahiy had a high reputation and status among the people, in the presence of the king. This process continues until the end of the drama. Every character who sees Ogahiy as an enemy not only opposes him, but also acknowledges his courage. Because "the force that holds the work from beginning to end is necessary for the dynamics of the conflict, which is the mainstay, especially for the development of dramatic works".



Images in conflict with Ogahiy can be conditionally divided into the following types: 1. The conflict between Ogahiy and Sowirboy, or the struggle between honor and humiliation. 2. Conflict between Ogahiy and Hajiniyaz, Atamurod, or the conflict of faith and hypocrisy. 3. Conflict between the savages and the traitors, the Russian invaders, or the struggle between good and evil.

The second scene of the drama depicts Ogahiy's role as a mirage. It reveals Ogahiy's business acumen and concern for the people. We know from history that Ogahiy fell from a horse and was severely injured in the line of duty. As the author points out, it describes how difficult the task of mirab is. This is reflected in the following passage:

“ -Hoziq: Look, the ancestors were well aware of the flood. No river is as stubborn as Jeyhun.

Ogahiy: That's why we fight the stubbornness of the river day and night for 12 months of the year. Sometimes we win, sometimes he beats us. That's why we're restless. We rebuilt the stone, the escapees. We bring stones from Yumortov and strengthen the river bank. There is so much to do, as you say, which one will you list? ”(P. 105). As Ogahiy said this, he read one of his poems about the hard work of a farmer in managing water. At this point, the author skillfully moves from Ogahiy's role as a mirage to the world of creation. The images around him also speak directly to creation. Through their conversation, Ogahiy is applauded.

Throughout the drama, Ogahiy is vividly portrayed as not afraid of anyone or anything in the struggle for truth. The author reveals his courage in a way that creates tense situations. That is, "a logically based description of a writer's historical protagonist's character, character, behavior, external and internal world, interactions with people, and so on, in accordance with his creative intent".

The third scene depicts Ogahiy's romantic experiences. Ogahiy's love affair with a girl named Sanamjon is also mentioned in historical documents. In a drama, these two lovers can't be together. Because in the play, Ogahiy is given as a married and old man. Sanamjon is a teenage girl. In the 19th century, polygamy was allowed both in religion and in the socio-political structure of the state. From this point of view, it would be a logical mistake in the drama if only Ogahiy's marriage was the main obstacle in the way of the two lovers. With this in mind, the author gives many reasons why Ogahiy and Sanamjon cannot be together. First of all, Ogahiy is loyal to his family. Second, there has always been a strong disagreement between Ogahiy and the girl's father. Third, there is a big age difference between Ogahiy and Sanamjon. The following words of Ogahiy prove his perfection as a human being. "Understand, my dear, for you are an unopened flower, a stagnant variety, a crystal-clear waterfall. Don't set yourself on fire. After all, I am the owner of the apartment. I have no right to break the faithful picture. But in the end, I will keep your sincerity and love for me for the rest of my life. ... do not spoil the flower of youth. All your air is fleeting ”(p. 117).

When Ogahiy tells Sanamjon these words, he is not aware that he is not indifferent to the girl. Ogahiy also loves the girl, but this love makes her feel forbidden. "He wrote a letter with the intention of meeting, so it's a serious matter," he said. What's the matter? I'm sorry, why am I so upset? What kind of trade is this, every second that burns my heart and my body ?! Vodarig! What a waste! No! Give him strength, O God, not to fall into his trap! ” (P. 116).

The drama depicts Ogahiy sharply criticizing people who are not suitable for the people, who spread various *fisq-u fasots* in the palace. The following statements made by Khiva khan Allakulikhon at the Ogahiy Palace in front of everyone are an example of our opinion:

“Ogahiy: (calmly) Your Majesty, it is true that I have written a poem about corrupt officials. It's impossible for anyone to take them. ”

The drama also points out that Ogahiy is a good politician. The King of England sends Abbot as ambassador to make a treaty with Allahu Akbar. The aim was to stop Britain's Russian invasion of Khiva. Because otherwise their rule in India could also be in jeopardy. This has caused a great deal of controversy among palace officials. Allakulikhan then asked Ogahiy for his opinion on the matter:

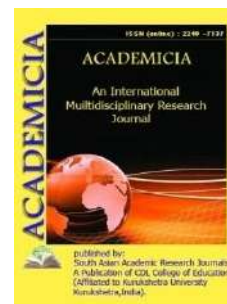
"Allakulikhan: Do you mean to accept the British demand?"

Ogahiy: Absolutely not! If the Russians or the British take India, Khorezm will be under a guzar. I do not want to interfere in the affairs of the kingdom, but I would like it to be in a state of peace and decency, not in a hostile, violent state”(p. 124).

The second part of the work describes the events of 1873, the events of the Russian invasion. The drama does not provide details of the Russian invasion or battle scenes. The situation is described directly after the Russian invasion. It mainly reflects the mental state of Khiva khan Muhammad Rahimkhan II - Feruz, the actions of Ogahiy, who sought to lift the spirits of the depressed people. The work ends with Ogahiy's *gazel* about freedom.

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## THE IMPORTANCE OF MATHEMATICAL TALES IN ELEMENTARY SCHOOL MATH CLASSES

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### ABSTRACT

*This article discusses the importance of using mathematical tales in math classes in elementary school and how to use them effectively. The article analyzes the importance of using mathematical tales in the mathematics lessons of primary school students and their effective application, as well as methods for creating some mathematical tales. One may find that it is more difficult to understand the world of ideal dreams in a person who has not been brought up in fairy tales. Thanks to fairy tales, the child begins to distinguish between real and unreal things. If in the past the game was a prerequisite for attracting students to learning, then you can implement the game for the entire learning process, mastering the elements of educational activity in the gaming environment. , That is, a game based on the learning process becomes in essence a didactic tool.*

**KEYWORDS:** *Creative Thinking, Mathematical Understanding, Mathematical Fairy Tale, Didactic Game, Cognition, Imagination, Mathematical Knowledge, Ability.*

### INTRODUCTION

It is known that in the modern educational policy of the republic it is very important to increase students' interest in mathematics from elementary school, to use modern innovative technologies in mathematics lessons. The science of mathematics, the foundation of which was laid by our great ancestors, like Muhammad al-Khorezmi, Ahmad Ferghani, Abu RayhanBeruni, Mirzo Ulugbek, is becoming increasingly important in connection with the rapid development of modern branches of science and technology. Its role has increased in the field of information and communication technologies, medicine, biology, the digital economy and many other fields.

Large-scale, well-focused measures have been taken in order to bring up a healthy and harmoniously developed generation in our country, to create the necessary conditions and opportunities for young people to realize their creative and intellectual potential, to bring up young generation of our country as fully developed individuals who fully meet the requirements of the XXI century.

The Decree of the President of the Republic of Uzbekistan “On reforming the system of education and training, education of a harmoniously developed generation” and “National program of Personnel Training”<sup>1</sup> indicate different issues with the aim of improving the quality of teaching mathematics, the formation of personal qualities, mathematical literacy and the development of creative abilities.

Using a variety of methods in the classroom, including fairy tales, helps motivate students, increases their interest in science, literature, fairy tales, develops skills that help others, and increases the ability to interact with adults and peers. Mathematics is more complex than other subjects, and some students have difficulty mastering it. The use of mathematical tales in the teaching of this science is very effective.

The article analyzes the importance of using mathematical tales in the mathematics lessons of primary school students and their effective application, as well as methods for creating some mathematical tales. Mathematics is a real magical world. Shapes, geometric shapes can turn into amazing fairy-tale characters, if you want it. The child learns the first mathematical concepts from fairy tales: 1) numbers (Snow White and the Seven Dwarfs, three little pigs); 2) calculation; 3) comparison (three bears, 7 Dwarfs); 4) Concepts, including ideas such as geometric shapes, increase the wealth of mathematical knowledge in elementary school students and increase their interest in science. Here are some thoughts on the science of mathematics: mathematics finds the unknown, mathematics gives us the joy of feelings, mathematics is an art, mathematics is the world of arithmetic. In mathematics, too, thanks to fairy tales, we can instill in students an interest in this science, a desire to study it.

We are used to meeting fairy tales in literature lessons. Tales are adventures, we do not take them seriously. Mathematics is the queen of all sciences. From elementary school, we teach students to be polite, hardworking and serious. In our country, mathematics is colorless and not always interesting science, and we are used to talking formulas, equations, considerations, proofs, graphs in our native language. But this does not mean that the words "Tale" and "Mathematics" cannot stand side by side. Of course it is possible!

Using fairy tales for the interests of children in math classes in the first grades is very effective. If you ask the children if they like fairy tales, everyone will answer “yes”. Fairy tales always bring joy to children to understand their attention and interest.

One may find that it is more difficult to understand the world of ideal dreams in a person who has not been brought up in fairy tales. Thanks to fairy tales, the child begins to distinguish between real and unreal things. Bypassing a fairy tale, it is necessary to use not only imagination, but also to reveal the necessary information for decision-making, thinking about the proposed situation, which requires not only imagination, but also the basic skills of critical geometric materials, imagination and ability.

There is a good mood in the lessons where fairy tales are used, and this is the key to effective work. The fairy tale gives you access to humor, creativity classes, and most importantly, teaches children to be kind and fair. In the study of mathematics, fairy tales can be used as follows: the heroes of fairy tales face difficulties.

Children try to help them, they are corrected on the way, overcoming the most unexpected obstacles. They do math tasks, riddles, proverbs. Together with the heroes of fairy tales they help to overcome educational barriers. This improves the mastery of both mathematical and literary materials.

When the bell rings, the teacher says that it is not a simple math lesson today. All students go to the magical world of the fairy tale "Swans". The teacher tells a story: Do you remember when the swans took the girl's brother? The girl ran to look for her brother and asked for the stove, the apple tree and the river. But before helping the girl, the stove, the apple tree and the rivers ask her to fulfill their wishes. The girl, without a doubt, is worried. It will be very difficult for her to complete the tasks alone and there a lot of students in our class and together we will help her. The girl throws herself to meet the swans and runs, runs.

The girl sees a standing stove. Stove, stove, tell me? where did the geese swans fly? The stove answered her. I will tell you if you solve my task. Help me once. I'm in a hurry. Let the children help the girl so that the stove does not get angry with her. Children turn over the cards with the task: show a number greater than 2 less than 4, a number greater than 4, but less than 6. Give one number from 1 to 10. The girl ran forward, there is an apple tree. Apple tree, apple tree, where did geese and swans fly? Guess what number is not here, I'll tell you. Milk River, the shores of the Aral Sea, tell me, where did the geese and swans go? Multiply each number 13, 4, 7, 16 in the balloon by 3 and name the smallest, I will say. "I'm afraid I don't have time," she said and continued. Can the children do the job? The girl turned away from the chicken coop around the window. She found her friend in the hut, took his daughter in her arms and ran. The girl returned to the river with milk and asked: Mother river, hide us from them. I am hiding the answer. Which of the two terms can be divided into 8 and 7? The number that comes after the number 9 is the number that comes before the number 7 during the calculation.

The girl replied: (observes the answers of the students) The river took her and her brother to the shore. The girl and her brother ran again and saw that the geese and swans had flown away. There is an apple tree. The girl turns to the apple tree and quickly solves the problem. (3 apples under the apple tree. 4 more apples fall from the tree. How many apples under the apple tree?) The apple tree covered them with branches. Swans will never see them again and fly past them. The girl ran to the stove, mother stove, hide me! I hide the answer to the questions, find: which number is greater than 1 to 4 and less than 7 to 2? What number in the calculation goes after 8 and before 10? Which number is greater than 4? What are the numbers from 7 to 1? The girl answered quickly. Children encouraged the girl and hid her brother.

Lessons organized in this way make children active and contribute to their work. Education is formed as a result of many educational tasks. Didactic games in the form of entertainment lose their role as students acquire learning skills. If in the past the game was a prerequisite for attracting students to learning, then you can implement the game for the entire learning process, mastering the elements of educational activity in the gaming environment. , That is, a game based on the learning process becomes in essence a didactic tool.

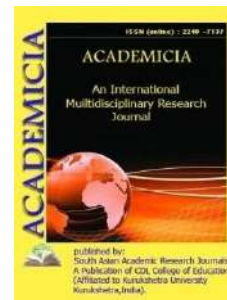
So, thanks to the math lessons we want to teach, math stories are very important in the early math classes.

Organizing the learning activities of primary school students in a harmonious way through the activities of mathematical fairy tales gives good results in achieving the purpose of the lesson, motivating them, educating and developing the individual.

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## **INFORMATIZATION OF PUBLIC EDUCATION SYSTEM OF THE REPUBLIC OF UZBEKISTAN**

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### **ABSTRACT**

*This article provides concepts and Government decisions on informatization, computerization of the Republic of Uzbekistan, as well as information on the work done on the computerization of secondary schools in the country. The meeting focused on the development of the information sphere, increasing the speed of the Internet, further development of the e-government system and the development of other information technologies.*

**KEYWORDS:** *Computer, Education, Continuing Education, Information, Informatization.*

### **INTRODUCTION**

Today, our society, our entire way of life, is developing and accelerating so much that it can even be seen as an invisible phenomenon. The role of information and communication technologies, which are rapidly entering our lives, is gaining ground not only in industry or other areas, including the education system.

As the first President of our country IA Karimov said, “Today, the actions in the modern information space are so intense, so fast, now, as before, yes, this event took place far away from us, it cannot be ignored that it has nothing to do with us. It is inevitable that a people or a nation given such a mood will lag behind in development for hundreds of years”.

We can see that modern information technologies and software products are becoming one of the most important sectors in the development of the state economy as one of the most profitable sectors.

In his Address to the Oliy Majlis of January 24, 2020, the President of the Republic of Uzbekistan stressed the urgency of the development of information and digital technologies,

saying: “It is necessary and necessary to acquire digital knowledge and modern information technologies to achieve development. This allows us to take the shortest path to the ascent. After all, today in the world, information technology is penetrating deep into all areas. Digital technologies not only improve the quality of products and services, they reduce unnecessary costs. We all need to understand this”.

It is also necessary to launch the project “1 million programmers” with foreign partners to train highly qualified specialists for the industry, to introduce information technology that fully meets international standards at all levels of education, to provide all villages and neighborhoods with high-speed Internet in 2 years. The tasks of necessity have been identified.

## **MATERIALS AND METHODS**

If we look at the history of the legislation adopted by our Government on the development of the informatization of our country. With the adoption of our country's independence, great attention has been paid to the development of this area. In particular, the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated April 22, 1999 No. 199 “On the program of modernization and development of the national data transmission network of the Republic of Uzbekistan for 1999-2003”, Resolution of the First President of the Republic of Uzbekistan No. PF-3080 of May 30, 2002 “On further development of computerization and introduction of information and communication technologies”, Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated May 27, 2002 No. 137 “On approval of the Regulation on Internet distribution”. Resolution No. 336 of September 10, 2002 “On Further Improvement of Activities in the Field of Information and Communication Technologies”, Resolution of the Government of the Republic of Uzbekistan No. 352 of October 10, 2002 “On Decentralization of the Use of International Computer Networks”; Resolution of the President of the Republic of Uzbekistan No. PP-191 “On the establishment of the public educational information network of the Republic of Uzbekistan”, Cabinet of Ministers of the Republic of Uzbekistan dated December 17, 2007 No. 269 “On measures to further develop the Government Portal of the Republic of Uzbekistan on the Internet”, “On approval of the Model Regulations on the electronic library and the plan for the creation of a full-text electronic information and library resources in information-library and information-resource centers and libraries” No. 198, February 1, 2012 “Further development of computerization and information and communication technologies in the field” Resolution of the First President of the Republic of Uzbekistan dated March 21, 2012 No. PP-1730 “On measures to create conditions for the introduction and further development of modern information and communication technologies” dated April 16, 2012 “On measures to create conditions for Republic of Uzbekistan “On measures to implement the investment project” Creation of the national system of “e-learning”” PP-1740, Resolutions No. PP-989 of June 27, 2013 “On measures to further develop the National Information and Communication System of the Republic of Uzbekistan”, PP-2042 of September 20, 2013 “On measures to further strengthen the incentives for software developers of the country”, PF-5099 of the President of the Republic of Uzbekistan dated June 30, 2017 “On measures to radically improve the conditions for the development of information technology in the country”, PF-5349 dated February 19, 2018 “On measures to further improve the information technology and communications” Decree of the President of the Republic of Uzbekistan dated February 19, 2018 No PP-3549 “On the organization of the Ministry of Information Technologies and Communications of the Republic of Uzbekistan”, the Cabinet of Ministers of the Republic of Uzbekistan dated September 5, 2018

“Information threat on the World Wide Web” On measures to further improve the quality of education No. 707, June 11, 2019 “On measures to introduce advanced information and pedagogical technologies in preschool education” No. 487, July 15, 2019 “On the organization of the Technological Park of software products and information technology Resolution No. 589 of November 28, 2019 “On measures to improve the quality of life of the population”, Resolution No. 955 of November 28, 2019 “On approval of the Regulation on the Unified Register of information resources of the network” ZIYONET”.

Given the importance of regulation of the informatization sector and the need to accelerate this process in the country, in accordance with the Resolution of the Cabinet of Ministers under the President of the Republic of Uzbekistan dated August 3, 1992 No 360 “On improving the structure and activities of the State Committee for Science and Technology” The General Directorate of Informatization has been established under the FTDQ. Within the framework of the main tasks and areas of activity set out in this resolution, a number of laws aimed at developing the information process were adopted at the initiative of the FSB of the Republic of Uzbekistan. Resolution of the Supreme Council of the Republic of Uzbekistan No. 869-XII of May 7, 1993 “On the implementation of the Law of the Republic of Uzbekistan” On Informatization”, May 6, 1994 “On legal protection of programs and databases created for computers” Laws 1060-XII are among them.

Following the provisions of the Law of the Republic of Uzbekistan on Informatization, in December 1994, the Cabinet of Ministers approved the concept of informatization of the Republic of Uzbekistan. The main purpose of this Concept and the issues raised in it are as follows: creation of a national information and computer network; maintaining economic, legal and regulatory documents on the approach to information as a commodity; compliance with international standards of information processing; integration and development of the information industry; encourage and support fundamental research in the field of information technology; coordination of the system of training computer users.

The “Informatization Program of the Republic of Uzbekistan” was developed, taking into account the main provisions of the concept. It includes three target programs:

- a) National information and computer network;
- b) Computer mathematical and software;
- c) Personal computer.

The program includes the creation of ministerial and judicial information networks, the National Information and Computing Network, the organization of production of computers and computer equipment, improving training in the field of new information technologies, the creation of regulatory and legal framework for documentation and others.

Uzbekistan has a lot of intellectual potential and information resources for the implementation and development of information technology. The Academy of Sciences, higher and secondary special educational institutions, manufacturing and companies have qualified staff in computer technology, communications, software and information, information systems.

On January 9, 2018, a meeting chaired by the President of the Republic of Uzbekistan ShavkatMirziyoyev was held on the effectiveness of measures taken to further develop information and communication technologies and ensure security.

The meeting focused on the development of the information sphere, increasing the speed of the Internet, further development of the e-government system and the development of other information technologies. Relevant instructions were given to the representatives of the industry on the issues considered.

The Ministry of Public Education its work in 2010 to increase the literacy of teachers in information and communication technologies. In particular, the Resolution of the Board of the Ministry of Public Education of the Republic of Uzbekistan dated July 1, 2010 No 5/1 “On further improvement of the system of retraining and advanced training of teachers” and January 3, 2012 No 1 “On approval of training programs” Basically, 8 (eight) hours – “Information technology and their use” and 12 (twelve) hours – “Information technology in science teaching” training courses for all categories of students on the use of information and communication technologies in education.

## RESULT AND DISCUSSION

The main purpose of this is to increase the competence of teachers in information and communication technologies and the effective conduct of distance learning in the future. This is because the main stages of the distance learning process are planned to be conducted on the Internet with the help of a computer.

Adoption of the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 92 of February 19, 2003 “On measures to implement the Education Sector Development Program with the participation of the Asian Development Bank” is the main basis for providing the education system with information and communication technologies In the Decree of the First President of the Republic of Uzbekistan PF-3431 “On the National State Program for the Development of School Education for 2004-2009” dated May 21, 2004, the issue of providing schools with educated and qualified personnel, creating a new, effective system of teacher retraining and advanced training set as a separate line.

One of the effective, convenient, popular solutions to this problem is the large-scale introduction of distance learning technology in the public education system.

Resolution of the First President of the Republic of Uzbekistan dated June 2, 2005 No pq-91 “On improving the system of training in the field of information technology”, instructions on improving the system of training specialists in information and computer technology, further expanding the application of information and communication technologies in education given.

A lot of work is being done in public education on the introduction of information technology and capacity building in this area. In particular, the order of the Ministry of Public Education dated August 3, 2006 No. 6/5-HB “On naming the 2006-2007 academic year as the academic year of capacity building of teachers in the use of information and communication technologies” to accelerate the introduction of information and communication technologies in education and ensuring computer literacy of all teaching staff was identified as the primary goal.

According to the order of the Ministry of Public Education of the Republic of Uzbekistan from December 20, 2007 of No. 329 “About approval of plans of retraining and advanced training of heads and teachers of public educational institutions for 2008” the Ministry of Public Education, Labor and social protection Joint orders of the Ministry of Higher and Secondary Special Education No. 542, 40 and 277 of September 5, 2008 and the Ministry of Public Education No. 153 of May 24, 2008 “On measures to improve the theoretical and practical knowledge of teachers on advanced pedagogical and information technologies” On the basis of the order of the Ministry of Education and Science of the Republic of Uzbekistan for 18 hours of training module “Information technology and their use” for each subject was introduced, which provides students with skills in the use of information and communication technologies and Internet services.

In addition, through the distance learning system, listeners will have access to the most necessary reading materials of the virtual library via the Internet. It should be noted that the virtual environment has the ability to provide listeners with much more visual information (text, illustration, video, audio) than in the form of full-time reading. The Internet Web-node consists of a unique classroom for listeners, which is accessible at any time of the day and on any day of the week, from any place (university, faculty, residence, office) with a computer connected to the Internet. In addition, the Internet consists of a Web-node - a room for rest, a post office, a bulletin board for hanging a table and a place for testing and partial examinations. The Internet Web-node provides listeners with information about the Internet's learning and information materials, in other words, it is a window into the global information network's educational space. Communication between the tutor, teachers and listeners is done through e-mail, discussion forums and chat systems in the learning environment created on the site. The interactive capabilities of the Internet provide a collective approach to education. The trainee can send information to colleagues through an electronic forum or a list of referrals, or use the tools of teamwork done on a training project. Once listeners are exempted from compulsory attendance, they can exchange information or interactive discussions from different geographical areas.

As noted in the Decree of the President of the Republic of Uzbekistan dated April 7, 2017 “Action Strategy for the five priority areas of development of Uzbekistan in 2017-2021” – “... new information and communication technologies in the education system, including the process of professional development of educational institutions It plays an important role in the formation of modern electronic information resources and portals, as well as in the further informatization of the education system. Today, the organization of the system of professional development of educational institutions in the country to a higher level on the basis of new information technologies such as computers, multimedia electronic manuals, Internet, electronic databases, distance learning, as well as teaching, learning, modeling, practical, informational and other programs. A number of measures are being taken for its widespread use”.

Resolution of the Cabinet of Ministers of the Republic of Uzbekistan ID-2110 on measures to provide secondary schools in the country with computers and the introduction of information systems and databases in public education in 2019-2020. The resolution of the Ministry of Public Education of the Republic of Uzbekistan on equipping educational institutions with modern information and communication technologies and the introduction of information systems and databases in public education in 2019-2020 and the program “Information systems in public education and Database Introduction Program”.



**CONCLUSION**

In conclusion, it should be noted that the rational use of opportunities provided by the period is one of the cornerstones of the country's development, not only in society, but also in the system of public education, which is a leading link in the development of society.

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## PROBLEMS OF USING INFORMATION RESOURCE EDUCATIONAL TECHNOLOGIES FROM DIDACTIC SOURCES OF DRAWING

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### ABSTRACT

*In the article, the current state of engineering graphic science is analyzed in general schools. In the course of the educational process, it was proposed to develop electronic teaching literature in the use of information technology.*

**KEYWORDS:** *News, Reproductive Method, Graphic Assignment Computer Technology, Electronic Educational Literature.*

### INTRODUCTION

Modern society is living in an era of unprecedented growth of information flows, both in the economy and in the social sphere. The use of information in various spheres of human activity, the widespread introduction into practice of modern means of their transmission has launched a new stage in the development of society - the era of information.

People's lives and activities take place in the world of many types of information in the form of audio, text, digital, video.

Reproductive methods of teaching, which do not develop students' creative abilities, do not help them to work with information and identify, analyze and systematize the main content, are often used in the teaching of drawing in general secondary schools. The modern specialist is required not only to be knowledgeable in his field and to have information in this area, but also to be able to use them appropriately in various professional situations. Along with labor education classes in secondary schools, the subject of drawing also has great potential in the vocational guidance of students and the formation and development of their polytechnic knowledge. In order to make effective use of these opportunities in drawing lessons, it is necessary to pay special attention to the fact that the content of the subject is structured in a way that is interesting for them, taking

into account the age characteristics of students. However, the information in the textbooks that have been published so far does not go beyond the summary of the information in the Unified System of Design Documents (ESKD) and the description of simple methods of drawing.

## **MATERIAL AND METHODS**

The history of the development of drawing, as well as the unique achievements in the field of drawing in the territory of Uzbekistan (especially in the example of applied art) are ignored by the authors of textbooks, both in current and previous textbooks. In this regard, the inclusion in the educational process of creative tasks aimed at meeting modern requirements is not reflected in the textbooks. As a result, in most schools, drawing is viewed as a secondary subject, and students' knowledge of drawing does not meet the requirements.

In the process of studying and analyzing the teaching of drawing in general secondary schools and their content, we have identified a number of factors that negatively affect the mastery of the subject by schoolchildren. These include:

- Low interest in the school drawing course by the majority of students in secondary schools;
- In some cases, non-specialist teachers teach drawing lessons in schools for various reasons;
- Lack of seriousness on the part of school administration and teachers, as well as students;
- The study of drawing requires students to acquire special abilities and skills (spatial imagination, creative approach to problem solving, independent work skills, analytical skills, etc.). If a science teacher has not mastered the methods of shaping them (a non-specialist teacher), teaching students simple methods of drawing becomes a big problem in itself.

## **Results**

All of the above arguments are fully applicable to the subject of drawing in schools as well. The content of the science of drawing, the different changes in the study hours allocated to it, the variety of topics covered in the textbooks and programs of different authors confirm that there is no clear approach to solving the problem.

The content of the school drawing course and the problems in its teaching confirm the relevance of the topic.

Student engagement and independent thinking problems are one of the didactic roots of the practice. If students are not active and cannot imagine the space, the teacher's activity will not be meaningful. The development of teaching methods should primarily focus on students thinking independently and being active. Computer technology can effectively help students develop free thinking and spatial imagination.

## **DISCUSSION**

The task of scientific research is to create a new theoretical database on the subject of drawing, to develop samples of new types of exercises and graphic assignments of practical importance, taking into account the interests and age characteristics of students, lesson plans using modern pedagogical, information and computer technologies is calculated.

Course development using modern information and computer technologies, e-learning literature should have the following features:

- Ensuring fast communication in the educational process;
- Possibility of individualization of educational process;
- increasing the visibility of the educational process;
- the ability to search for information from various sources;
- the possibility of modeling the process or event being studied;
- It can be used in team and individual training;
- The breadth of opportunities to test students in education;
- availability of interactive methods and techniques of education;
- high quality training;
- creation of opportunities for students to generate knowledge and self-assessment;
- Ensuring the interconnectedness of lessons;
- Transmission of information in a new form through multimedia.

E-learning literature should not become an absolute source of information. E-learning literature should be designed taking into account the mental activity of the learner, his abilities, in particular, the ability to see, hear, especially imagine, and to facilitate the memorization of knowledge and concepts to a high degree.

## CONCLUSIONS

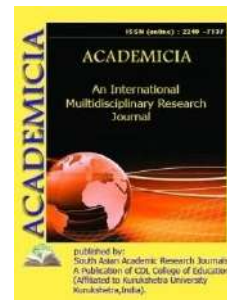
It is necessary to create a methodological support for the subject of drawing in secondary schools, taking into account the possibilities of using information, computer technology, computer graphics, taking into account the modern requirements of the education system.

## Acknowledgements

In summary, the application of computer technology in the teaching of drawing science enhances students' cognitive abilities, motivation to learn, develops their spatial imagination and creative thinking skills.

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## ROLE OF ATTITUDE AND PRACTICES ABOUT PRE-CONCEPTUAL NUTRITION AMONG FEMALE STUDENTS

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### ABSTRACT

*Background: Diet is associated with five of the 10 leading causes of death in the U.S. Currently the greatest increase in overweight and obesity in the U.S. has occurred in 19-24 year olds. Those youth age groups are 43-times more likely to develop cardiovascular disease, as well as other risk factors such as high blood pressure and cholesterol, and Type 2 Diabetes, which poses a concern for the future health of Americans as well as the already excessive health care costs. This study was proposed in order to assess female-students' attitude and practices regarding healthy diet during preconceiving period. Method: The information was collected from eighty female students who enroll on fall courses at SIUC using a survey with 13 questions. The questions asked about the attitude and practices regarding nutrition such as attitude to a healthy diet, attitude to receive pre-conceptual care counseling, exercise, and some daily habits. Result: Eighty female students participated in this survey with the mean age of 24.5 (M= 24.5). The results show that most of the participants have attitude forward eating healthy food, attitude toward healthy practices such as exercise, and attitude to get more information regarding healthy diet during pre-conception period as well. Conclusion: There is a slight trend to an attitude to a healthy diet and practices during preconception period, but it is not highly significant. Since only 80 people participated on the survey, the results only present slight tendencies. Additional studies are required in order to get more reliable and accurate results.*

**KEYWORDS:** Attitude, Conceiving, Infertility, Pre-Conceptual Nutrition.

## 1. INTRODUCTION

*"Each women, man, and couple should make a reproductive life plan that includes whether and when they want to have children and how they will maintain their reproductive health"* CDC, 2006

Diet is associated with five of the 10 leading causes of death in the U.S., including coronary heart disease, certain types of cancer, atherosclerosis, and Type 2 diabetes (Schulman & Wolfe, 2000, p.107). Currently the greatest increase in overweight and obesity in the U.S. has occurred in 19-24 year olds (William et al, 2001). Those youth age groups are 43-times more likely to develop cardiovascular disease, as well as other risk factors such as high blood pressure and cholesterol, and Type 2 Diabetes, which poses a concern for the future health of Americans as well as the already excessive health care costs (Judith, 2013).

College life brings change in the lives of students, which can lead to compromised eating habits once away from their parent's home (Conklin et al, 2005). Diets of these students tend to be high in fat and saturated fat, while being low in fiber and complex carbohydrates. Portion sizes, high food availability, frequent intake of fast food and continuous snacking may be the main contributors to poor dietary quality. These eating habits are of concern because research shows unhealthy eating habits learned in childhood and adolescence tends to be maintained throughout adulthood. These eating behaviors put college students at risk for many chronic diseases (Butler, 2004)

Nowadays, many studies show that infertility is linked to diet and nutrition habits (Swinney, 2013). Therefore, preconception nutrition besides lifestyle changes are considered as a core factor in the prevention/ treatment of several common health problems of women and men prior to conception. Furthermore, nutritional and health status before pregnancy have influences on fetus development/ health, and decrease the risk of complication during pregnancy.

As shown previously that nutrition and lifestyle has various impacts throughout adulthood. Specifically, nutrition stats of women before pregnancy (Preconception nutrition) have impacts on health of women during pregnancy and the health of newborn (Judith, 2013). Therefore, improving and enhance knowledge, attitude, and practices regarding pre-conceptual nutrition among female college students is so important.

## 2. METHODOLOGY

The information was collected from 80 female students who enroll in fall courses at SIUC using a survey with 13 questions. The questions asked about the attitude and practices regarding nutrition such as attitude to a healthy diet, attitude to receive pre-conceptual care counseling, exercise, and some daily habits. Every question was proposed and then analyzed by the researcher. These surveys were filled out by 80 females after getting approved by the ethic committee of Southern Illinois University. For each question, there is four different choices can be selected: strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD).

## 3. RESULTS AND ANALYSIS

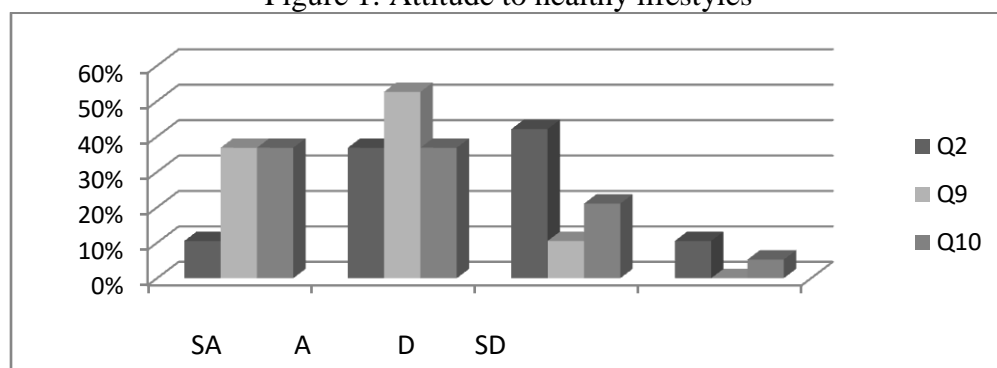
The results about attitude and practices of female students at SIUC regarding pre-conceptual nutrition are summarized as the following:

The mean age of participants is (M= 24.5). The results of attitude to a healthy diet, attitude to get knowledge, and attitude to healthy lifestyles are represented as: 46% of participants are showing their attitude to get knowledge linked to diet and practices before conceiving. However 2% of them aren't agreeing. 41% are agreeing with the conception of health diet before being pregnant has impacts on pregnancy and newborn health. In contrast to 1% aren't agreeing. Regarding exercise before conceiving and its impact on pregnant health, 42% of the participants are agreeing with. Conversely 28%, 25%, and 5% are strongly agreeing, disagreeing, and strongly disagreeing respectively.

The results for the questions about attitude to healthy diet linked to pre-conceptual (questions 1, 3, 5, and 6). 56% of participants are disagreeing with the concept of continuing eating the food that they like with knowing that food is unhealthy. While some participants strongly agreeing (11%) and agreeing (33%) with continue eating the food they like even it is unhealthy. Also, 45% and 40% of participants are strongly agreeing and agreeing, respectively, with the idea of that good nutrition, good general health, and exercise are the most important aspects of getting ready for pregnancy.

Responding to the questions that related to the attitude forwarding healthy lifestyles show that of the participants, 53% agreeing and 37% strongly agreeing with the notion of that exercise is beneficial for health of reproductive organs. Regarding being overweight or underweight can reduce the chance of conceiving, participants respond as disagree with 42%, agree 37%, and 11% as strongly disagree and strongly agree (see figure 1).

Figure 1: Attitude to healthy lifestyles



One of the most important aspect regarding being health through the lifecycle is knowledge. Many studies show that being knowledgeable about healthy diet and lifestyles make you more aware about your diet (Dickson-Spillmann&Siegrist, 2011; Swinney, 2013).



Figure 2: Attitude to getting knowledge.

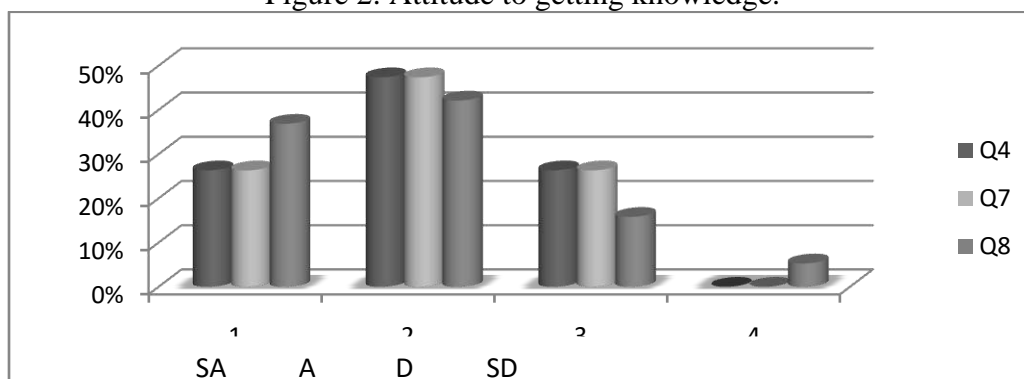


Figure 2 shows that most of the participants (47%) agree with the notion of receiving preconception diet counseling is beneficial for both mother and child, (43%) agree with the notion of following preconception guideline and recommendations regarding diet will improve the quality of my pre-conceptual health, and (47%) agree with the notion of talk to others who are hoping to get pregnant or were pregnant might be beneficial.

Responding to the questions, that are related to some practices during preconception period such as drinking alcohol and coffee and smoking, show that the average of coffee cups that drunk per week is higher (11.75 cups/week) comparing to alcohol consumptions (3.85 cups/week). However, the average of cigarettes smoked per week among participants is 8.5.

Finally, is important to point out that the survey was performed with only 80 female students. The results show a slight trend to a healthy lifestyle and attitude regarding diet before conceiving, but more research is required in order to get solid conclusions in the topic. With this preliminary information it can be said that the initial hypothesis must be changed because despite female students, in general, are aware that attitude and practices linked to preconception nutrition is feeble, they show a significant attitude and practice regarding pre- conceiving diet.

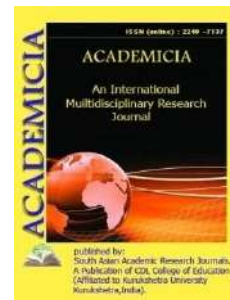
#### 4. CONCLUSIONS

The attitude and practices to a healthy diet during preconception period at Sothern Illinois University at Carbondale were studied preliminary by mean of a survey. The main findings are as follows: There is a slight trend to an attitude to a healthy diet and practices during preconception period, but it is not highly significant. However, initial hypothesis consider that attitude and practices regarding preconception nutrition is frail. Therefore, the initial hypothesis must be reevaluated.

46% of the participants are showing their attitude to get knowledge regarding diet and practices before conceiving. However 2% of them aren't agreeing. 41% are agreeing with the conception of health diet before being pregnant has impacts on pregnant and newborn health. In contrast to 1% aren't agreeing. Regarding exercise before conceiving and its impact on pregnant health, 42% of participants are agreeing with. Since only 80 people participated on the survey, the results only present slight tendencies. Additional studies are required in order to get more reliable and accurate results.

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## TESTING AS A LEARNING KNOWLEDGE CONTROL METHOD IN FOREIGN LANGUAGE TEACHING PROCESS

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### ABSTRACT

*Article on test quality control of knowledge in training Foreign languages in the modern education system. The test method does not allow only to consolidate the acquired knowledge and skills, but also to identify gaps in the students. Passed material, allows the teacher to correct further curriculum according to the results of the tests conducted and pay more attention to badly acquired material. When preparing tests for foreign languages, it is necessary to select tasks that cover all grammatical, lexical, phonetic aspects, invite students to perform several exercises on a single topic, minimize chance when students choose any of the answer options. Test tasks activate mental activity, train students to independent to work and assiduity. The author concludes that, despite such shortcomings, this method like probability of guessing the correct answer, addictive to work with ready language and lack of ability to reveal individuality are the most a promising form of knowledge control that complies with the principles of humanization of education, improves the quality and learning of the material required for qualified specialist.*

**KEYWORDS:** *Testing; Knowledge Monitoring And Verification; Assimilation And Fixing Material; Intellectual Activity; Independent Work*

### INTRODUCTION

Knowledge of foreign language in the modern world is one of the most important conditions professional competence [4]. In the process of learning language skills

Teachers face the challenge of controlling the quality of knowledge. In modern times - this is especially relevant, as "pedagogical tests open promising directions

### Improving the quality of learning by improving the results monitoring system

Training in conditions of teacher-teacher cooperation. " [2] It is important to select objects and control forms. There are many forms of control of acquired knowledge - oral survey, Frontal polling, working in pairs, final control, phonetic dictant, etc. In Recently, mainly two types of control are used: oral interview and written work. An oral survey does not always provide a complete picture of the learned or Untapped material and time-consuming; Writing work requires a lot of Time to verify it. Both of these methods may not lead to an objective assessment of the resulting pupils of knowledge.

A control method such as testing can be successfully applied to the current, Intermediate and final knowledge check. You can test your knowledge with tests Students both selectively and generally. Testing is important for securing, Improvement of acquired knowledge, skills and skills, identification of gaps in knowledge. Students in higher education are more conscious and thorough in their verification Their knowledge, as their training places higher demands on their mental activity and independence. To learn the requirements for the study The program needs a sufficiently high level of development of generalizing, logical and Abstract thinking, as in older age students are more conscious of to study and submit it to certain tasks of life and future work on the chosen ones professions. Their thinking activities change as they grow up, too. They must be able to argue and draw conclusions. The criticality of thinking develops, i.e. at training students use testing is particularly justified and leads to increasing motivation both in the study of foreign languages and other subjects. Than is the test different from traditional control work? Test (from English word 'test' - Test, check, control, exercise, study) is a system of tasks, execution which allows you to verify the level of ownership of an object by using a specially designed knowledge assessment system. Thus, testing is a method of such testing of knowledge, skills and skills where the subject is tested performs a number of special tasks. These are called test jobs. As note Zharynova E.G. and Chernyaev E.V. test tasks must meet several criteria. First, the test task should be short and technological. Secondly, test task must be formulated logically and unambiguously. Third, response evaluation rules and the instructions shall be the same for all subjects [1]. Advantage of such tasks in that they allow teachers to evaluate in short periods of time degree of learned or non-learned material.

The test method has many advantages. Being an integral part of the class, it allows the student to work at an affordable pace, with a gradual transition from one level of knowledge development to another. Test jobs give time to think how much material is well acquired. When you use testing to consolidate language knowledge Concludes that both grammar and vocabulary will be better learned, which in turn.

Will allow the teacher to adjust and plan further training process according to the results of the tests conducted and pay more attention to the poor to the acquired material. Lack of time-consuming verification of written works allows to carry out tests quite often and creates a feeling of total in students control knowledge and get rid of psychological problems associated with personal student-teacher relationships that may not always be positive, i.e.

This form of knowledge control eliminates subjectivity. Combined with other species control, the use of testing is an effective technique that motivates preparation for each occupation. Testing facilitates the educational process. Especially This is clearly seen in high school and university students. Activity on classes also increase, the psychological atmosphere and connection

between by the teacher and students, which has only a positive impact on learning in whole. Testing takes time, but it should be seen as part of the training process. And motivation depends on how we use test results. If testing is seen as a competition between students, then they may not cause Motivation, and if testing is used as an opportunity to identify progress in students, then they motivate them and make them think about how to raise their level of knowledge.

Now let 's look at the disadvantages of this method.

1. When running tests, there is a chance of guessing: the student presents only the answer numbers, the teacher does not trace how he decided on whether or other choice. This disadvantage is common for tests consisting of jobs on selecting the correct answer from among the suggested ones. [6]

2. The compilation of tests is often based on a mental function - recognition, therefore, some methodologists believe that in selective responses, the student

Gets used to working with ready-made language and is unable to present the acquired knowledge in a different way.

3. There is often subjectivity in forming the content of the tests themselves, in their

Selection and instructions for test jobs, much also depends on the specific

Test system is allocated from time to knowledge control, etc.

4. There is a danger of automatic errors. For example, the subject did not understand

Instructions and began to respond at all not as required by the standard procedure.

5. Lack of ability to reveal identity when standard tasks.

Let 's take a look at the test functions and basic test requirements [by Shatilov S.F.]: 1) Control and correction function reveals degree of mastery individual groups of students with new material; 2) control and precautionary and control and stimulating functions draw the attention of trainees to what requirements are presented by the instructor, gaps in material absorption are detected, which allows

in due time to liquidate them; 3) control and training function is important for themselves students, as they repeat the material passed when performing tests; 4) the control diagnostic function allows to check the level of learning that is learned by them good, which is not very good, and what is poorly learned; 5) control and educational function testing allows to take into account personality characteristics; 6) control generalizing function is to identify skills and skills in the training course

(Final tests at the end of the subject, half-year, school year). [10] In form, the tests are divided into open and closed tests. In case of open form, the person to be tested

Must formulate or supplement the response itself. Test jobs contain questions, answers require the full implementation of acquired knowledge, skills and contribute to the preparation of new, more complex issues.

The closed test form has several options: 1) with one selection correct answer; 2) with multiple selection; 3) to determine compliance, such Jobs typically consist of 2 blocks between which to map (E.g. word and definition) 4) to determine the sequence, they assume that the student must

establish a certain order of action to get necessary result; 5) graduated - when all answers are correct, and the trainee must select the most correct answer of all; 6) alternative, which include only two answer options, not four as usual. Tasks of alternative answers are simple, but not the most common in the formulation of tests. Such tests can give students valuable information.

In addition, in the methodological literature and practice of teaching foreign languages two types of tests have been distributed: norm - referenced

Test) and criterion - referenced test. The first type of the test is designed to compare students' learning achievements. This test is widely used in the distribution of students by educational group, taking into account their language training abilities. The second type of test is used to check the degree of ownership of the training material. This kind of test is currently the most popular and easier to realize in practice. [8] But there are also disadvantages, namely, the degree of understanding of the test in reading process, hearings, comparisons and whether all skills should be checked or restricted a few and what then.

Types of test tasks in foreign language training to monitor passed grammars and vocabulary, and thinking logic are as follows: 1) cross-selection (matching); 2) multiple choice; 3) streamlining (rearrangement); 4) end (completion); 5) replacement (substitution); 6) transformation (transformation). It change the structure of the text specified in the test - its reduction, expansion, change word order; 7) intra-language paraphrasing is a transmission in his words the author's thoughts, clarifying it as far as possible; 8) interlingual cross-language paraphrasing/translating assumes the ability to find equivalent form for transmitting the content of text expressed by the means of the study language; 9) filling of gaps in coherent text (cloze procedure). Such a test should be cost-effective and include all grammar and vocabulary to be tested, and which would be interesting and cognitive. You can selectively use question-answer tests for the current or intermediate control of knowledge. It is also useful to use patch tests

Editing procedure and header selection tests for related statements.

The general criteria for evaluating test tasks are as follows:

- ☐ about 90% of the correct answers- are "excellent";
- ☐ 76%- 90% of the correct answers - are "good";
- ☐ 60%- 75% of the correct answers - are "satisfactory";
- ☐ less than 60% of the correct answers - are "unsatisfactory".

What are the recommendations for foreign language tests, for example for University students (both linguistic and non-linguistic)?

1. All answers to this question should look plausible, forcing

Students analyze each response option and identify inaccuracies in it or mistake (self-examination).

2. It is desirable that the test answer options are not random, but are,

Derived from their implementation, taking into account the knowledge gained; The most common errors during training. It minimizes chance when students choose any of the answer options if their native does not match any of the options given.



3. Test tasks should be formulated in such a way that they are most complete covered all grammatical, lexical, phonetic, etc. aspects of the language and allowed to control not only skills, but also learning by students theoretical knowledge.

4. When creating test variants, it is desirable to selectively suggest students perform several exercises on this topic. This method detects all errors in the test. Such a measure is also necessary. Because the teacher may not see a twofold interpretation and ambiguity in the proposed versions, as what is for the person skilled in the art is obvious, the student may raise well-founded questions.

Of course, there are difficulties in developing and applying testing and it is necessary to be able to overcome them. First, it is the need to distinguish between the types of speech activities and unambiguity of responses. Secondly, the complexity of the organizational nature - creating a supportive psychological environment as many students experience a certain stress in the tests. Therefore the goodwill is important teacher. You can overcome these difficulties if you follow the 3rd basic to the rules:

- 1) To give clear and unambiguous theoretical definitions of skills which it is necessary to check;
- 2) To determine precisely the conditions to be followed in conducting the test (the time given for its execution and monitoring of its execution);
- 3) determine (in points) the results. The tasks of the educational institution are to develop the educational system,

A personality-oriented student. All this applies to testing, as the connection

Russia to the Bologna process in September 2003 allowed to concentrate on

A structure of education that is compatible with the relevant structures European countries. [7] Testing, according to many scientists, complies with the principles humanizing education because it cannot be directed against the interests of the individual. Modern science testology offers a variety of approaches, models and methods verification of acquired knowledge. Every year the quality of tests improves, Increased probability of using test materials, various testing and test generation technologies for different levels of training. Understanding testing patterns will allow the teacher to improve the process of education and training to foreign languages.

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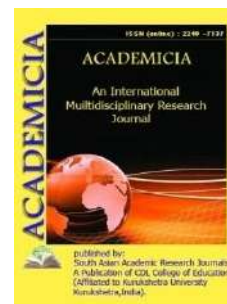
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## THE ROLE OF PHONETIC SKILLS IN THE FORMATION OF SOCIO-CULTURAL COMPETENCE IN PRE-SCHOOL CHILDREN

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### ABSTRACT

*At present, it is obvious that it is necessary to create optimal conditions in the pre-school educational organization for the comprehensive development of pre-school children, for their learning of socio cultural ties and traditions, in other words, for the formation of socio cultural competence, which acts as the purpose of teaching a foreign language. The article attempts to clarify the purpose of teaching the German language to pre-school children and defines the role of phonetic skills in the formation of socio-cultural competence.*

**KEYWORDS:** *Preschool Education, Socio-Cultural Competence, German Language, Formation Of Hearing And Pronunciation Skills.*

### INTRODUCTION

In today's conditions, when learning a foreign language has become not only a way of self-development, but also a necessity for many, especially young people, the organization of the process of learning a foreign language (IA) remains the focus of attention of methodologists and teachers, who are looking for ways to optimize this process and reserves to improve its performance. According to many, one such reserve is the shift of the beginning of the study of IJ to pre-school age. As a result, the popularity of teaching a foreign language in pre-school institutions increases every year, and the problems that arise in practice need to be solved. It should be noted that a number of studies consider certain issues of training of the IYA of pre-school children (see, for example, the works of T. B. Khlybova, A. N. Utehina, K. B. Zhigaleva, I. V. Zotova, Z. N. Nikitenko, etc.). However, it seems that not all issues of organization of activities on IY in children 's educational organization (DPI) are properly investigated, so, first, the most important is the correct definition of the purpose of education, as well as its maximum minimization and concretization taking into account the specific conditions of education in children 's preschool organization

As is known, at present, the purpose of IJ training at any stage is the formation of socio cultural competence. The term "socio cultural competence" has recently been increasingly used in foreign language teaching techniques and refers to a certain component of the ultimate goal of learning. Different definitions of socio cultural competence can be found, which, however, are close in essence. For example, I. I. Mantrova defines socio cultural competence, what is the ability to carry out their speech behavior in accordance with the knowledge of the national-cultural peculiarities of the country of the language studied, as well as the rules of speech and non-speech behavior in typical situations of communication [4]. The formation of socio cultural competence means the acquisition by students of a certain linguistic competence, universal human values, which help to properly build a dialogue with representatives of another culture. At the same time, the search for optimal means and methods of training plays a major role, which, on the one hand, would take into account the specifics of training of IA pre-school children, on the other, create conditions for the successful formation of socio cultural competence. Social and communication development, according to the pre-school education standard approved by the Federal State Educational Standard (hereinafter referred to as the Standard), means "the learning of norms and values adopted in society, including moral and moral values; Development of communication and interaction between the child and adults and peers; Development of autonomy, focus and self-regulation of own actions; Development of social and emotional intelligence, emotional responsiveness, empathy, formation of readiness to work together with peers, formation of respectful attitude and sense of belonging to the family and to the community of children and adults in the organization; Formation of positive attitudes towards different types of work and creativity; Formation of the foundations of safe behavior in the home, society, nature. "

It is obvious that the promotion of socio-cultural competence as a goal of education of pre-school children of IA is quite in compliance with the requirements of the Standard. The concept of "socio cultural competence" appeared relatively recently in the methodology of education. It is close in importance to social and communication development. Many scientists view the term from different angles. For example, E. G. Azimov and A. N. Schukin in the new dictionary of methodical terms and concepts (theory and practice of language education) define socio cultural competence as one of the components of communicative competence [5]. Several main goals of formation of socio cultural competence are identified: 1) expansion of information about culture of the country of the studied language; 2) ethical and aesthetic education; 3) correlation of native culture with traditions of other peoples; 4) development of the ability to perceive authentic texts of different styles; 5) understanding the dialogue of cultures; 6) development of pre-school personality. With regard to teaching the German language of pre-school children in socio-cultural competence, the following components can be distinguished: 428 • Linguostranology - knowledge about the history and geography of the country of the language studied, knowledge of the main attractions of the country. In DOO No. 178, children are well aware of the main historical monuments of Berlin. For example, das Brandenburger Tor, der Alexanderplatz, Unter den Linden, der Tiergarten. • Sociolinguistic - language clichés used in childhood. For example, Sag mal!, Seht mal!, Vorsicht! and others.

Socio-psychological - possession of the rules of speech behavior adopted in this culture. Например, Danke!, Moment mal!, Entschuldigen Sie, Darfich mal?, Darfichhinein / heraus? And others. • Cultural component - knowledge about the traditions of the country of the language studied, about its holidays and customs, peculiarities of culture, musical component (various

children's songs) and others. For example, the holidays of Ostern, Weihnachten, Backe songs, backeKuchen; O, Tannenbaum; Traditional heroes: der Osterhase, der Teddybär and more. With this approach, the IA acts not only as a means of communication, but also as a tool for formation of socio-cultural competence in pre-school children, expansion of their general outlook and harmonious development. However, the conditions for the formation of sociocultural competence are complicated by the fact that pre-school children learn only direct communication, i.e. oral and speech communication. Accordingly, the formation of linguistic competence takes place only in two types of speech activities (speaking and auditing), often older children of pre-school age are not yet able to read not only in a foreign language, but also in their native language. Accordingly, the principle of the oral basis of instruction is the leading principle, that is, the necessary language material is absorbed orally. That is why the development of hearing-pronunciation skills should be given special attention. It is obvious that this process should be based on the principles of approximation and consideration of the mother tongue. Approximation principle - means "condescending attitude" of the teacher to the permitted errors of the trainees in the process of speech activity, if they do not disrupt communication and do not lead to distortion of the meaning of the message [3, c. 172].

The principle of taking into account the mother tongue - involves taking into account the difficulties of the language studied caused by the divergence in the systems of the students studied and mother tongue [3, c. 168]. With regard to phonetic skills, this means that most sounds are pronounced based on the articulation base of the native language. Sounds that have no analogues in Russian, such sounds as [ This approach was tested during a number of classes held in MADOU "Child Development Center - Kindergarten № 178" Koluchko "in Ulyanovsk. 429 Purpose of classes: • to form hearing-pronunciation skills of senior pre-school children. Tasks: • to develop the ability correctly, from a phonetic point of view, to repeat German words behind the teacher, i.e. to form attention, phonematic hearing and simulation mechanisms; • to organize the mastery of lexical units on the topic of occupation; • to update the use of simple grammatical structures. The proposed algorithm of work on formation of hearing and pronunciation skills in senior pre-school children in MADOU "Child Development Center - Kindergarten № 178" Cloud "in Ulyanovsk looked as follows: At the beginning of the class, the following speech actions were used as phonetic charging: greeting" Guten Morgen/Tag, "as well as presentation using the phrase" Ichheiese.... " Further words the containing sounds [ä, ö, ü] were fulfilled. Auditory perception was supported by a visual row:

das Känguru, das Mädchen, das Kätzchen, der Bär, der Löffel, das Püppchen, München, die Vögel, Köln, der Löwe. The following stage suggested this rhyme: Das kleineKätzchenfängt die Maus, die kleineMausläuft ins Haus. It was also accompanied by a picture, which helped to understand its content. This type of work was consistent and logical when working out sounds and vocabulary, but caused difficulties in some children. Despite this work the choir was successful. The survey showed that the best trainees remembered the following words: der Bär, München, Köln, der Löwe, das Püppchen. In this way work on the following sounds was based [ä, ö, ü, ch]. In the occupation, sounds were practiced on the following lexical units: das Gesicht, der Bär, der Frühling, die Kleidung, München, das Brötchen, Köln, der Löwe. The words were also supported by appropriate illustrations. The strongest words children learned were der Frühling, der Löwe, München, Köln. When teaching pre-school children phonetic skills, it is particularly effective to unearth poems, songs, rhymes. Например, Mit den Händchenklipp,

klipp, klapp, mit den Füßchentripp, tripp, trapp, einmalhin, einmal her, rundherum, das istnichtschr. Einmalhin, einmal her, rundherum, das istnichtschr. The song was not only accompanied by a music video order, but also by corresponding movements. When unearthing verses and songs also 430 you can use exercises to expand the synthagma: working out isolated sounds, individual words, phrases, sentences. This type of work is not only interesting to children, but also quite effective.

Analysis of the conducted classes showed that 65-70% of children are able to distinguish sounds on hearing, as well as sufficiently successfully imitate them. The results of the testing confirmed the conclusion that only a clearly planned occupation taking into account all psychological and physiological characteristics of the age of the trainees can lead to a positive result. Thus, teaching children of older pre-school age to a foreign language contributes to the general development of the child in the process of language learning, active inclusion of thinking, memory, imagination, emotions, perception in this process. Successful acquisition of foreign language speech by children is also possible because children (especially of pre-school age) are characterized by the most flexible and rapid memorization of language material than at subsequent age stages; Absence of so-called language barrier [2, c. 160]. It becomes obvious that it is necessary to create optimal conditions in the pre-school educational organization for the comprehensive development of pre-school children, for their learning of sociocultural ties and traditions, in other words, for the formation of sociocultural competence. One of the means of achieving this goal is the acquisition of a foreign language, which in this case acts not only as a means of communication, but also as an instrument for the formation of socio-cultural competence among pre-school children, the expansion of their general outlook and their harmonious development.

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## IMPORTANCE OF FOREIGN LANGUAGE TRAINING OF UNIVERSITY TEACHERS IN INTERNATIONAL INTER-UNIVERSITY COMPETITION

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### ABSTRACT

*The article shows that increasing the foreign-language competence of university teachers is equivalent to increasing the quality of the labour force. It is concluded that the language training of faculty is not their private concern, but is important for the university itself in order to ensure the quality of education, its compliance with international standards and an essential factor in international inter-university competition. It is proposed to move to compulsory or optional teaching of a foreign language by a university for its teachers.*

**KEYWORDS:** *Foreign Language Competence, Human Capital, Labour Quality, Global Competitiveness, International Academic Community, International Inter-University Competition*

### INTRODUCTION

As you know, the UT (MIIT), as the leading transport university of the country, the Ministry of Transport of the Russian Federation has been instructed to develop a program to increase the global competitiveness of our university. Such a program has been in operation for at least a year and a half. In an interview with the newspaper "Big World 24" in April 152 this year, Rector of RUTH A.A. Klimov explained that the university "faces the task of entering global profile industry or subject world ratings." At the same time, the UT is well aware that the setting of such goals requires serious changes of almost all structural subdivisions of the university. Achieving such goals requires major changes in the work of the university and, in particular, a significant increase in the number of foreign students [1]. One of the most important steps towards engaging teachers and students in intercultural communication with the international academic community is the inclusion of subjects in foreign and, above all, English in the working curricula of education, which is necessary in the context of global competition in the world markets for the provision of educational services. In particular, the May 2018 decree of the President of the

Russian Federation established that by 2024 the number of foreign students in the Russian education system should increase at least twice [2]. In order to increase the prestige of Russian higher education, the Ministry of Education and Science of the Russian Federation initiated the so-called "5-100 project," the purpose of which is to appear five Russian universities in the rating of "100 best universities in the world" by 2020.

However, Russia is far from achieving the goal: in 2017 the highest place among universities of the Russian Federation in the ranking of universities of the world Times was 188 [3]. The construction of the Times rating is mainly based on research activities, citation and the university's "international image." At the same time, almost each of these items requires English language proficiency. In order to improve positions and achieve the goal "5-100," some Russian universities are beginning to increase the number of subjects taught in English and are introducing mandatory teacher training programs in English. For example, NIU Higher School of Economics, which received funding within the framework of the "5-100 project," plans to read about 20% of all disciplines in foreign language by 2020 [4]. The same attention is paid to the foreign-language competence of teachers, for example, at Taganrog Radio Engineering University, which was included not so long ago in the Southern Federal University. When evaluating the quality of teachers' work in the certificate sheet, up to 10 points are given for proficiency in foreign language depending on the degree of competence of the teacher, i.e. the same amount as for having a doctorate, and twice as much as for publishing a scientific article abroad (5 points) [5]. Thus, in IEF UT (MIIT), the development strategy was also set an ambitious task to make the institute as a whole bilingual (Russian and English) by 2030. It is quite natural that teaching subjects in English becomes an urgent task for teachers of our university.

The IEF employs teachers with highly professional qualifications. However, the level of their foreign language competence generally does not reach the level of "proficiency" in the language and accordingly requires a significant increase. This is not surprising, as according to the eighth edition of the EF EPI Index for 2018, compiled on the basis of the results of testing of 1.3 million people, Russia ranks 42nd out of 88 countries and regions of the world and only 28th out of 31 in Europe [3]. To wait for the general level of English language proficiency in Russia to increase, we simply do not have time if we want to participate in international inter-university competition on an equal footing. In addition, the level of English language proficiency varies widely by industry and official function. Workers with the highest level of English proficiency are known to be concentrated in certain functional divisions, such as strategic development, and in certain industries such as banking and information technology. Unfortunately, the employees of higher education are not among them, which only highlights the difference in foreign language training of teachers from the Russian Federation and other countries of the world. In the context of increasing globalization, the knowledge of foreign languages, especially English, in which business negotiations take place before the 80%, is regarded as an essential component of the human capital of the individual that it can apply in today's labour market. At the same time, Marx's idea that people, not machines, are the driving force of economic growth is not disputed by anyone these days and is confirmed in statistics.

Thus, according to the calculations of the American economist E. Denison, 16% of economic growth in 1948-1982 was achieved due to the increase in the educational level of the labor force, 34% - as a result of technical innovations and know-how, also related to education, and only 12% were determined by the increase in equipment costs [6]. There is an endogenous mechanism for generating economic growth, the sources of which are linked to the accumulation of human capital. The point of it is that in a long period of time output per unit of capital can increase, even when investments in fixed assets exhaust themselves, when technically trained employee and growing knowledge provide growth of production. That is, the economic return on training costs significantly exceeds the investment in new technology and equipment. Most consistently, this theory has been introduced in the practice of personnel management in Japan, where a Japanese worker is considered the most expensive resource, more valuable than the most expensive equipment. The use of this resource results in continuous improvement of the labor force through continuous training, official rotation, foreign internships. 154 Thus, increasing the level of language knowledge of teachers is equivalent to a significant increase in the quality of the labour force, as improving the foreign language professional competence of a specialist is a multilateral process affecting the development of professional qualities, increasing the level of education and expanding its outlook.

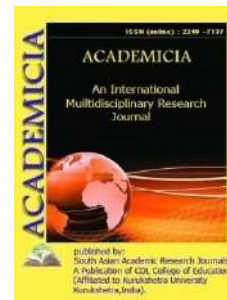
Therefore, the management of the university should be clearly aware that raising the level of language competence of teachers is not a private concern of the teachers themselves, to learn a foreign language, which would be desirable for their pleasure, but is extremely important for the university itself in order to solve the problem of ensuring the quality of education and its compliance with international standards. Considering that intercultural communication becomes an integral part of the professional life of a modern teacher of the university, we propose to move to compulsory or optional teaching of a foreign language for faculty by the university itself at the expense of its budget. This is how the issue of increasing foreign language competence in Russian institutions, which consider it necessary to know their employees foreign languages, is resolved in practice. Thus, in the Ministry of Foreign Affairs of the Russian Federation, all employees have the right to study foreign languages and improve their knowledge completely free of charge. This approach should be taken, in our view, by the management of universities if the aim is to deepen intercultural communication and integration into the international academic community. Of course, people differ from each other and their ability to study a subject is also different. This situation is quite normal. Just one may take a little longer to learn than the other. Therefore, education of this kind cannot but be multilevel. Experience of such teaching already exists in IEF.

All teachers wishing to study English were divided into three groups - beginners (Gr. I), improving the language (Gr. II) and preparing to read their courses in English (Gr. III). Literally in a year of preparation for four academic hours a week all students of Gr. III prepared courses for their conduct in English, and in another year students of Gr. II were able to hold seminars and give lectures on it, and one teacher from Gr. II went to France to give lectures in English. At the same time, even those students who initially did not expect to be able to prepare a course in a foreign language were given sufficient knowledge and motivation during regular classes to begin preparation for the maintenance of their subjects in English. In addition to regular classes, the IEF held an annual teacher competition for the best lecture in English, the last of which, held in

2017, was attended by about 20 teachers. According to the results of the competition, 7-8 people were sent to language courses in 155 Oxford and Portsmouth at the expense of the IEF budget. The well-designed system worked effectively and ensured the introduction of a number of teachers in the IEF, ready to prepare their training courses in English. For a number of reasons, unfortunately, this system is not yet in operation. But the results of the system have been extremely positive, and sufficient experience has been gained in this regard. It must now be institutionalized.

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## THE TAX SYSTEM IN TURKESTAN IN THE LATE XIX - EARLY XX CENTURIES

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### ABSTRACT

*The article deals with the socio-economic situation in Turkestan in the late XIX - early XX centuries, taxes and their essence, types, economic and financial management system. It describes the socio-economic situation in the country in the first quarter of the twentieth century, including the pre-Soviet period and its early years, as well as the subordination of production to the interests of the Soviet regime and its early years.*

**KEYWORDS:** *Turkestan, Khanates, Russian Empire, Soviet Power, Chamber, County, Land, Property, Taxes, Farmer, Product, War, Economy, Finance.*

### INTRODUCTION

History has shown that in the early twentieth century, radical changes began to take place in the socio-economic and financial life of Turkestan. Such changes were especially directly related to changes in the political, administrative, economic system of the country. However, if we pay attention to the administrative division of the country, in accordance with the Regulation "On the management of the Governor-General of Turkestan" adopted in 1886, it included districts, volosts, village elders and aul communities [1906, 1910]. In the late 80s of the XIX century, the Governor's Office consisted of 5 provinces, 23 districts, which included many volosts. In general, by the first quarter of the XX century, the Governor-General of Turkestan was divided into five regions - Syrdarya, Fergana, Samarkand, Ettisuv, Caspian regions, regions into districts, districts into districts, districts into districts [2005. №3. S 75].



Along with the historically formed land ownership relations in the country, the active involvement of the administrative system of the Russian Empire in the economy did not go unnoticed in the socio-economic life of Turkestan. This undoubtedly led the empire to increase its sources of income and profit in the country. In this regard, before the establishment of Soviet power in Turkestan, the Russian Empire carried out a number of reforms to control the tax system and formed a number of financial structures. They were strictly under central control.

In particular, during the reign of the Russian Empire in Turkestan, there were special associations that directly supervised tax and financial issues, including the Ministry of Finance and the State Control Council, which were subordinated to the State Control Chamber (Gosudarstvennaya Kontrolnaya Chamber) and the State Treasury Chamber. 2005. №1, S 65-66]. The main task of the State Control and Treasury Chamber is to form the state budget, control the use and collection of taxes, revenues and other funds to the treasury, and has unlimited powers over them [2005 №1. S 66].

The State Chamber of Control performed administrative, budgetary and audit functions. It was established in Tashkent on the special instructions of the Turkestan Treasury Chamber and the Ministry of Finance. The Chamber had an office, treasury and inspection departments. It included 12 local treasury departments. Its chairman was a direct member of the Council of the Governor-General of Turkestan by participating in the resolution of certain issues related to taxes and revenues, revenues and expenditures [2005 №1. S 69]. In some cases, the central executive body of this structure worked with the Treasury Chambers of Omsk and Caspian regions [OP-1, D-99, L-10-11].

The receipt of taxes in the state budget was directly related to the activities of the Treasury Chamber, which operated primarily in the localities, ie in the districts. County administrations send information on relevant revenues, levies, and expenditures to the Treasury Chamber 2-3 times a month. All revenues, levies and receipts from local administrations were summarized on the basis of documents and sent to the Chamber of Control through it to the Ministry of Finance [OP-1, D-99, L-10-11].

In other words, the Russian Empire will begin a series of "reforms" in the field of taxation in the new capitalist relations. In particular, the economic oppression of the government will intensify under the pretext of the First World War and the Civil War. But when thinking about the socio-economic situation on the eve of Soviet rule and its early years, it is certainly appropriate to think about the First World War and its negative impact on the life of the country. Indeed, during this war, the situation in the country changed radically on the eve of Soviet rule. First the capitalist relations of production, then the process of building a society in accordance with the procedures of the socialist socio-economic system had begun. Especially during the war years and the civil war, the situation in the whole region became more tense, there were negative changes in the lifestyle of the population.

This led, first of all, to the deregulation of production, the aggravation of the economic and financial situation, the shortage of food and rising prices, the outbreak of various diseases, and the intensification of imperialist and Bolshevik oppression. According to sources, during the First World War, a pack of meat rose from 20 to 50 tiyins, a pack of sugar from 14-15 to 30-35



tiyins, and a pound of flour from 2 soums to 10 tiyins to 4 soums to 20 tiyins. Prices for cows and sheep have also risen. A horse for 50 soums was sold for 100-200 soums. The reason for the increase in the price of the horses was that they were sent to the front. Prices have risen frequently. A chit that costs 10-12 cents a gas, has risen to 30-40 cents. These prices have risen by 80-100 percent for food and 300-400 percent for fabrics [2019. №66. S 67]. The imperial authorities pursued a strict policy aimed at further oppressing the natives of Turkestan and making as much profit as possible for the needs of the war. This increases the anger and hatred of the local workers towards the ruling regime.

If we look at the numbers, at that time taxes were rising and the state of the tax system was getting worse. For example, according to the data, "the land tax collected in Turkestan increased from 6859021 soums in 1914 to 14311 771 soums in 1916, ie it doubled. The tax on artisans will increase from 1,149,676 soums to 2,839,240 soums. During the war, the Tsarist government imposed an additional tax of 2 soums 50 tiyins on a pound of cotton fiber sold at railway stations and piers [1993. S-146]. This brought even more disaster to the farmers in the first place.

During the war, the collection of various levies and taxes from the population increased. For example, in 1916, 3,360 horses and 119,640 soums were taken from the population of Namangan district, 4,325 horses, 200 hay, 178,656 soums from Skobelev (residents of Fergana. 302545 soums were collected from the population of Fergana region for war needs. In 1914-1916, 70,000 horses, 13,441 hay, 30,000 meters of felt, 300,000 tons of meat, 3 million pounds of cottonseed oil, 12,000 camels and other items were confiscated from Turkestan for "war needs." with in 1915 paid for a pound of cotton The average market price of 30 Uzbek soums to 24 soums reduced. This is serious effects on the financial situation of farmers by 1993. C-146-147].

As a result, protests among the local population have increased and strikes by workers of various enterprises have begun. For example, the strikes of workers of the Chelekan oil field and the Andijan cotton plant in 1915-1916, and in 1916 by employees of the Tashkent and Kyzyl-Arvat railway locomotive and repair enterprises are clear evidence of the deepening revolutionary process in the country [1993. S-146-147]

The specialization of the Central Asian economy in the cotton monoculture meant that the main economic sectors were tied to cotton. As the capitalist industrial products of the Russian Empire continue to dominate the Central Asian markets, the farms of local artisans, weavers, silkworms, blacksmiths, and others are in decline. Cotton planting has increased in the country, while the production of grain and other food products has declined. The imperial textile industry was supplied with cheap Turkestan cotton, where the purchase of cotton from the United States was restricted. As a result, the area under grain crops in Turkestan was reduced, the area under cotton in the country was expanded, the number of farms began to increase, and for many years they worked mainly for the benefit of the center.

During the First World War, on June 25, 1916, the decree of the Russian emperor was one of the terrible consequences of colonial policy. The Tsarist government, which feared a project to arm the "peoples of the periphery" and arm them, instead forced them to work hard behind the front lines to meet the needs of a bloody, unjust world war [2000. S-244-628]. The content of this

decree led to the spread of rumors among the local population that "the white king will be recruited for the war" or "will be recruited for the war."

Due to the war, from February 1917 the burden of taxation was aggravated by the interim government of the Russian Empire headed by Kerensky. As a result, the economic situation becomes more negative. Due to the relentless war and the ruined economy, the governor-general's income in 1917 was \$ 33.4 million. The deficit amounted to 65.6 million soums. soums [2009. S-133].

In difficult circumstances, ie in the early years of Soviet rule to restore the economy from the Civil War and the First World War, in particular, the Turkestan RKP (b), formed in October 1917, appealed to the RKP and the Finance Department of the RSFSR (Narkomfin) for financial assistance. However, they were told, "The property of all the rich should be confiscated and taxes should be levied on them. No support should be expected from the center." [2000. S-253].

The emergence of dual power as a result of the February Revolution of February 1917 also affected the economic and financial situation in the country. In particular, the events in Russia will affect Turkestan. On March 10, 1917, mass events began to be held in the cities of Turkestan in connection with the overthrow of tsarism. It was as if a large part of the people, who had just been formed and wanted to get rid of the Bolsheviks seeking power, even supported the fact that a revolution had taken place, that the old regime had been overthrown. For example, on March 11, residents of the village of Karabulak in the Syrdarya region sent a telegram to Tashkent: , we hope that there will be no taxes under the old system "[1993. S-132-133].

After the coup d'etat of October 1917, in the context of the Bolsheviks coming to power, improving the living standards of the population, first of all, providing them with food, became one of the most important problems. The government, under the slogan of abolishing private property, ending the wealthy class, and establishing equality in society, began to seize grain and other foodstuffs from the population (mainly the wealthy landowners).

As a result of these measures, in 1918 the food department of the Turkestan People's Commissariat was opened. To this end, on June 15, 1918, the Food Directorate was established to address food issues. However, the directorate operates without regard to local conditions. In one of his articles, M. Haydarov said, "... the directorate has made big mistakes in its activities. That is, the Muslim population expelled from power was also deprived of bread. As a result, the Muslim population, which could not escape starvation, began to die. There is an impenetrable wall between the new Russian city and the Soviet authorities and the local population living in it," he said [2003. №3. S-34].

Indeed, the introduction of a grain monopoly and food distribution has caused considerable discontent among local leaders and the working class, further exacerbating the living standards of the population. As a result, the government will be forced to loosen its financial monopoly on the tax issue for some time. In particular, cash taxes will be introduced only for the population living in cities and districts resettled from Russia, and for the population in rural areas, nomads and semi-nomads. According to researcher B. Isakov, cotton growers will be given some tax

benefits. Such a policy would, firstly, be aimed at strengthening the cotton monopoly in Turkestan and, secondly, at increasing the number of Russian farmers who had migrated to the country from Russia.

According to the author, by the beginning of the XX century alone, the number of migrants from Russia to Turkestan will exceed 197 thousand. Although they made up only 5% of the total population of Turkestan, they enjoyed tax benefits and owned 60% of the fertile land [1936. S 32].

Although there are separate Russian villages and towns for immigrants in the country, part of the displaced population is also housed in villages. In the Fergana region alone, 24,346 East Slavic people at that time lived in special suburban settlements, while in the cities their number was 14,722 [2011. S-87]. A large part of the population is also located in the villages of Semirechinsk and Syrdarya regions.

Taking advantage of this, the imperial government tried to allocate fertile land to Russian peasants by any means and increased land taxes, forcing the locals to sell their land. Such "vacant lands" were given primarily to retired soldiers, peasants migrating from Russia. For example, the lands seized from such settlements were 47,600 tanob in Syrdarya region, 75,000 tanob in Fergana region, 3,000 tanob in Samarkand region, and 7,000 tanob in Caspian region [2009. S-176].

Even those who were resettled had certain tax privileges in contrast to the indigenous peoples. That is, they were not taxed for a certain period of time. The government tried to absorb the idea that "it is not in the interests of the local population, as the settlers will settle on newly developed and vacant lands, while the local population will remain the full owners of the lands that fully meet their needs." However, this was not done in practice.

As a result, special taxes will be developed for people living in auls far from cities. For example, the "grass tax" levied on nomadic and semi-nomadic populations is not levied on their sources of income, but in most cases on the number of grains belonging to related species. In fact, as in the case of the settled population at that time, the nomadic volosts were divided into auls, which were divided into small (khutor) and large aul farms. Small auls consisted of 6-7 grasses, while large auls consisted of an average of 25-30 grasses, and in some cases 40-50 grasses. The population living in the villages is based on a certain ethnic basis, that is, on the principle of kinship. According to the administrative-territorial division of the country, the volosts consisted of 300-400 families (households or pastures), and the elders consisted of 100-200 households. [C-56-69] / As mentioned above, if we take into account that the collection of taxes is determined not by the total income of the grassland population, but by the number of grasses, it is not difficult to understand that "grassland taxes" are much higher for local herders.

On April 20, 1918, at the V Regional Congress of Soviets, the political and economic relations of Turkestan with the RSFSR were formalized and Turkestan was declared an autonomous republic within Russia. The adopted Constitution of the Turkestan ASSR gives Turkestan the right to set its own budget, set taxes and issue loans within the RSFSR [1994 / C 43-45]. However, the

situation with taxes in the country, as in all spheres, has not changed for the better in the context of the reconstruction of the economy, which has just emerged from the war and is in ruins. On the contrary, the sense of ownership of property, which had become a common way of life for thousands of years, began to disappear, and the property of the wealthy population, businessmen, and merchants began to be confiscated.

## CONCLUSION:

In conclusion, it should be noted that even in the remote regions of Russia, as a result of the decentralization of the economy, the labor company, the Bolshevik state and society, which were destroyed during the First World War and the Civil War, taxes and their types also increased. Because the only way out of the crisis was to solve the problem of finance and budget at the expense of taxes. In general, the socio-economic situation in the country in the first quarter of the twentieth century, including on the eve of Soviet rule and in its early years, was explained by the following important features:

First, due to the Soviet power and the socio-economic and political situation in the country in its early years, the economy of Turkestan, especially agriculture, underwent a huge crisis and conflict. The existing economic sectors proved to have served first in the interests of the Russian Empire and then in the interests of the metropolis and monopoly of the Soviet regime;

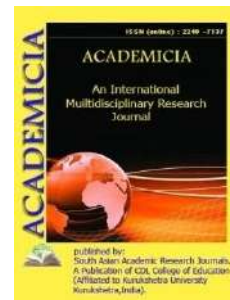
Second, taxes and levies from all branches practically did not allow the formation of an independent tax system and budget of Turkestan, as a result of which all taxes were managed centrally, first the Treasury Chamber of the empire and then the Soviet Ministry of Finance;

Third, after the establishment of Soviet power, the sense of ownership formed in the minds and lifestyles of the peoples of the country for many years began to disappear, the inviolability of foundation property, which was exempt from all taxes and fees, was completely abolished, confirming the introduction of taxes on such property.

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## PLAYING AS THE MAIN FORM OF WORK IN PRESCHOOL EDUCATION

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### ABSTRACT

*The article is devoted to the problem of gaming activities in work with children of pre-school age. It reflects features of English language speech skills development through gaming activities. According to the characteristic age characteristics of pre-school children, the importance of using story-role play with pre-school children in the study of English is described.*

**KEYWORDS:** *Subject Role-Playing Game, Game Detail, Communication In English, Preschool Age. The Main Leading Activity In The Child 'S Life Is - The Game.*

### INTRODUCTION

K. D. Ushinsky wrote: "The game is a free activity of the child, and if we compare the interest of the game, and exactly the number and variety of traces stopped by it in the soul of the child, with similar influence of the teachings of the first five-six years, then, of course, the whole advantage will remain on the side of the game" [3, c. 11]. The game method is a way in which a child develops active speech, breaks down speech barriers. When pre-school children begin to feel comfortable in English classes, there is discomfort in front of the teacher and the child. They are interested, fun, funny to communicate with the teacher [5, c. 23]. As Grigorieva E. N. notes, Vanyushkin E. N.: "The game for a child is a research and creative activity, as in each child from nature there is an active activity and ability to self-realization" [1, c. 355]. In recent years, the problem of children 's play has been the focus of many research papers. In domestic psychology and pedagogy, the game is meant as an activity that is of great importance in the development of a child 's personality in pre-school age, when the pre-school student is in the world of actions, relations, tasks and motives of human activity (A. V. Zaporozhets, A. N. Leontiev, D. B. Elconin, etc.) [4, c. 103].



Teaching pre-school students English through gaming activities leads to communicative communication. Communication in English for preschool children should be motivated and targeted. It is necessary to create a positive motivation for the child to play. On several occasions, various pre-school institutions raised the question that playing activities do not reach a certain level and are gradually leaving the life of the child. Mostly children forget about story-role games in senior pre-school age [2, c. 152]. This is the age when a child begins to have a crisis towards himself. He begins to hesitate to speak to others or something wrong to say. At pre-school age, the development of the motor sphere of the child goes through certain stages: • The first stage - up to 1 year old - the child cannot predict the results of his actions; • The second stage - up to 2-3 years old - the child already has a preliminary visual image of the surrounding world, It is enough to remember how a child of 2 years of age jumps up to try something; • The third stage - up to the age of 4-5 - children arbitrarily control movements, Navigate in space when there are adults; • The fourth stage - up to 6-7 years - the child wants to feel space from several sides. Teaching English to preschool children is based on their age and psychological characteristics, namely: • rapid fatigue; • involuntary attention; • subconscious level of memorization. A child in pre-school age begins to get stuck in speech, to look clumsy when the speech is made wrong. During this period, in most cases, children have similar words in speech.

During playing activities children of pre-school age repeat after a companion, imitate adults, and to come up with something their own gives them harder. It is necessary to take into account all these age characteristics of organization of playing activities in teaching pre-school children English. We believe that the study of English is aimed at achieving the following goals: • ensuring the development of the child 's personality; • creating favorable conditions for early communication and psychological adaptation to the new language world and overcoming the psychological barrier in the use of English; • familiarizing with the world of foreign peers, children 's folklore, and artistic literature; • introducing new social experience using a foreign language. 415 The most basic task of teaching English to children is to develop children 's ability to communicate, both in their mother tongue and in English. When communicating with a child, personal qualities, expression of certain emotions, feelings are revealed. One of the main components in teaching children English is speaking. After all, it is with speaking that children are taught English, not reading and writing. And without the ability to speak it is impossible to communicate, to use the acquired knowledge in English. In the "Child Development Center - kindergarten № 134" Pearl "of the city of Cheboxary there are classes in English, where they work under the program of Yu. A. Komarova" English for pre-school children. " The purpose of English language classes is to create favourable conditions for children to acquire English as a means of developing children 's speaking, extensive interaction with the environment. During the class, educators play various games in English with their children. Various soft toys come to the children of the older group.

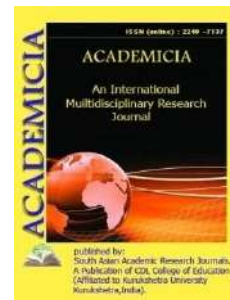
At the beginning of the class the teacher uses a surprise moment, someone knocks on the door, and welcomes the children together with the funny toy "Cheeky Monkey," further children together with the teacher turn into musicians and perform the song: Good morning, good morning, Good morning, to you. Good morning, good morning, I am fine. How are you? On the way, the children "disappear" their fingers and they all quickly find them, remembering how the numbers in English will be pronounced. So do they play the game "Who is it?" - "This is a cat, this is a dog, this is a frog, this is a car, this is a Cheeky Monkey and etc." Children turn into

violinists and sing words, at first quiet, then louder. Most of all, children like it when various animals come to them, when they disappear and manifest themselves. At the end of the class the teacher is interested in the children, what they remembered this occupation, and they receive for hard work stickers. But from time to time there are certain problems in organizing playing activities in English with pre-school students: • children are shy to say words, doubting the correctness of their pronunciation; • children know the correct answer, but are afraid to say it before comrades. These problems were solved by us in various ways. The main goal we set for ourselves in classes in English with up to 416 schoolchildren is to form a feeling of "motor joy" in the child, to connect his positive emotions with the class in English. The child has a natural biological need to play, and it is very important that the child remains in motion. If during the class the child is only engaged in sitting mode, he becomes bored, he will start jumping out of the place, interfering with other children. Therefore, the more creative the teacher in terms of planning the game activity in the English language class, the more interesting the child to be engaged in.

Creativity can also apply to parents. They can diversify a child's favorite game by introducing some new elements into it. It will be easier for a child to remember words-designations in English, for example, to show a spout, cheeks, eyes as he did, saying words in his native language. English for children will become closer and clearer if you call the items around it at home: toys, clothing or interior, various products and dishes. As we can see, teaching English at pre-school age contributes to the harmonious development of children - intellectual, social, moral. Through English classes in pre-school institutions, children are expanding their outlook and acquiring the new skills needed to continue their English studies in school. Summing up the above, it can be concluded that in teaching pre-school children English should take into account the age, physiological and psychological characteristics of children. It should be remembered that language is a means of communication and it is important to know that we form communication skills in pre-school children.

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## MUTUAL SEMANTICS OF ENGLISH PERSONAL PRONOUNS AND THEIR COMBINABILITY

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### ABSTRACT

*This article deals with the peculiarities of personal pronoun in English. Moreover, the investigation has been held on this topic, as well as, the semantics of personal pronoun have been identified with its combinability.*

**KEYWORDS:** *Personal Pronoun, Semantics, Combination, Characteristics, Research, Grammar Works*

### INTRODUCTION

Many researchers note the specificity of the semantics of the personal pronouns of modern English. The words I, you, he, she, it, we, they are deictic in nature, i.e. they show a meaningful dependence on the situation of speech, outside of which their meaning is vague and unclear; Are constantly related to the subject of speech; Allocating external objects not on the basis of their own characteristics independent of the speaker, but on the basis of their random relationship with the speaker; Their relevance is instantaneous and ephemeral and varies from one case of use to another.

So far, however, researchers have not gone further than pointing to these features. The semantics of personal pronouns taken in isolation, regardless of their combination, were studied. The connection of information about the combination of personal pronouns allows to reveal new features of their semantics.

The question of the combination of English personal pronouns still remains completely uncharted. At best, grammar works indicate that personal pronouns are not among those pronouns that are able to act as the main components of phrases. Meanwhile, it is worth taking a

careful look at the syntax behavior of this small group of words, as information about the syntax of personal pronouns undoubtedly helps to better understand the specifics of their semantics and the role in the polyfunctional development of the text.

First of all, the extremely low activity of personal pronouns draws attention. In the frequency scale of phrases of different digits, phrases with personal pronouns take the last place after phrases with uncertain pronouns, not to mention substance, verb, adjective phrases.

What to explain it with? Is this feature in conflict with the features of the semantics of personal pronouns or only confirms it once again?

Let's compare offers:

“What do you want?” old Tom mumbled. He wore a black slouch hat ... [109, p.195].

Two rangy shepherd dogs trotted up pleasantly, until they caught the scent of strangers ... [109, p.196]. old Tom two rangy shepherd dogs he they Updating of values of nouns of Tom, dogs is carried out in the considered offers through their syntactic activity by accession to these words of the dependent old components (old Tom), two rangy shepherd (two rangy shepherd dogs). Relevance of personal pronouns of he and they comes to light differently, only by means of the instruction, reference to the previous text, to an antecedent: he → old Tom; they – the two rangy shepherd dogs.

Thus, the syntax activity of personal pronouns is not due to the need to update the meaning of the personal pronoun similar to that of nouns. The main actualizer of the meaning of personal pronouns is the antecedent in context. Updating the meaning of personal pronouns through their syntax activity - side, auxiliary, secondary. There is a close mutual agreement between semantics and syntax behavior of personal pronouns.

Since synthetic activity of personal pronouns plays only a secondary role in updating their values, phrases with personal pronouns in their mass do not differ in structural diversity, and the amount of additional information carried by components attached to personal pronouns is very small.

Personal pronouns I, you, he, she, it, we, they can enter into both a compositional and a subordinate relationship with other components. The occurrence of compositional and subordinate phrases with personal pronouns is approximately the same.

Within writing phrases, English personal pronouns tend to be right-handed active. In this respect, they behave in the same way as nouns and undefined pronouns like someal, nothing. Postpositive models, i.e. models in which the personal pronoun joins other components on the right, in postposition, are 6.3 times more common than prepositive models.

In modern English, personal pronouns with right-hand writing connections are found in the following models:

Personal pronoun noun

George suddenly realized that he and the waiter were potential enemies [109, p.237].

Personal pronoun noun in opposition

We artists were both mad and amused [108, p.271];

Personal pronoun (personal or undefined)

He had no idea I or anybody was near [106, p.287];

Personal pronoun noun

“You didn’t even see him?”

And the sheriff told that too-how as he and the deputy and Flint stood on the gallery, they suddenly saw the old man looking out at them through a window... [108, p.162];

Personal pronoun group numeral

He went to the bedroom where he and two of the children slept and shut the door behind him [109, p.218];

The pretext of the personal pronoun noun

I came to know if you’d dine with me and Reggie to-night [106, p.270];

The pretext of personal pronoun the pretext of noun

They could see her hands holding to the window bars and a lot of them stopped along the fence, listening to her and to the jailer trying to make her atop [109, p.279] ;

The pretext of personal pronoun

The very rich are different from you and me [109, p.244];

The pretext of personal pronoun the pretext of pronoun

My father. I don’t know what he’ll do to me or to you either... [106, p.85].

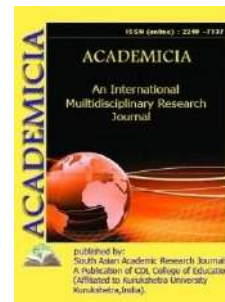
The occurrence of all described combinatorial possibilities is very uneven. Among postpositive writing phrases, the most characteristic is the sequence "personal pronoun noun" like he and Ada and appositive phrases like we artists. They are 2.3 times more common than all other phrases combined. Of the low-frequency more common than others is the sequence "personal pronoun" type he or and "pretext personal pronoun noun" type for me and my family.

We have already noted that the role of components attached to personal pronouns as actualizers of the meaning of these pronouns is insignificant, hence the poverty of the additional information they carry. Against the background of this general pattern, the relationship between the value actualizer and the amount of additional information is mobile.

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## THE ROLE OF INTERDISCIPLINARY INTEGRATION TO IMPROVE THE EFFECTIVENESS OF EDUCATION

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### ABSTRACT

*This article is based on theoretical and practical methods of organizing integrated learning technologies in language teaching. The role and importance of travel lessons in the organization of integrative lessons are illustrated with vivid examples. The author explains how to organize travel lessons step by step. Learning foreign languages and at the same time having knowledge about each country will give future students an advantage in conversations with foreign colleagues, adherence to the norms and rules of etiquette of a particular country. The works of fine art are based on exemplary ideas that the organization of trips to the museum will further develop students' interest in language learning. It was noted that it is important to educate students to be broad-minded and spiritually mature through the organization of travel lessons.*

**KEYWORDS:** Integrative Approach, Miniature, Exhibit, Travel, Communication, Technology, Monograph, Graphic, Consistency, Literary Heritage, Art.

### INTRODUCTION

In recent years, special attention has been paid to combining several disciplines to achieve consistency in a comprehensive education system. Such cases are especially noticeable in the process of teaching foreign languages. The concept of "foreign language" can be interpreted as follows: the methodological term "learning a foreign language" refers to the acquisition of speaking, listening, reading and writing skills in this language. [1] As part of the educational process, teachers and methodologists are actively working to create a concept of education based on interdisciplinary links, the main purpose of which is to increase the effectiveness of the educational process. One of the modern approaches is to promote different models of integrative



education, so that teachers try to find common ground on different topics, so that students can use the knowledge gained in one subject in the study of other subjects, and the learning process is more effective for students. rich in information, simple and interesting. All this allows to generalize and systematize the learned language experience, to make it more complete in terms of the education system. In solving the problems of interdisciplinary integration, it is necessary to take into account the problems of integration, which may be logical sequences within the topics. In the process of language teaching, it is necessary to establish a number of links between the components of the learning process that directly affect the consistency and quality of education, with the correct organization of lessons. Language is a means of knowing existence rationally, logically. Only with the help of language units and forms in the process of learning generalization, discussion and conclusion of the concept is carried out. [2] In the process of reading and discussing texts on language learning, conversations with the teacher, native speakers during meetings and excursions. The main part. We would like to talk about the role and importance of travel lessons in the organization of integrative education. In the process of extracurricular activities, one of the travel lessons in the museum will be meaningful and interesting, complementing the lessons in the classroom, enriching the imagination of students. Such lessons will remain in the memory of students for a long time, and their value in developing the culture of speech and broadening their worldview is immeasurable. The content of the use of an integrative approach in the classroom is based on the idea of working as a whole in the classroom, involvement in the teaching process, collaboration, comprehension. [4]. In particular, by combining foreign languages and mother tongue subjects in schools, students' interest in these subjects can be maintained and even increased. One of the necessary aspects to be considered in a lesson with an integrated approach is the use of didactic materials. The use of research in the teaching process, which is characteristic of an integrative approach to language learning, plays an important role in increasing the enthusiasm for language learning. Through the use of language-oriented, didactic resources in foreign language lessons, students gain a broad knowledge of the country in which they are studying. This is one of the integrated methods of teaching. Integrative approach expands the communicative features of the student. In such situations, it is easier for them to interact with themselves and those around them. Sources specific to the arts and culture give learners an inner desire to develop their lexical and grammatical skills in the classroom. Therefore, research should serve to satisfy the desire to learn a language and increase the demand for its acquisition. We express this as follows: 1) The demand for learning a foreign language; 2) Have a general idea of the country where the language is studied; 3) The level of activity of language learners; 4) Analysis of all studied data. We will continue to focus on our cultural and spiritual heritage. The exposition of the AlisherNavoi State Museum of Literature in Tashkent fully meets the requirements of the secondary school curriculum. In the museum you can study the life and work of the writer on the basis of rich evidence. In addition to listening to monographs in the native language under the guidance of a teacher in the museum, students get acquainted with the rich literary heritage, art and culture of our people. The teacher plans to hold the lesson in the museum. Special attention is paid to extracurricular and extracurricular activities, conferences on the life and work of the writer, creative meetings, summarizing the results. They translate words and phrases based on the knowledge and skills they have learned in English. Students expand their knowledge of their native language, English, literature, and geography at the same time. We consider the use of museum materials in the study of the life and work of AlisherNavoi below, so that the reader has

a comprehensive understanding of the works of great poets and thinkers. When the students are informed about the life and work of the poet, the museum's traveling conversation gives good results: in this case, he presents the material in a consistent monograph on the basis of exhibits. The teacher can also present the materials to the students on the basis of the demonstration method. In this case, the teacher must be well acquainted with the materials on display in the halls of the museum, or come a few days in advance and get acquainted with the materials about the author. For the lesson to be meaningful, the teacher should take the following measures:

1. Determining the topic of the lesson.
2. Selection of concrete examples, exhibition materials that reveal the content and essence of the topic.
3. Creative use of additional materials.
4. Defining the methods and techniques used in the lesson.
5. Determining the content and purpose of the conversation with students.
6. Interpretation of works of fine art.

The second floor of the museum is dedicated to the works of AlisherNavoi. It contains miniatures of the poet's life, his childhood, adolescence, the beginning and maturity of his work, as well as exhibits, manuscripts and books dedicated to his socio-political activities. Among them are unique manuscripts in the form of miniatures by famous artists of the East, painted by famous calligraphers of different periods, portraits created by various artists, graphic works. Before the lesson in the museum, the teacher announces a plan on "Life and creative activity of AlisherNavoi", then students are invited to the exhibition hall. Exhibitions of the XV century, Alisher's youth, the general image of the city of Herat, the cultural center of the XV-XVI centuries, the map of the cities where AlisherNavoi lived, studied, worked, the state of reading of the madras a student-Alisher, Navoi the opinions of his contemporaries, the opinions of Navoi about them, the written sources. The teacher briefly describes the period of AlisherNavoi's life. In this case, the important features of the Navoi period are revealed. Then the conversation about the poet's biography will continue on the basis of pictures depicting Navoi's childhood and school days. Explaining the life and work of Navoi on the basis of museum equipment, the teacher can effectively use school exhibitions, works of fine art and M. Mirfayozov's album about AlisherNavoi. At the end of this lesson, based on the museum exhibits and observations, write an essay at home on such topics as "Childhood and adolescence of AlisherNavoi", "Navoi in Samarkand," Navoi in construction ", " Navoi people's caregiver ", " Navoi's image " handed over. In such cases, the connection between the study of language and the science of literature and technology is significant. Because in literary works the ideas of labor education and diligence are blown. Giving students information about the plate for reading books, he spoke directly about the creative work of our scholars, such as Nizami, Al-Khwarizmi, Abdurahmon Jami, Lutfi, AlisherNavoi, Mukimi, Furkat. It is worth mentioning that they read the book using a device, ie a plate. It is worth mentioning that the poet Hisrav, in addition to being a famous poet, was a skilled carpenter. In this regard, the role of folklore is invaluable. Here it is necessary to cite the following folk proverbs: "Seven measures, one cut", "Unplanned work without bricks", "Don't count eight" and others. Works of art for reading at home should be recommended to students to check the results and help them to develop such qualities as love for

work, respect for work, a conscious attitude to work, the pursuit of creativity. Each subject has its place in language learning. Along with all subjects, the use of works of fine art at school is an important factor in educating students in the spirit of beauty, in the spirit of understanding the subtleties of art, ideological and aesthetic content from an early age. These classes also help students to understand the interrelationships and characteristics of the arts. To consolidate the knowledge gained in all subjects, the teacher plans to organize another trip to the museum with his students. The museum is preparing to hold a seminar on "Study of the life and work of Alisher Navoi." A. Abdullayev, Ch. Akhmarov, Uzbek artists using the paintings of Alisher Navoi and M. Mirfayozov's photo album "Study of the life and work of A. Navoi at school", booklets about the life and work of the poet. Portraits of V. Kuznechov, A. Rozibaev's brush, miniatures from the album "Miniatures of Alisher Navoi's works" compiled by the late professor H. Sulaymonov, miniatures of Navoi's works will be presented. This research course is of particular interest to students. The teacher also gets acquainted with the exhibits of the museum and develops methods and techniques to explain it:

1. Lesson topic: Life and creative activity of Alisher Navoi.
2. Educational purpose of the lesson: To explain to students the life and work of Alisher Navoi through museum exhibits.
3. Educational significance of the lesson: To educate students in the spirit of love for aesthetics, culture and art through this lesson. This will increase students' interest in the visual arts and strengthen their understanding.
4. Classroom: Use of museum exhibits to reveal the content and essence of the topic.
5. Additional materials: Fiction and methodical literature to help understand the works of fine arts.
6. Method of the lesson: Demonstration method.
7. Determining the content and purpose of the conversation with students: a) What works of art do you know about the life and work of Alisher Navoi? b) What can you comment on the miniature? Q. What works of art can you comment on? We believe that students will answer these questions based on their own ideas. A student who is able to feel the integration of sciences, that is, a special understanding of the works of literature and fine arts, will try to answer these questions in full. Commentary on works of fine art. Teacher said that, Alisher Navoi begins his biography with an introductory speech. He noted that he was at the peak of the literature of the twentieth century, his work in the literary, socio-political spheres, his love for music, fine arts and architecture, his upbringing brought up famous artists, calligraphers and architects. The focus is on a photo of the city of Herat. Before their eyes was a huge city connected to wide horizons. The teacher showed a portrait of Abdulhaq Abdullayev "Navoi" without referring to the illustrations showing that Navoi was born in this city on February 9, 1441. Children immediately recognize the image of Navoi, depicted on the background of the wide streets of Herat. The teacher draws the students' attention to the portrait of Alisher Navoi, a 16th-century brush by Mahmud Muzakhib, a student of the famous artist Kamoliddin Behzod. Then the teacher comments on the portrait of A. Abdullayev "Navoi" as follows: "Students, if we look closely, we see that it is very similar to the image of Navoi, which you see now, that is, Mahmud Muzakhib. His expression is thoughtful, deep and wise. The artist's skill is that in order to show his

greatness, the breadth of his creative potential, he portrayed him with his whole body against the background of the vast horizon of Herat. Look, those low houses and high madrasas seem to be approaching us from those streets of Herat, passing by us innocently. He frowned and stared ahead, as if to tell us something. Then the teacher said that the portrait of Mahmoud Muzahhib was from the 16th century and that the original was kept in the Astana Kurs Library in Mashhad, Iran. Then the teacher talks about the poet's youth and comments on such paintings as "Nazarov's meeting with Ali Yazdi", B. Boboyev's "Navoi and Hussein Boykaro at school". In order to highlight the friendship and creative cooperation between the teacher Navoi and Jami, ChingizAhmarov's "Navoi and Jami" miniature depicts a green hill and flowers, the roof of the altar against the background of a tree, two people on the carpets in front of a two-story door - Navoi and Jami. Jami is talking. The image of Ch. Akhmarov is artistically designed. Pencil, book, pen and writing paper on the table. The walls of the room are decorated with beautiful carvings, bookshelves. Navoi wore a sleeveless cloak over a yellow tunic, a compact white beard with a white turban. She is reading the book with pleasure to her teacher Jami, with determination in her face. Jami, a white-bearded man, listens to Navoi's words with pleasure. Respect for Navoi, kindness and satisfaction are shining in his eyes. Talking about Navoi's life in Astrabad, the teacher showed the children the feeling of longing for his hometown of Herat and showed the children a picture of "Chain Poem". The words "Zanjirbandsheir, yenaman der" from Uygun and Izzat sultan's drama "AlisherNavoi" will be the basis of the conversation. Students comment on the content of the picture. In the picture, the teacher says that Navoi symbolically chained his powerful poem to Astrabad by Hussein Boykaro. Then you are given the task to draw a picture of a lion based on this picture, to write sentences that correspond to the content of the picture. At the end of the lesson, the teacher tells about the life and work of AlisherNavoi, which is very complex and multifaceted. "AlisherNavoi's goal in writing five Uzbek-language epics" Khamsa "was from a young age. He achieved this goal in 1483-85.

The work spread the fame of Uzbek literature and became one of the masterpieces of world literature. "[3] Such travel lessons organized by teachers in museums play an important role in strengthening students' knowledge and instilling interdisciplinary connections in the minds of students. To reinforce the museum's travel lesson, please refer to the small text of The Natural History Museum in London in the Traveling section of the 7th grade English textbook to keep students informed of additional literature and manuals. focus on the rib exit. We develop students' perceptions of museums through this topic: In 1905 the best known dinosaur's skeleton appeared there. This dinosaur is called Dippy. This dinosaur is known as biggest in the world. The skeleton is 26 meters long. There are other types of dinosaurs, especially the popularT rex. Here are stuffed birds, with the extinct dodo bird. Every year the museum has new exhibitions as some events like the favorite "Wildlife Photographer of the Year" and butterfly house, "sensational butterflies". You can visit the museum after hours including movie nights, monthly late openings and the chance to sleep at the Museum with Dinosaurs. [5].Based on the integrative approach, students are asked the following question. Why do people travel? Students use the following phrases to answer. to discover new places; to see the sights;

To meet people;

To know the history, culture-to study history, culture;

To learn a language;

To visit new places;

to know customs, traditions- to study customs, traditions.

It is both a museum and the place where scientists work. It is a beautiful building. There are 80 million things in the Museum and Darwin Center. This means that students' independent thinking and active participation in the learning process are enshrined in state law. Particular attention should be paid to the age, physiological and psychological characteristics of students, including their abilities and talents. Based on the requirements of the Law "On Education", it is necessary to meet the following social requirements for education:

- to show the role and importance of our rich pedagogical heritage of the distant and recent past in the theoretical and practical development of pedagogical science; Formation of patriotism and national pride in students in English classes, directing them to independent and creative thinking with the help of various methods and tools of pedagogical analysis;
- Achieving conscious mastery of pedagogical knowledge of students as a subject of education;
- using new pedagogical technologies, in particular interactive teaching methods, to make each lesson a much-anticipated and fun activity for students;
- Strengthening the pedagogical skills and competencies acquired by students through various methods of assessment and control; focus on solving pedagogical and educational problems to improve the learning process of students in a logical sequence, based on the latest achievements of science;
- to create an integrated system of monitoring and evaluation of students' knowledge, skills and abilities in English lessons on the basis of test assignments,
- Development of key criteria;
- The basic concepts described in English lessons, the achievement of clarity of definitions, etc. form the socio-humanitarian democratic basis for the teaching of English in secondary schools on the basis of research problems. Independent study of students in English language classes is strengthened by legal and regulatory documents. Textbooks, manuals and other didactic resources are aimed at fulfilling a specific task in the education of students within the framework of State educational standards. The manuals are intended for teachers and contain recommendations on the purpose of the lessons, teaching aids and methods of use, the content of the lesson, practical exercises, additional assignments and more. For example, O.Madaev's methodical manual "How to write an essay" [7] shows the importance of essay types in the development of students' written speech on the basis of essay analysis, K.Yuldashev's "Teacher's book" methodical manual sample analyzes of works were carried out, the database is created on the basis of capabilities and means of computer technology, created in static and dynamic mode, equipped with sound and color images, contains a large amount of information, which can be presented in various forms (tables, diagrams, histograms, text, pictures, etc.). , go through a state list of important, widely used, widely used for independent study and control of their knowledge in the learning process An data set. Dictionaries are a set of second-language alternatives of words or terms in the alphabet in certain areas of language or science, which require extensive use in the process of working on questions and assignments. For example, H.Homidiy, S.Ibrahimova, M.Akhmadbaeva's "Dictionary of pedagogical terms", B.Sarimsakov,



N.Hotamov's "Russian-Uzbek concise dictionary of pedagogical terms" grammatical, etymological and scientific-scientific definition of pedagogical terms. given, examples of their application, information that such dictionaries can be used effectively as additional pedagogies in the lessons on working on the text.[6].

The digest opens the way to the use of the Internet on the basis of new pedagogical technologies as a collection of data, which provides a summary and commentary on the content of periodicals. Electronic literature is intended for the use of computer-based teaching methods, independent learning and effective learning of scientific teaching materials, scientific information, which are reflected in the following forms:

- Educational and scientific materials only in the form of verbs;
- Learning materials in the form of verbal (text) two-dimensional graphics; rotated) applications, i.e., data in three-dimensional graphical form, in the form of audio, video, animation, and partially verbal (text); Educational and scientific materials only in the form of verbs;
- Learning materials in the form of two-dimensional graphics;
- "Multimedia" – (multimedia) manuals, data in three-dimensional graphic form, audio, video, animation and partially verbal (text); It is necessary to form the process of pedagogical education on the basis of joint activities of teacher and student and their full support by students. Questions and assignments in textbooks are used as a scientific and didactic source to meet these requirements. At the stage of general secondary education, the mental and physical characteristics of students do not allow them to exaggerate. At the same time, if spiritual virtues, beautiful human deeds are shown as direct examples and instilled naturally in the souls of students without being imposed on them, these virtues and deeds can become an integral part of the nature of youth. We will discuss about traveling lessons again: “When you are in Samarkand, you will see visitors visiting ancient monuments, listening to their guides, writing something, photographing some cameras and cameras. And then I come up with a question: What is the beauty of this ancient young town? Isn't this elegant, charming force embodied in historic monuments, the inimitable beauty of diverse, unique architectural ensembles? Yes, it is, of course. Because they have marble, ornaments, gilt and adorned brick ornaments, and the unique artifacts created by the history. Foreign visitors are a treasure trove of ancient architecture. Another pupil writes: "I always look at the historical monuments. Watching the Khiva Panorama over the walls of the archipelago makes me very excited. Do you not see the high ceilings of the sky, the magnificent minarets, and the dome decorated with tiles made of gold? They are both beautiful and thought provoking. Each monument has its own history and details. The history of the construction of the Sherguzy, built in the first quarter of the 18th century in Khiva, is also tragic. The construction of this madrasa takes thousands of centuries. Slaves were promised freedom after the madrasah was built. But they did not expect the slaves to survive and free them because of the difficult conditions at work. One day, when a Sherhon construction site came to life, it was murdered, the uproar broke out, and even the central part of the city. Then the uprising will be cruelly suppressed. A new khan will be sitting on the throne of Khiva and the madrasah will continue to be built. enough. Just as the spiritual qualities formed during this period accompany children for a lifetime, the loss of such opportunities can be costly later. Therefore, the formation of children's personality traits in this period is one of the most important tasks of national education. At the stage of general secondary education, the mental



and physical characteristics of students do not allow them to exaggerate. According to the methodological analysis, the following issues are considered in the development of students' learning activities:

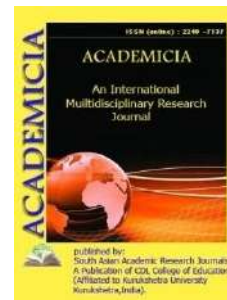
- Full mastery of the content of the studied topic;
- Use of visual aids according to the content of the topic; -
- determination of students' knowledge and understanding;
- Age and individual characteristics of students, and interest in the subject;

## CONCLUSION

When building phrases, students rely on their knowledge of the native language. In this process, students get acquainted with the nature of our country, look at the past and present of our people, as well as develop the ability to think in English, organize history through language skills, feelings of preservation of our spiritual and cultural heritage.

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## SCIENTIFIC AND THEORETICAL BASES OF IMPROVING THE QUALITY OF PORTFOLIO ASSETS OF COMMERCIAL BANKS

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### ABSTRACT

*The article was written by foreign and local economists. the need to ensure the quality of asset portfolios of commercial banks to ensure their financial stability and liquidity. The main use of the conditions of Uzbekistan directions illuminated.*

**KEYWORDS:** *Asset Portfolio, Net Profit, Investment, Credit, Deposit Base, Subordination, Capital, Financial Ratio, Small Businesses, Deposit Base.*

### INTRODUCTION

In Uzbekistan, commercial bank loans are also considered an important factor in economic development. "The expansion of lending to promising investment projects, small businesses and private entrepreneurship was recognized as a necessary condition for ensuring the stability of macroeconomic growth" [1]. However, there are problems with improving the quality of the asset portfolios of commercial banks in the country. In particular, the issue of resource support for long-term bank loans has not been resolved. "Although 70 percent of bank deposits are short-term, 90 percent of loans are long-term given "[2]. Also, the risk of transformation in the country's commercial banks has increased. In addition, investment operations with securities of commercial banks in the country are underdeveloped. "Today, the share of commercial banks' investments in securities in gross assets is only 1.1%" [3], and this indicator indicates the underdevelopment of banks' investment operations with securities. In this regard, it is important to improve existing legislation.

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## ANALYSIS OF LITERATURE ON THE SUBJECT

Certain theoretical and practical issues of improving the quality of asset portfolios of commercial banks were identified by foreign economists - J. Sinki [4], W. Soto [5], T. Mazurina [6], M. Matovnikov [7], S. It was studied in scientific the works of Moiseev [8], G. Panova [9], O. Blanchard [10], Yu. Morozkin [11], H. Markowitz [12] and others.

L. Muradova, an economist from Uzbekistan [13], M. Muminova [14], H. Otamurodov [15], A. Boimuratov [16], A. Omonov [17], I. Alimardonov [18], F. Kholmammatov [19] studied the specific aspects of improving the quality of portfolios of assets of commercial banks.

The issues of improving the quality of loan portfolios and securities portfolios of commercial banks around the world, in particular, ensuring a balance between loan yield and risk level, ensuring the optimal ratio between investments in highly liquid securities and corporate securities, are studied on a scientific basis.

## ANALYSIS AND RESULTS

Foreign economist prof. J. Sinki studied the issue of improving the quality of the loan portfolio of commercial banks and formulated a number of important conclusions and recommendations. He came to the conclusion that the analysis of the cash flow of the borrower plays an important role in reducing credit risk and is one of the necessary conditions for ensuring the quality of the loan portfolio. At the same time, the analysis of the client's cash flows should allow finding answers to the following pressing questions:

- Is the client's net profit sufficient to pay the current portion of his long-term debt?
- how much money does the company receive?
- How does the company finance its activities?
- The current state of the company is determined by what management actions or what external influences.

This conclusion by J. Sinki is important for the banking practice of Uzbekistan. This is primarily due to the low level of money supply in the country's economy, which impedes the stability of cash flows of business entities. As of January 1, 2019, the level of monetary support for the economy of the Republic of Uzbekistan was only 20.5% [20]. This is a very low indicator (in countries with economies in transition, the average is 40-45%). Secondly, the relatively high level of inflation and devaluation in the country negatively affects the stability of cash flows of customers of commercial banks.

According to Huerta de Soto, firstly, lower interest rates on loans from commercial banks will turn previously unprofitable investment projects into profitable investment projects; secondly, financing of investment projects by banks at the expense of loans not secured by voluntary funds, which ultimately leads to the disruption of investment projects and non-repayment of loans.

The above opinion of W. Soto is based on the results of his many years of research and is of practical importance. However, he did not investigate the possibility of lowering interest rates on loans from commercial banks in the face of relatively high inflation. However, interest rates on loans from commercial banks are the main factor determining the level of use of loans by legal entities and individuals.

According to T. Mazurin, for the development of lending to the real sector of the economy, the following conditions must be created:

- the state has an effective investment and industrial policy to be;
- risks associated with the implementation of investment projects which reduces the level to develop investment infrastructure;
- increase the investment attractiveness of enterprises.

This conclusion by T. Mazurin is important in terms of improving the quality of the loan portfolio of commercial banks. Because the quality of the loan portfolio directly depends on external factors, in particular, on the investment and industrial policies of the state and the level of risks associated with financing investment projects.

According to Matovnikov, the main obstacle to improving the practice of long-term lending to commercial banks is the lack of long-term resources in banks. A simple and realistic way to solve this problem is to obtain a loan from the Central Bank secured by liquid assets.

M. This conclusion by Matovnikov is refuted by the conclusion of S. Moiseev. He concluded that obtaining resources from the Central Bank by pledging liquid assets by commercial banks was not relevant to Russian banking practice. This is due to the fact that the presence of the Stabilization Fund in Russia does not force the government to increase the volume of public debt by issuing securities.

The Fund for Reconstruction and Development of the Republic of Uzbekistan is allowed to be used as a resource for loans from commercial banks. However, the fund's resources are used to finance large investment projects of strategic importance to the country.

According to G.S. Panova, to increase the ability of banks to provide loans, first of all, it is necessary to ensure the adequacy of their deposit base. At the same time, in order to ensure the adequacy of the deposit base of commercial banks, it is important not to allow the share of transactional deposits in gross deposits to exceed 30%, to introduce restrictions on the loan-oriented part of deposits based on German banking practice. In Germany, 60% of term deposits and 10% of transactional deposits go to credit operations.

This conclusion of G. Panov is of great importance for the banking practice of our republic. This is due to the fact that the country's commercial banks do not have restrictions on the share of transactional deposits allocated on credit. However, transactional deposits are unstable liabilities, and loans are high-risk assets.

According to O. Blanchard. The central bank influences the interest rate on loans through monetary policy and thus regulates the demand for money and money supply.

Blanchard's conclusion is of great practical importance for developing countries, including Uzbekistan. In particular, in 1980, in the United States, the Federal Reserve raised interest rates on loans by reducing the supply of deposits in the banking system by selling government securities based on repos. As a result, the growth rate of the money supply in dollars slowed down.

According to Yu. Morozkin and E. Svistunova, in the conditions of dynamic changes in the stock market, the formation of an optimal portfolio of securities is not always enough. In this context, a commercial bank will need to develop an improved strategy for building a portfolio of securities.

Management allows you to make adjustments to the portfolio of securities based on monitoring of one or another factor, which allows you to draw conclusions about the situation in the stock market. This makes it possible to make modern and clear decisions on investment strategy and portfolio composition.

This conclusion is important for banking practices in developing countries. This is due to the fact that high inflation and the devaluation of the national currency, the instability of financial legislation exacerbate the dynamic changes in the stock market. Moreover, the high probability that investments in securities denominated in the national currency will lose value under the influence of inflation and devaluation contributes to the growth of uncertainty in the stock market. In developed countries, the problems of inflation and devaluation do not currently exist.

Portfolio theory H. Markowitz is widely used in banking practice in developed countries, in the formation of the securities portfolio of commercial banks.

According to the theory of H. Markowitz, one of the mistakes that can be made is that the investor always provides a portfolio that provides low risk with an acceptable level of profitability or high profitability with an acceptable level of risk. To avoid this error, the investor should choose a portfolio in which the expected return cannot increase without increasing the risk, or, conversely, the risk should not decrease without increasing the expected return.

According to the Uzbek economist L. Muradov, it is necessary to increase the level of diversification of the loan portfolio of commercial banks by setting industry lending limits that impose restrictions on lending to certain enterprises, which make up 25% of the loan portfolio of commercial banks.

In our opinion, this conclusion by L. Muradova is of great practical importance for the banking practice of Uzbekistan. Because all the major commercial banks in the country do not provide a level of diversification of the loan portfolio. However, L. Muradova did not justify the possibility of ensuring a 25% diversification of the loan portfolio of commercial banks by industry, given the growing specialization of commercial banks in the country.

M. According to Muminov, “streamlining the organizational structure of banks, improving incentives for managing the bank from shareholders, in particular, large customers, as well as using strategic planning methods when introducing new regulations in the banking system, thereby reducing the risk level of the bank. protection is appropriate. ”

M. In our opinion, there are some aspects of Muminova’s proposal that need to be clarified. First, the procedure for implementing the proposed incentive mechanism in bank management is unclear; secondly, it is unclear which new regulatory documents to use in the banking system and which strategic planning methods to use.

According to Otamurodov, one of the ways to improve the management of the loan portfolio of commercial banks is to balance the credit potential and structure of loans.

In our opinion, this proposal of H. Atamurodov is not sufficiently substantiated. Because, firstly, there is no information on indicators characterizing the ratio of loans to the credit potential of banks (the dissertation abstract does not contain such information); secondly, there is no justification for the problem of ensuring a balance between the credit potential and the structure of loans in commercial banks of the Republic of Uzbekistan.

According to Boymuratov, in order to strengthen the resource base of commercial banks engaged in agricultural lending, it is necessary to increase the volume of bonds issued by them by more than a year and exempt investors from income tax on these bonds.

In our opinion, A. Boymuratov considered the issue of eliminating the risk of transformation, which is one of the most pressing issues related to improving the quality of the loan portfolio of commercial banks. Insufficient long-term resources required for long-term loans in the country's commercial banks have led to a deepening risk of bank transformation.

According to A. Omonov, it is advisable to increase the stability of their capital base and the size of the long-term resource base by including subordinated debt in the secondary capital of commercial banks.

A. Omonov proposes to strengthen the resource base of commercial banks by strengthening their capital base. However, subordinated debt obligations alone are not enough to strengthen the capital base of commercial banks.

I. According to Alimardonov, in addition to the composition of financial ratios, it is necessary to improve the methodology for determining the creditworthiness of small enterprises, including the size of profit, the debt service ratio and the debt turnover ratio of creditors.

This proposal of I. Alimardonov has not lost its relevance for commercial banks of the republic. This is due to the fact that the country's commercial banks use three financial ratios (liquidity ratio, coverage ratio, autonomy ratio) to determine the creditworthiness of clients with legal entity status. These coefficients do not allow the client to assess the rate of return, debt servicing, lender debt turnover rate.

According to F. Holmamatov, the following criteria are offered to improve the quality of the loan portfolio of commercial banks in order to improve the methodology of creating reserves for covering possible losses on loans for a realistic assessment of loan quality and providing reserves: from 1% to 10% for low-quality loans; non-performing loans from 11% to 25%; from 26% to 50% on doubtful loans; up to 100 percent on bad loans.

Conclusion F. Kholmamatova shows that it is impractical to create reserves for standard loans. Because, according to the current procedure, commercial banks of the republic also have a reserve of 1% for standard loans. In addition, F. Kholmamatov proposed stratifying reserve rates in a certain range.

The proposal of F. Kholmamatov is important for the banking practice of Uzbekistan. This is due to the fact that, firstly, the probability of bad debts on standard loans is low, and secondly, when issuing loans in the country, special attention is paid to highly liquid collateral.

## CONCLUSION AND RECOMMENDATIONS

Economists expressed different opinions about improving the quality of the portfolios of assets of commercial banks, and the following conclusions were made: reducing credit risk by analyzing the cash flow of the borrower;

- ensuring that interest rates on loans from commercial banks remain low and stable;



- Since the quality of bank loan portfolios directly depends on external factors, the level of risks associated with the state investment and industrial policy and the financing of investment projects plays an important role in improving the quality of their loan portfolios;
- the main factor hindering the improvement of the practice of long-term lending to commercial banks is the lack of long-term resources in banks;
- To increase the creditworthiness of banks, it is necessary to ensure the adequacy of their deposit base and introduce limits on deposits aimed at lending operations;
- in the context of dynamic changes in the stock market, the formation of an optimal portfolio of securities is not always sufficient, therefore, a commercial bank needs to formulate an improved strategy for forming a portfolio of securities;
- according to the theory of the portfolio of securities, the investor should choose a portfolio in which the expected return cannot increase without increasing the risk or, conversely, the risk should not decrease without increasing the expected return;
- Ensuring that the level of diversification of the loan portfolio of commercial banks is based on the criteria of 25% is one of the necessary conditions for ensuring the quality of the loan portfolio;
- The elimination of transformational risk plays an important role in improving the quality of bank loan portfolios. Insufficient long-term resources required for long-term loans in commercial banks of the Republic of Uzbekistan have led to a deepening risk of bank transformation. In turn, the risk of transformation has a strong negative impact on bank liquidity.

As a result of studying the scientific and theoretical views of economists on improving the quality of asset portfolios of commercial banks, we developed the following scientific proposals:

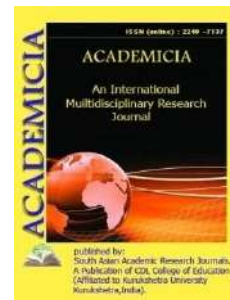
to reduce the level of credit risk by analyzing the cash flows of the borrower, to ensure that interest rates on loans from commercial banks are low and stable, the level of risks associated with state investment and industrial policy and financing of investment projects, since the quality of the loan portfolio of banks depends on external factors; Ensuring the level of diversification of bank loan portfolios plays an important role in improving the quality of their loan portfolios;

- the main factor hindering the improvement of the practice of long-term lending to commercial banks is the lack of long-term resources in banks;
- To increase the creditworthiness of banks, it is necessary to ensure the adequacy of their deposit base and introduce limits on deposits aimed at lending operations; the formation of an optimal portfolio of securities in the face of dynamic changes in the conditions of the stock market forces a commercial bank to develop an improved strategy for the formation of a portfolio of securities;

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## PROCESSING OF PHYSICOCHEMICAL COMPOSITION OF BROWN COAL

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### ABSTRACT

*Improving the quality of unsuitable coal from the Angren coal mine in Uzbekistan, improving its quality, supplying quality coal to the population and industries for use as solid fuel, and efficient use of coal, which is our mineral wealth. Development of enrichment technologies for the production of waste-free, efficient fuel from brown coal, which is a factor in the development of industry and living standards of the country and a source of natural energy.*

**KEYWORDS:** *Lignite, Fuel, Coal Ash, Minerals, Heat Of Combustion, Chemical Reagent.*

### INTRODUCTION

So far, coal is the most promising source for the production of recycled solid fuels, with the goal of avoiding large amounts of waste that is highly toxic when used as a fuel in recycling and also, it is the most important product for obtaining various chemicals and composite materials [1]. Processing coal into synthetic fuel for domestic use and introducing it into industry has been identified as a strategic direction in countries that do not have their own oil. In this regard, there is a need to develop new methods of obtaining alternative fuels through the processing of coal resources located in the country [2]. As a result, in a short period of time, coal became the most

important source of energy for the development of industry and transport to meet the energy needs of society.

2BPK, 2BR-B2, 2BOM, and 2BR brown coals were chemically treated with nitric acid, hydrochloric acid, fluoric acid, and sulfuric acid, and good results were obtained when treated with 0.1 M HCl acid. Studies were conducted on the basis of Angren coal, Shargun coal and Baysun coal. Table 1 shows the technological parameters of coal [9].

**TABLE 1 TECHNOLOGICAL PARAMETERS OF COAL.**

View of the normative document	Product naming	Brand (group)	Piece size, mm	Quality indicators	
				Working moisture, Wr, %	Ash content Ac, no more %
Angren field					
ГОСТ 8202-87	Brown coal	2BPK	50-200	30	16
ГОСТ 8202-87		2BR-B2	0-200	40	24
ГОСТ 8202-87		2BOM	0-50	40	22
ГОСТ 8202-87		2BR	0-200	32,5	22
Shargun field					
TSh 12-12:1998	Coal	1SSSSH	0-13	10	30
TSh 12-12:1998		1SSKOM	13-100	10	25
Baysun field					
TSh 12-12:1998	Coal	1TR	0-200	10	24,5

Potentiometric titration method is used to check the mineral content of  $\text{SiO}_2$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{MgO}$  in the ash content of brown coal grades 2BPK, 2BR-B2, 2BOM, and 2BR. [3]

Sodium and potassium oxides ( $\text{Na}_2\text{O}$ ,  $\text{K}_2\text{O}$ ) were determined using flame photometry. A PFP-7 photometer was used for this purpose. To do this, an aliquot is prepared from 0.1 g of crushed ash in accordance with the requirements of GOST, passed through a photometer (GOST 26148) and each oxide is tested separately.

Low and high combustion temperatures of coal were determined by colorimetric method. [4]

The experiment determined the amount of minerals in coal ash (35-60%). They not only incur excessive economic costs (increased costs and excess oxygen), but also reduce the heat of combustion of coal. [5] Excess oxygen is added to the non-combustible minerals, which leads to a decrease in the efficiency of the combustion reaction and less heat is released during combustion. [8]

In the experiment, high combustion heat of coal (organic, enriched part of coal burns during combustion) and low heat of combustion (coal burns when mineral mixtures are not purified) were tested [6] (Table 2).

**TABLE 2 COMBUSTION HEATS OF BROWN COAL GRADES**

Brand of coal	High combustion heat kcal/kg	Low combustion heat kcal/kg
2BPK	1620-2430	1670-2500
2BR-B2	1530-2350	1570-2480
2BOM	1680-2480	1690-2400
2BR	1590-2350	1600-2450

The table shows that the presence of mineral compounds in coal leads to low heat of combustion. This means that in order to increase the heat of combustion and improve the quality of coal, it is necessary to clean the coal from non-combustible mineral compounds. The coal ash level ( $A^\circ, \%$ ) was checked to determine the mineral content of the coal. This experiment was carried out using the accelerated method according to GOST11022-95, and the coal samples were determined as the amount of ash mass in the initial sample mass heated in the furnace to a temperature of  $850-875 \pm 25^\circ \text{C}$  [10] (Table 3).

**TABLE 3 THE ASH LEVEL OF BROWN COAL GRADES**

The brands of coal	The ash level, $A^\circ, \%$
2BPK	16
2BR-B2	24
2BOM	22
2BR	22

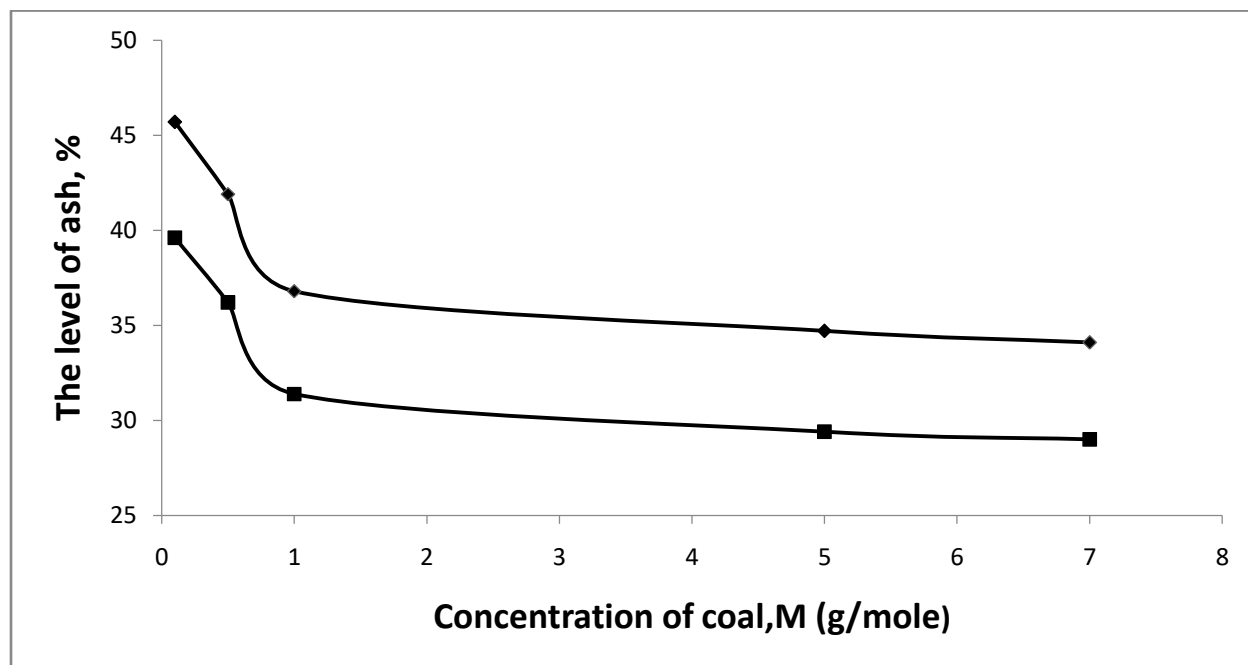
The composition of the coal ash was examined to determine the effective enrichment method.

**TABLE 4. THE MINERAL COMPOSITION OF BROWN COAL GRADES ASH WAS STUDIED.**

№	Chemical composition of coal ash %	The brands of coal			
		2BPK	2BR-B2	2BOM	2BR
1	$\text{SiO}_2$	57.0	66.4	61	60.2
2	$\text{Fe}_2\text{O}_3$	1.9	1.5	1.6	1.4
3	$\text{Al}_2\text{O}_3$	27.6	17.1	18.6	19.0
4	$\text{CaO}$	8.3	7.6	6.4	6.9
5	$\text{MgO}$	1.7	2.1	1.8	1.9
6	$\text{Na}_2\text{O}$	0.5	0.9	0.4	0.6
7	$\text{K}_2\text{O}$	1.1	0.7	0.9	1.4

Many components of a mineral mixture ( $\text{Fe}_2\text{O}_3$ ,  $\text{CaO}$ ,  $\text{MgO}$ ,  $\text{Na}_2\text{O}$ ,  $\text{K}_2\text{O}$ ) are highly soluble in acids. Therefore, the effect of different acids on the mineral compounds in coal was studied in the selection of a chemical reagent for processing coal. However, since these compounds are also soluble in water, in order to reduce acid consumption, the coal was first enriched with water and purified from water-soluble compounds. Hydrochloric acid 0.1n ( $\text{HCl}$ ) was selected for the acid treatment of coal. Because other acids, such as sulfuric acid ( $\text{H}_2\text{SO}_4$ ) and phosphoric acid ( $\text{H}_3\text{PO}_4$ ) with some ions in the coal, form water-insoluble sulfate, phosphate salts, causing an

increase in the amount of minerals, 0.1 M, 1 M was treated with HCl and the results are shown in Figure 1.



**Figure 1. Dependence of coal ash level on acid (HCl) concentration**

For 2BPK, 2BR-B2, 2BOM, and 2BR lignites, the use of 0.1 M HCl was significantly reduced. Therefore, the optimal concentration of hydrochloric acid treatment for the studied types of coal was set at 0.1 M (Table 5).

**TABLE 5. THE AMOUNT OF MINERALS AFTER ENRICHMENT OF BROWN COAL GRADES WITH HCL (%).**

The brands of coal	2BPK	2BR-B2	2BOM	2BR
The amount of minerals before enrichment, %	41,26	47,12	43,54	42,16
The amount of minerals after enrichment, %	28,75	33,87	32,52	31,35

When treating coal with water, it was found that due to the transfer of various water-soluble carbonates, sulfates, chloride salts, potassium, sodium and partly calcium and magnesium compounds into the water, we can remove 6-9 % of non-combustible minerals with the help of water.

When treated with hydrochloric acid (HCl), it was found that the amount of mineral compounds decreased by 12-13% due to the purification of acid-soluble compounds, mainly calcium and magnesium, partly from iron and aluminum compounds (Table 6).



**TABLE 6. AMOUNT OF MINERALS IN ASH AFTER TREATMENT OF 2BR -B2 GRADES OF BROWN COAL WITH WATER AND 0.1 M, 1 M HCL (%).**

The level of ash, %	The amount of minerals (%)						
	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>	CaO	MgO	Na <sub>2</sub> O	K <sub>2</sub> O
2BPK 0.1M HCl	58.1	2.1	27.6	8.4	1.8	0,6	1.2
2BPK 1M HCl	58.4	1.8	28.9	8.1	1.4	0.41	0.9

One of the indicators of the quality of coal is that it does not pollute the atmosphere with harmful gases when burning coal (these gases react with water vapor in the air to form acid rain [11]). When the composition of lignite grades was studied, the presence of such a toxic gas-producing element, sulfur (S), was determined and the percentage of coal was calculated (Table 7).

**TABLE 7. THE AMOUNT OF SULFUR (%) IN THE BRANDS OF BROWN COAL NAMED 2BR-B2 AND 2BOMSSH-B2.**

The brands of coal	Sulfur (%)
2BPK	0.9-2.8
2BR-B2	0.3-3.5
2BOM	0.4-3.4
2BR	0.2-2.4

It is known that, when heated these substances decompose and release into the atmosphere toxic sulfur dioxide (SO<sub>2</sub>). Therefore, it is important to clean the coal of sulfur (S) compounds. By chemical treatment of brown coal grades, FeS<sub>2</sub>, CaSO<sub>4</sub>, FeSO<sub>4</sub> in coal are also partially removed from S due to partial solubility in acid.

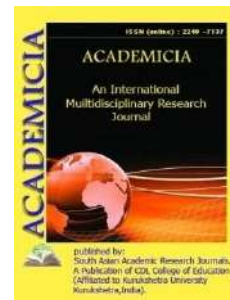
## CONCLUSION

Non-combustible mineral compounds in coal degrade the quality of coal and reduce the heat of combustion. Compounds containing sulfur (S) pollute the atmosphere by releasing toxic gases when coal burns. The coal studied in this study contained a large number of non-combustible minerals, which were found to be significantly reduced by chemical treatment with acids, and partially removed from sulfur-containing compounds. The mineral content of brown coal ash has been determined. The chemical method of purification from mineral impurities has achieved an effective result.

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## **AWARENESS OF FARMERS TOWARDS EFFECT OF PESTICIDES ON HUMAN HEALTH**

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### **ABSTRACT**

*Farmers spray pesticides indiscriminately, which are hazardous to their health. Pesticides being used in agricultural tracts are released into the environment and come into human contact directly or indirectly. The present investigation aimed to provide necessary information on level of awareness that the cotton farmers possess on effect of pesticides. The present study was conducted with specific objective namely to study the awareness of farmers towards effect of pesticides on human health. Nanded district was selected purposively for the study as it has larger area under cotton, from that district three tahsils namely Mudhked, Himayathnagar, Kinwat were selected purposively, four villages from each tahsils were selected and ten respondents from each village were selected for the study comprising of 120 respondents for the study. The study revealed that majority of the farmers had medium level of awareness (67.5%) followed by high level (20.00%) and low level (12.50%).*

**KEYWORDS:** *Indiscriminately, Purposively, Investigation*

### **INTRODUCTION:**

Agriculture remains the principal source of livelihood for majority of the population in India. The increased use of synthetic fertilizers and chemical pesticides in agriculture started in India since 1960s as part of the Green Revolution. Over the past five decades synthetic fertilizers' consumption has drastically increased several folds and India is now one of the leading

producers of agrochemicals in the world. Many of the chemical pesticides can have harmful effects on human beings either as acute or chronic toxicity. Acute exposure to pesticides can lead to death or serious illnesses.

India is the largest producer of pesticides in Asia and ranks 12<sup>th</sup> in the world for the use of pesticides with an annual production of 90,000 tons. Although Indian average consumption of pesticide is far lower than many other developed economies, the problem of pesticide residue is very high and has also affected the export of agricultural commodities in the last few years. Regarding the consumption of pesticide, cotton consumed 55 per cent of total pesticides in India while the total area under cotton was 11.90 million hectares. The estimated demand of pesticides in India during 2011-2012 is 55,590 tons ([www.indiastat.com](http://www.indiastat.com)).

Good management, use, and disposal of agrochemicals is an important health and environment issue in developing countries. Safe pesticide management is essential to the well being of all those involved with using pesticides. The total exposure of a person to pesticide is the sum of all exposures resulting during different working situations like mixing, applying, storing or disposing the chemicals. Exposure to pesticides and there by its health impacts can be minimized at community level by appropriate and judicious use of agrochemicals, Chemical use in farming and its health and environmental implications in a rural setting ,adopting recommended methods of mixing, applying, storing, disposing and practicing use of proper personal protective equipments (PPE).

The present investigation aimed to provide necessary information on level of awareness that the cotton farmers possess on effect of pesticides. The present study was conducted with specific objective namely to study the awareness of farmers towards effect of pesticides on human health. Nanded district was selected purposively for the study as it has larger area under cotton, from that district three tahsils namely Mudhked, Himayathnagar, Kinwat were selected purposively ,four villages from each tahsils were selected and ten respondents from each village were selected for the study comprising of 120 respondents for the study.

## **MATERIALS AND METHODS:**

The present study was conducted in Nanded district of the Marathwada Region of Maharashtra state. The geographical area of the district is 1033.1 hact Nanded district is the south eastern part of the Marathwada region of Maharashtra state. Annual rainfall is 993.1mm, maximum and minimum temperature is 43.3°c and 11.9°c, respectively. The soils of Nanded district are mostly belongs to order Vertisols ,inceptisols and Entisols. The soils varied with colour due to presence of different type of minerals. The soils of this district are medium black soils and light soils. It has slight slope towards South. Major *kharif* crops of the district are Cotton,Sorghum,Blackgram Soybean, whereas, major crops grown in *rabi* are Safflower wheat and *rabi* Jowar. The major cash crops grown are Sugarcane, Turmeric, Sweet orange Grape, Mango in some part of district.

Ex-post-facto research approach was used for the present research study. Cotton crop is selected as the reference crop for the selection of the respondents, as majority of the pesticide usage has been done by the cotton growers. The data were collected through personal interview method with the help of pre - tested structured schedule consisting of various items concern with the objective of study. The farmer was contacted personally at their home during their leisure time.

The content of the test is composed of items asked in the form of questions. The important factor considered in collecting the items for awareness test was to determine and classify the object to be measured by taking care of the respondent's abilities. Fifty items were collected from different sources like printed literature including farmers training manual in english, hindi language, in consultation with staff members of departments of entomology and extension education of college of agriculture, Latur.

Each item in the awareness test was read out to the respondents in translated version (Hindi) by the investigator and the responses in the form of correct or incorrect answers were recorded. The correct answer was assigned a weightage of 'one' and the incorrect with 'zero'. Based on the awareness scores obtained the farmers were grouped into 3 categories by using mean and standard deviation.

**TABLE NO -1 :SCORING PATTERN FOR THE RESPONDENTS IN MEASURING AWARENESS**

S.No	Category	Score range
1.	Low awareness	Below 12
2.	Medium awareness	Between 12-20
3.	High awareness	Above 20

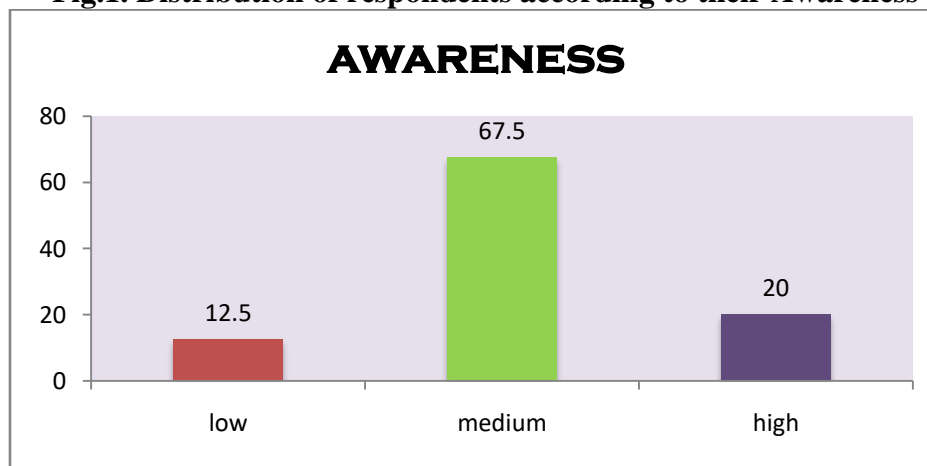
#### Results:

In order to assess the overall awareness level of the respondents, necessary data were collected and they were categorized into three groups viz. low, medium and high based on mean and standard deviation, as presented in Table-1,

**TABLE .2. DISTRIBUTION OF RESPONDENTS ACCORDING TO THEIR AWARENESS (N=120)**

S.No.	Awareness	Frequency	Percentage
1.	Low	15	12.50
2.	Medium	81	67.50
3.	High	24	20.00
	Total	120	100

**Fig.1. Distribution of respondents according to their Awareness**



By examining Table.2. it can be revealed that majority (67.50%) of the respondents had medium level of awareness about effect of pesticide on human health followed by low (20.00%) and high (12.50%) awareness levels. The possible reason for this trend might be due to the fact that majority of the respondents were small growers with high school education, mass media exposure, innovativeness, social participation and scientific orientation. Hence, the above results were obtained. The agricultural department personnel and extension agencies must concentrate on growers by providing sufficient trainings regarding pesticide application, demonstrations and conducting meetings with growers to become aware of the health hazards that can cause due to indiscriminate use of pesticides. This result is in accordance with the results of Kalaskar *et al.*, (2001) and Swathi Lekshmi *et al.*, (2010). Awareness needs to be created on use of personal protective measures among growers, while handling pesticides. Growers need to be encouraged to reduce, if not eliminate the use of pesticides, with the introduction of incentives to the growers to help them shift from synthetic pesticides to bio pesticides and organic farming.

### CONCLUSION:

The findings of the study indicated that only (67.50%) of the farmers had medium level of awareness on effect of pesticide on human health. Hence, it is imperative that the State Department of Agriculture and agricultural scientists should make integrated and concerted extension efforts to create the awareness about effect of pesticides on human health. The practice of storing, mixing and applying agrochemicals without personal protection and unsafe disposal of pesticide containers appears to be widely prevalent in the study villages. A comprehensive program for creating awareness for safe management, handling and disposal of pesticides among both users and shop keepers is required to address this important health and environmental problem.

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## **MODIFICATION OF FEIGE-FIAT-SHAMIR BASED ON PUBLIC KEY CRYPTOGRAPHY**

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### **ABSTRACT**

*In networks and entity groupings that have sensitive resources, user identification is a crucial requirement for secure access, communication and transactions involving those resources. However, there are networks and entity groupings that require entity authentication while preserving the privacy of the entity being authenticated. There are several zero-knowledge protocols (ZKP) including the Feige-Fiat-Shamir that authenticate an entity anonymously. We present a revised Feige-Fiat-Shamir ZKP scheme for the Airborne Networks (ANs) that reduces the ping-pong effect in the scheme and speeds up the growth of the Verifier trust of the Prover, thus making the authentication process faster and more efficient.*

**KEYWORDS:** *Mission Critical, Time, Authenticity, Anonymity, Zero Knowledge, Authentication.*

## INTRODUCTION

**The urgency of the subject and founded:** In modern conditions, in networks and entity groupings that have sensitive resources, user identification is a crucial requirement for secure access, communication and transactions involving those resources and this will lead to a number of urgency issues. To solve these issues, the development of authentication protocols in open-key cryptography is discussed in this master's dissertation.

**Subject and object of research:** Feige-Fiat-Shamir ZK protocol was taken as a research object.

Master dissertation is dedicated to authenticity and which will summarize the Feige-Fiat-Shamir ZK protocol to improve the efficiency of the inspection process.

**Purpose of the research:** We propose a new approach to the Feige-Fiat-Shamir ZKP scheme that aims to reduce the number of challenge-response ping-pong exchanges and thus create a speed-up in the building of trust and increasing the effectiveness of the scheme.

## MATERIALS AND METHODS.

The Feige-Fiat-Shamir Identification Scheme is a classical, practical and widely used modular arithmetic ZKP scheme developed by Uriel Feige, Amos Fiat and Adi Shamir in 1988. Following the principle of all zero-knowledge proofs, the Feige-Fiat-Shamir Identification Scheme involves two entities, the Prover, and the Verifier. The Prover possesses a secret token and is seeking authentication and must prove to another entity, the Verifier, who must authenticate the Prover based upon the secret token the Prover has, through a series of challenges without getting to know the Prover's secret token.

### Procedure

The Feige-Fiat-Shamir process involves the Prover choosing two large Blum prime integers  $p$  and  $q$  where each is of the type  $4g+3$  and  $\gcd(g, 3) = 1$ . Also the Prover chooses two security integers  $k$  and  $t$ . Then computing the product  $n = pq$ . The protocol then uses this  $n$  in the modular arithmetic that follows.

### The congruence relation

Two integers  $a$  and  $b$  are said to be congruent mod  $n$ , if their difference  $a - b$  is an integer multiple of  $n$ . That is both numbers have the same remainder when divided by  $n$ . This is then expressed as:

$$a \equiv b \pmod{n}.$$

A good example are integers  $a = 38$  and  $b = 14$ . Then  $38 \equiv 14 \pmod{12}$  shows that  $(a, b)$  form a congruence class.

Using this  $n$ , choose or create secret vector  $s = \{S_1, S_2, \dots, S_k\}$  with  $\gcd(S_i, n) = 1$ , and  $c = \{c_{i=1,k} | c_i \in (0,1)\}$ .  $n$  is then made public. Now compute the vector  $v = \{v_1, v_2, \dots, v_k | v_i = S_i^2 \pmod{n}\}$  where  $\equiv$  is a congruency relation between  $v_i$  and  $S_i^2$ , meaning that  $v_i$  and  $S_i^2$  have the same remainder upon division by  $n$ .

The vector  $v$  then is sent to the Verifier. The difficulty the Verifier may encounter in recovering the vector  $s$  as it involves the computation of the modular square root without knowing the modulus' factorization. The Feige-Fiat-Shamir procedure goes as follows.

1. Prover chooses a random integer  $r$ , a random sign  $b \in \{-1, 1\}$  and computes  $x = (-1)^{c_i, i=1, k} * r^2 \pmod{n}$ . Prover sends this number to Verifier.
2. Verifier chooses numbers  $a_1, a_2, \dots, a_k$  where  $a_i$  equals 0 or 1. Verifier sends these numbers to Prover.
3. Prover computes  $y \equiv r S_1^{a_1} S_2^{a_2} \dots S_k^{a_k} \pmod{n}$ . Prover sends this number to Verifier.
4. Verifier checks that  $y^2 \equiv \pm x v_1^{a_1} v_2^{a_2} \dots v_k^{a_k} \pmod{n}$

This procedure is repeated with different  $r$  and  $a_i$  values until Verifier is satisfied that Prover does indeed possess the modular square roots ( $S_i$ ) of his  $v_i$  numbers.

## RESULTS AND DISCUSSION.

While the Feige-Fiat-Shamir Identification Scheme is the most celebrated, classical, practical and widely used modular arithmetic ZKP scheme, it suffers from the ping-pong problem. The Ping Pong problem in the ZKP solutions is caused by repeated, sometimes uncontrolled, challenge-response exchanges between the Verifier and the Prover, as the Verifier tries to get as much information as possible from the Prover in order to complete the authentication process in the shortest time possible but in the most sure way and as the Prover tries to provide the needed information for the authentication process without revealing the Prover's identity. The ping-pong problem is a resource guzzler. Given that the AN environment is time critical, the authentication process needs to be comprehensive, precise and take a short time. But in the Feige-Fiat-Shamir this cannot be accomplished because, there is no sure way of making the process short. In some cases, the authentication process may be short but not always. We propose a procedure that speeds up this process and it builds the trust quickly. The scheme still involves two entities, the Prover, who possesses a secret token and is seeking authentication and must prove to another entity, the Verifier, who must authenticate the Prover based upon the secret token the Prover has, through a limited series of challenges without getting to know the Prover's secret token.

### Procedure

The revised Feige-Fiat-Shamir protocol still involves the Prover choosing two large Blum prime integers  $p$  and  $q$  where each is of the type  $4g+3$  and  $\gcd(g, 3)=1$ . Also the Prover chooses two security integers  $k$  and  $t$ . The Prover then computes  $n = pq$ . Using this  $n$ , the Prover then chooses or creates a secret vector  $s = \{S_1, S_2, \dots, S_k\}$  with  $\gcd(S_i, n) = 1$ .  $n$  is then made public. Further the Prover still computes the vector  $v = \{v_1, v_2, \dots, v_k \vee v_i \equiv S_i^2 \pmod{n}\}$ . The vector  $v$  is then sent to the Verifier. Like in the original Feige-Fiat-Shamir protocol, the Holy Grail of the protocol is the difficulty the Verifier encounters in recovering the vector  $s$  as this involves the computation of the modular square root without knowing the modulus' factorization. The revised Feige-Fiat-Shamir protocol then goes as follows.

1. Prover chooses a random integer  $r$ , a random sign  $b$  in set  $\{-1, 1\}$  and computes  $x = b * r^2 \pmod{n}$ . Prover sends this number to Verifier.
2. Each time the Verifier chooses a challenge, there are  $C_{i=1, k}$  possible ways to choose the vector  $a = \{a_1, a_2, \dots, a_k\}$  where  $a_i$  equals 0 or 1. These choices are represented by the 0-1 matrix  $M = \{a_{ij} = (0, 1) | (i, j) = 1, k\}$ . From these rows of  $M$ , the Verifier randomly selects

a number of rows forming a sub-matrix  $D = \{a_{ij} = (0,1) | i = 1, k, j = 1, f.\}$  of  $M$  to concurrently send to the Prover as the challenge.

3. Instead of the Prover computing only one number  $y$ , the Prover uses the received matrix  $D$  to compute a vector  $y = \{y_1, y_2, \dots, y_f | y_i = r * S_i^{a_{ij}} \pmod{n}, i = 1, k \wedge j = 1, f.\}$ . The Prover then sends this vector  $y$  to the Verifier.

4. Verifier checks that each of the vector components of  $y$  satisfies  $y_j^2 = \pm x * v_i^{a_{ij}} \pmod{n}, i = 1, k \wedge j = 1, f.$

This procedure may be repeated with different  $r$  and different sub-matrices  $D = \{a_{ij} | i = 1, k \wedge j = 1, f.\}$  of  $M$  until the Verifier is satisfied that the Prover does indeed possess the modular square roots ( $S_i$ ) of his  $v_i$  numbers.

An Example:

1. Suppose either the Prover or a trusted center  $T$  selects the primes  $p = 139$ ,  $q = 347$ , and publishes  $n = pq = 48233$ .

2. The Prover chooses Integers  $k = 3$  and  $t = 1$  as the needed security parameters. Then the Prover does the following:

- Selects 3 random integers  $S_1 = 87, S_2 = 21649, S_3 = 523$  and 3 bits  $b_1 = 1, b_2 = 0, b_3 = 1$ .
- Computes  $v_1 = 7569, v_2 = 10310 \wedge v_3 = 32364$ .
- The Prover's public key then is  $(7569, 10310, 32364, 48233)$  and the Prover's private key is  $(87, 21649, 523)$ .

3. The Prover chooses integers  $r = 3209$ ,  $b = 1$ , and computes  $x = 24052$ , and sends this to Verifier.

4. Since  $k$  was chosen as 3, the Verifier has the following possible matrix

$M = \{000, 001, 010, 011, 100, 101, 110, 111\}$  of choices of challenges.

5. Suppose the Verifier chooses a sub-matrix  $D = \{010, 011, 111\}$  and sends it to the Prover.

6. The Prover must compute a vector  $y = \{y_1, y_2, y_3\} = \{16121, 5788, 36823\}$ .

7. The Verifier computes  $(y_1^2, y_2^2, y_3^2) = (259886641, 33500944, 1355933329)$ . Also computes.

8. To accept the Prover's identity the following pairs of numbers must be in the same congruency classes mod 48233:

- a.  $(259886641 \text{ and } 24052 * 10310)$
- b.  $(3350094 \text{ and } 24052 * 10310 * 32364)$
- c.  $(1355933329 \text{ and } 24052 * 7569 * 10310 * 32364)$

## CONCLUSIONS

In this paper, we have produced a revised Fiege-Fiat-Shamir protocol scheme in which the Verifier instead of choosing one 0-1 vector as a challenge to the Prove now chooses a sub-matrix whose rows are individual challenge vectors. Increasing the number of challenge vectors sent to the Prover at once speeds up the growth of the Verifier's trust of the Prover making the whole authentication process a lot faster and more efficient. We have also developed test programs to run the algorithm in a multithread environment. Further we have developed the necessary protocols to run the algorithm in a client-server model which gives it a real distributed environment. As we did this we took times tamps of each run and computed time grow th computation with the increasing size of the primes used. Looking at the times graph raises more and interesting questions that require extending this study. Such improvements may include finding more efficient and economical ways to move matrix D from the Verifier to the Prover. In our next attempt, we will focus on ways to move this matrix more economically. We want to investigate ways to either decompose the matrix or find some other loss less compression that will cut down on the amount of data passed.

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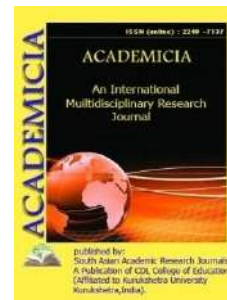
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IVAN DAMGOARD. Efficient Concurrent Zero-Knowledge in the Auxiliary String Model



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## EFFECTIVENESS OF OPPORTUNITIES IN THE USE OF ELECTRONIC RESOURCES IN EDUCATION

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### ABSTRACT

*This article demonstrates the effectiveness of opportunities in the use of electronic resources in education. The availability of educational material in electronic form, that is, viewing, studying, editing and recording textual, graphic, audio, animated materials on a computer screen, allows for more in-depth study. The application of information technology in the lecture, practice, laboratory and independent forms of teaching is rapidly yielding results.*

**KEYWORDS:** Education, Resource, Computer, Software, Interactive, Projector, Whiteboard, Multimedia, Technology.

### INTRODUCTION

The President of the Republic of Uzbekistan Sh.M.Mirziyoev said, "The solution of another problem is very important: it is the professional level of teachers and professors, their special knowledge. In this regard, it is necessary to create an environment that actively promotes the process of education, spiritual enlightenment and the formation of true values. " - His views are important [1].

In the Republic of Uzbekistan, great attention is paid to reforming the education and training system, as well as raising it to the level of developed countries as a priority of public policy. It is well known that today the system of continuing education and training has become a decisive and important factor in the innovative development of any country in line with modern requirements.

Today's scientific and technological progress requires the introduction of innovative technologies not only in many areas of production, but also in the field of cultural, social and humanitarian



knowledge, education. It is known that the "National Program of Personnel Training" emphasizes "..... provision of the educational process with advanced pedagogical technologies" [2], which is carried out in stages of improving the quality of continuing education. was identified as one of the serious tasks. In this sense, the development of the independent Republic of Uzbekistan is a perfect educational system based on the rich spiritual potential of the people and universal values, as well as the latest achievements of modern culture, economy, science, technology and innovative technologies. The need to create and put into practice the theoretical and methodological basis of pedagogy and innovative pedagogical technologies is to reform the national education system, bring its potential to the world stage, create an education market and train competitive professionals.

## LITERATURE REVIEW

At present, the rise of scientific thinking, as well as scientific techniques, is taking place dramatically and intensively. Therefore, it is essential for teachers to keep up with modern knowledge.

Problems of computerization of education in the Republic and introduction of information technologies in educational process M.M.Aripov, U.S.Begimkulov, N.I.Taylakov, U.Yuldashev and methods of organization of use of computers in professional training N.A.Muslimov, A.D.Askarov.

On theoretical bases of designing the educational process and the development of interpersonal e-learning resources. I.A. Bashmakov, F.M.Zakirova have done research work, the importance of using multimedia technologies and tools in the learning process and their use bases. , Studied by M. Bekmuradov, B. Rajabov.

The use of a computer during the classroom provides new and unique opportunities for teachers and students to interact with interactive teaching materials. We need to be aware of modern programming languages for interactive tutorials created by the teacher, so that they can be readily accepted by students. The utilization of other computer training tools, such as projectors, electronic boards, increase the amount of information using visual applications, thus facilitating the efficient use of classroom time [3,4].

Nowadays, creating modern electronic applications as well as electronic study programs by using the possibilities of modern programming languages - Delphi, Matlab, Matchad, Math, Maple, C - make the learning process qualitative. As a result, the effectiveness of the teaching will increase and students' interest and attitudes will change positively[4].

## RESEARCH METHODOLOGY

Improving the quality of teaching depends on the use of new teaching methods. In the new teaching methods, a student should be constantly moving forward, to be more specific, a student should be able to acquire, process, and apply the knowledge gained to solve specific problems. The use of information technology in lectures, practice, labs, and independent forms of learning gives its fruitful outcomes quickly. For example, the use of virtual stands in the laboratory classroom is the basis for the good quality of the training.

The incredible development of computers and software products opens up great opportunities for the use of information technology in education. Training materials can be made in the form of

multimedia systems and can be made available to the public through computer networks and transmission facilities. The widespread introduction of computer technology into the education system requires revision of all types of training materials. Multimedia e-learning materials should be developed for each form of teaching [5].

Usually, information and communication technologies are rarely used in practical and laboratory studies. However, research in the field of teaching technologies shows that it is in these forms of learning that the resources for improving the quality of teaching are hidden. The fact is that, in traditional teaching methods, it is not always easy to engage the group and control their study performance. The availability of electronic learning of textbooks facilitates a deep learning, by editing and recording text, graphics, sound, and animated teaching material on your computer screen.

The electronic form of the training material is connected to an existing local network, which enables performing tasks in groups and information sharing. Computer-based computer and software tools allow students to take a personalized approach to the topic studied, to form their own ideas and to increase their activity [6].

The teacher is able to monitor and record each student's progress through the server computer and how the tasks are fulfilled.

Sharing single information hyperlinks (platform) provides a creative, collaborative learning experience for students and teachers.

In order to organize such training, the teacher needs to have the knowledge and skills in e-resource development programs and the availability of technical tools to provide the user interface in the classroom.

Modern teaching technology is an integrated (whole, dependency) system in which students acquire theoretical knowledge, skills, and experiences that are based on educational objectives as a well-organized set of elements of pedagogical activity focused on education. [7]

As a result of the full use of e-learning resources in the learning process, the following will be achieved:

- 1) They accept, understand, accumulate, but they do not recover consciously;
- 2) Analyzes, compares, summarizes, and implements practical actions in direct collaboration with the teacher;
- 3) Independently search for solutions to problems, independently determine ways and means of achieving expected results.

The higher the quality of e-learning resources made by modern programming tools, the more effective the learning process is [8,9]. Knowledge of interactive teaching methods is a special form of communicative activity in which learners are involved in the learning process and have the opportunity to explain what they know and think.

Pedagogical collaboration between students and teachers at classes using e-learning resources will encourage the student to remain indifferent, to think independently, to be creative, and to maintain a constant interest at the subject being taught[10].

## ANALYSIS AND RESULTS

Information and communication technologies, which are being developed in the educational system, serve to raise the educational process to a higher level. Of course, it is important to use modern techniques to make the learning process more meaningful. Besides, the use of modern means of computer, multimedia, internet, distance learning, a unique information environment and information and communication technologies is giving its results.

The success of the pedagogical experiment in the pedagogical experiment testifies to the need to consider organizational and pedagogical aspects in this process. Therefore, particular attention was paid to these aspects. The organization of the experimental work was organized with the knowledge of the views and opinions of the professors and teachers of the Navoi State Pedagogical Institute. The experimental work was carried out among students studying in "Informational Teaching Methods" of Navoi State Pedagogical Institute. A total of 168 students were selected for the experimental and control groups.

During the experiment, discussions and observations were conducted with professors and teachers of computer science on the main features of the information and educational environment. The results of the interviews and observations were attended by 28 professors and 168 students of computer science.

According to a survey of professors, 56.4% of teachers need to use e-learning resources in the classroom, 28.6% need to independently use 14.8% of difficult topics. can be used for assimilation, 0,2% believe that it does not help to master knowledge.

According to the survey results, 45% of teachers need to use e-learning resources in the classroom, 40.3% can be used independently, and 14.4% can be used to master difficult subjects. 0.3% thought it would not help them in acquiring knowledge.

Summary of the pilot phase The results of the number of data collected in 2019 were analyzed and summarized, and a mathematical-statistical analysis was performed using the Student-Fisher criterion to verify its reliability. The results of the calculations showed that the average improvement of the experimental group was higher than that of the control group, which is 11.2%.

## CONCLUSION

E-learning materials are guaranteed ahigh quality and effectiveness in all forms of learning.

The demand for e-learning resources for today's youth is even more complex. Education resources should be comprehensive, up-to-date, youth-friendly and innovative. Therefore, it would be desirable to use new programming languages.

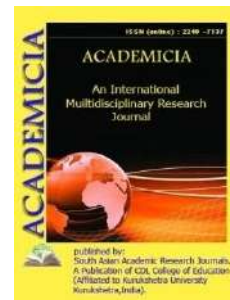
Expected benefits of new pedagogical technology in the education system, its benefits, and the principles of improving the effectiveness of the lesson. By organizingonline learning resources createdby usingmodern programming languages, students will be able to enrich their knowledge, improve their remembering the materials, make lessons interesting, and improve their thinkingabilities, broadens the outlook, encourages students to work on themselves, teaches them to express and defend their own ideas.

E-learning resources for science are widely used in student learning, student evaluation, and learning management.

The analysis shows that the research is mainly focused on improving the use of information technology in educational institutions, the development of students' innovative potential, and the development of a didactic provision of the learning process aimed at developing independent creative activity. and little attention has been paid to its implementation. This calls for a comprehensive study of the issue of developing students' ability to use modern technology in developing independent thinking.

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## LEXICAL-SEMANTIC AND COGNITIVE SPECIFICS OF POLITICAL DISCOURSE (BASED ON SI JINPING'S SPEECHES)

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### ABSTRACT

*The article is devoted to the lexical-semantic and cognitive analysis of the specifics of the translation of some proverbs and sayings, as well as metaphorical sayings in the discourse on the basis of Si Jinping's speeches about the "Chinese dream". The topic also included the analysis of factors affecting changes in the vocabulary of the lexical component, a linguistic analysis of the semantically-comparative phenomena of the social and political terminology of the Chinese language using descriptive description methods, features of the political discourse in Chinese, used as an object of translation, containing a rich vocabulary with background information. Particular attention is paid to the phenomenon of suggestion in political discourse. The research materials show the richness of the lexical layer of the Chinese language, the wide possibilities of transmitting thoughts using various social and political terms, transforming not only the tone, but also the cognitive paradigm of the text. These lexical and semantic features of Chinese sociopolitical terminology should be taken into account when translating articles, materials of negotiations, speeches, reports and speeches.*

**KEYWORDS:** *Chinese Initiative, Suggestion, Suggestor, Suggestor, Worldview, Strategy, International Cooperation, Globalization, Challenges And Threats, Expansion, Politics, "Soft" Socio-Political Terms, Trade, Infrastructure, Cooperation.*

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## INTRODUCTION

The political situation and its change play a significant role in the development of the language. Political discourse is a phenomenon of modern everyday life. The more open and democratic the life of society, the more attention is paid to the language of politics, moreover, political discourse is of interest to both professionals involved in politics, journalists and political scientists, and the widest masses of citizens. The ability to understand the language of politics and conduct discussion on socio-political topics is also included in the circle of significant competencies of students.

Students studying a foreign language are increasingly confronted with the problems of translating lexical units of political discourse as part of a professionally oriented translation course and within individual disciplines. In this regard, there is a need to pay special attention to such fields of knowledge as political discourse, the linguistic and cultural component of socio-political discourse and the features of the translation of articles on socio-political topics.

Political discourse is an integral part of social relations, since it is formed by them and at the same time forms them themselves, being a complex unity of the linguistic form, knowledge and action. Thus, not only linguistic means, but also extra-linguistic factors that determine communication, as well as cognitive structures that determine the existence of the discourse, participate in the implementation of political discourse.

## METHODOLOGY

The main research method is a cognitive, comparative method, since modern political linguistics is discursive, where each speech, written or oral, is considered in the context of the political situation in which it is created, in relation to other political texts, political views and functions which it performs.

## RESULTS

An analysis of the translation of the speeches of the political leadership of the PRC in the era of reform and openness demonstrates the growing trend of interaction between national and international target audiences. Depending on the political origin, historical impacts in the domestic and foreign policy of the PRC, the Chinese sociopolitical terminology in the political discourse includes definitions relating to nationally significant events of social and political life, as well as other aspects related to the economy and culture. In this regard, translators should pay attention to the fact that when translating general cultural words, it is more accurate to take into account the cultural traditions of China and historical background.

The empirical material of the study in the framework of this scientific article was Si Jinping's talk about public administration and materials from the collection of "Stories from Si Jinping".

## DISCUSSION

The characteristics of the discourse are the activity, the processuality associated with the real speech production (discourse-as-process), and the text, which is the product of the speech production, is a certain complete and fixed form (text-as-product)[2]. Text and discourse are linked by implementation relationships: discourse finds expression in the text [ 7].



Yu.S. Stepanov substantiates an ideological approach to discourse, believing that discourse is special texts, behind which there is a special world, i.e. special grammar, special vocabulary, special rules of usage and syntax, special semantics[ 11, 44-45]. G.N.Manaenko discourse acts in the form of a construct that includes four components:

1. Environment (type of social event, its purpose, socio-ideological conditions, situation);
2. Social subject (social status, role relations, social activity of participants, their personal relationships);
3. Content (intentions and goals, worldview positions, general knowledge fund, knowledge of the rules and norms of communication);
4. Text (the topic of verbal communication, relevance to a particular speech genre, compositional arrangement of statements, specificity of selected language means for speech interaction[ 8,37].

Political discourse is a phenomenon that is of particular importance in society. At the same time, political discourse is a complex object of research that cannot be unambiguously defined, as it falls into the field of view of various disciplines - political science, social psychology, linguistics - related to the analysis of the form, objectives and content of the discourse used in certain ("political") situations[5, 118].

V.N.Bazylev considers political discourse as a variant of phatic speech (its genre variety), taking into account the fact that the private goals of political discourse (in addition to the actual information content) are subordinate to the initial contact impulse, and the informative task of expression becomes secondary[ 4].

In order for the "addressee" to correctly interpret the intention of the addressee (author of the text), an appeal to collective knowledge and ideas is necessary. If we are talking about a text related to the political sphere, then probably there should be an appeal to the cognitive base, as politicians and political observers refer (in any case, ideally should strive for this) to the entire population of the country, and not to some part of it.

If we look at the speeches of the Secretary General of the CPC Central Committee, Si Jinping, then we can trace the tendency to appeal to collective knowledge in the form of proverbs and sayings, as well as stories from the history of the Chinese people. The main concept that runs through all the speeches of Si Jinping is the realization of the Chinese dream 中国梦. Si Jinping skillfully uses the form of a story about reliable events, interesting episodes, historical facts, public figures, and ordinary people.

In his speeches, history speaks with modernity and expresses itself through modernity, space narrows and distances are reduced, the small expresses itself in the big and shows significance for the greater[12, 10].

As the leader of the country, Si Jinping often refers specifically to a certain part of the population, for example, youth, as the main addressee, and in this case he skillfully operates on a cognitive base through proverbs and sayings, phraseological units, metaphors, which are dotted with the linguoculturological layer of the Chinese language.

So, for example, in his speech on May 4, 2013, namely when meeting with the best youth representatives of various circles of Chinese society, he used 9 phraseological units (ideomatic expressions, proverbs and sayings), despite the fact that the text of the speech was only 6 pages.

Speaking about the revival of the Chinese nation, he resorts to the ancient proverb 行百里者半九十, i.e. "Ninety out of a hundred - count for half the way." The original of this proverb is taken from the collected works Zhangotse-5th part of the kingdom of Qin, which reads: 行百里者, 半与九十 "90 is only half a journey of 100 kilometers."

This collection of works, Zhan guo ce (Politics of the Warring States), is a collection of diplomatic and military strategies of political figures and their speeches during the historical period of military clashes and conflicts between the ancient Chinese kingdoms. The use of proverbs from such an ancient source suggests that Si Jinping is an expert on the history of his people and a skilled storyteller.

Through the mouths of Si Jinping, historical stories carry a huge patriotic charge and possess powerful humanistic potential. The main task set for China in the near future is to create a peaceful and stable international environment for the realization of the "Chinese dream", and the head of the PRC sees youth as the main driving lever in the implementation of the above task. 长江后浪推前浪。一代更比一代强。 "One wave of the Yangtze rushes to the other", just like youth - the duty of youth is to catch up and overtake the older generation. [16, 49].

Si Jinping skillfully operates with metaphorical sayings in his conversation with youth. For example, he compares the youth of the PRC with the new waves of the Yangtze River - the symbol of the Chinese nation or with the wings of the dream 青春梦想 (Chinese dream). With this comparison, he sets a powerful patriotic charge of the youth of China [16, 50].

Through phraseological units, he, as the leader of the country, poses specific tasks for young people, namely:

1) 功崇惟志, 业广惟勤。 "For great feat great aspirations are needed, and for great work hard work is necessary." By this, he emphasizes his idea that young people should have firm ideals and beliefs. Ideals lead a person through life, beliefs determine the outcome of a case. Their absence leads to 缺钙 spiritual void [16, 50].

2) 学如弓弩, 才能箭镞。 "Knowledge is like a bow, and talents are like arrows." This proverb is used as a call for young people to study, study and study again. The basis of study is like a bow, and talent is like the head of an arrow, talent can play a role only in the direction of deep knowledge [16, 51]. With this phrase, he formed a new concept of the Chinese dream, namely, that the dream begins with study, and the completion of the business depends on talent. Studying hard should become the driving force for long-distance swimming of young people, and increasing talent should be the energy of their selfless struggle.

Of course, we should pay attention to the elements of suggestion (suggestion) in these lines of Si aimed at youth. Here Si is already acting as a skillful manipulator of the minds of the "Chinese dream." In this case, the suggestion phenomenon is formed verbally, and it is in the form of discourse that it represents the process of verbal influence on the psychological sphere of the listener, as a result of which the person is controlled, subordinated to his will, influenced his way of thinking, attitudes, intentions, behavior and imposing the finished opinions to the addressee [9;15;1].

During a speech interaction, the suggest or (addressee, in this case Si Jinping) regulates the activities of the suggest or (communication partner, in this case, the youth of China) through speech, making the necessary correction of values, pushing him to perform certain actions (realizing the Chinese dream) influencing decision making or changing his picture of the world[10, 21].

As suggest or Si denotes the specific responsibilities of the youth of the PRC, namely ... *she (the youth) must ... continuously strengthen her confidence in our path, theory and system, strengthen her faith in the party's leadership, always follow the party and bear high the great banner of socialism with Chinese specifics.* [16, 50].

In this message of Si, one of the most effective suggestion tactics is hidden - metaphorization is the great banner of socialism with Chinese characteristics. It is expressively saturated and capable of creating effective images that are easily absorbed by the recipient. According to A.A. Fedoseyev, metaphorization is the most important means of expressing an assessment of the socio-political situation[13, 12]. A.A. Anisimova considers the political metaphor one of the main tools that are effectively used by the subjects[1, 42-44].

1) 苟日新，日日新，又日新。 "If you can update once, update every day, and so day after day." This idiom was used by Si Jinping as a call of youth for innovation. Young people should be bold in innovation and creativity[16, 61].

"Do not spare your youth in the name of building a country capable of self-renewal, in the name of increasing the vital energy of the nation" or "meeting the mountain, paving the way, and, meeting the river, build a bridge." As a skilled strategist, Si Jinping implements a pragmatic strategy of translating the Chinese dream into reality through pragmatic tactics, namely, predicts the possible behavior of young people and strategically directs it into the political channel of creating a new society.

"All types of strategies are united in that they present a kind of hypothesis regarding the future situation and have a greater or lesser degree of probability"[6,55].

2) 宝剑锋从磨砺出，梅花香自苦寒来。 "The sword will not be sharp unless sharpened, and the plum will not be more fragrant if it has not survived the frost." With this phraseological unit, Si gives a new attitude to the youth of China, namely, young people must, with inexorable will, wage a stubborn and selfless struggle. Young people must remember well that "hard work leads to prosperity, and ranting harms the country" [16,52].

3) 从善如登,从恶如崩. «Anyone who takes a good, will rise to the podium, and those who engaged in evil, there is a crash" (from the treatise "Guo Yu" "Speech kingdoms")[16,52]. This historical dictum was appropriately used by Si in order to launch the campaign "My Chinese Dream", aimed at educating adolescents and youth, at developing the tradition "Komsomol is always ready at the call of the party." With this dictum, he, as it were, mobilizes the masses of youth to support reforms.

## CONCLUSION

In the context of globalization, the manipulative moves of politicians are recognized as the main way to struggle for power. There is a large arsenal of means of influencing a mass audience that both politicians and journalists resort to create the image they need, and one of the shortest paths

to the subconscious is linguistic suggestion. The study of specific tactics of metaphorical influence in the texts of Si Jinping's political discourse requires a separate study

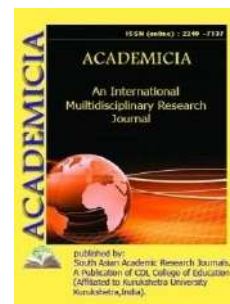
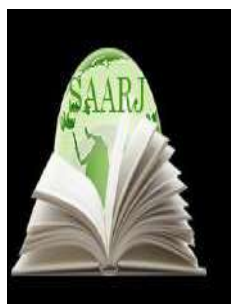
Si's appeal on 6 pages is replete with metaphors, such as cultural support, youth is the vanguard of the style of society, the revival of the Chinese nation is the leitmotif of the Chinese youth movement, innovation is the soul of national progress, etc. etc.

Within the framework of the cognitive paradigm, a metaphor is understood as a special form of thinking that forms an idea of an object, in this case, the Chinese dream acts as an object, as well as predetermining the way and style of thinking about it. Using a certain metaphorical model, the speaker builds in the mind of the addressee such a picture of the world that is beneficial to him. Most scholars (A.N. Baranov, I.M. Kobozeva, A.P. Chudinov and others) recognize the power of metaphor in political discourse and note its ability to influence the consciousness of the listener. It is thanks to the metaphor that a person's model of the world is replaced or changed by one that is skillfully built by a politician.

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## THE CREATIVE INTERRELATION OF SCIENTIFIC DEBATE WITH SOCIAL LIFE, THE POLITICAL SITUATION AND THE DIALECTICAL WAY OF THINKING THAT REFLECTS THEM

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### ABSTRACT

*In this article, the creative interaction of the phenomenon of scientific discussion with the style of social life and dialectical thinking as a means of cognition is highlighted on the basis of modern logic principles. With the development of legal-democratic principles, the formation of political positions, the debate in the development of the program of action serves as one of the main techniques. Because the argument is an indicator of the Real implementation of democracy in society. This situation requires understanding of the social significance of the phenomenon of scientific debate, studying its epistemic aspect.*

**KEYWORDS:** *Scientific Argument, Communication, Argument, Proof, Problem, Society, Justice, Democracy, Thought, Point Of View.*

### INTRODUCTION

The argument constitutes an important part of socio-political life as a private view of evidence. It is reflected in various socio-political doctrines, ideologies, clashes of worldviews, struggles.

Discussion plays an important role in the modernization of sustainable development processes and the development of civil society in the world, including Uzbekistan. It is democracy that requires the existence of alternative views, opinions, listening to the views of the opposing party, taking them into account, and in cases where they do not agree, to oppose it with serious, convincing arguments. With the development of legal-democratic principles in our society, debate serves as one of the main methods in the formation of political positions and the development of a program of action.



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## RESULTS AND DISCUSSION

Scientific and political debates are penetrating all spheres of human activity. People of today's society do not want to mechanically make decisions that are made without reasonable considerations, without studying alternative proposals, without going deep into the depths of the problem. Indeed, "the change of people's thinking, the formation of progressive features of the worldview of citizens in accordance with the times is reflected in the change and improvement of the structure of the state and society" [1, p.229]. Therefore, there is a need for argument and evidence as a means of solving various problems.

"Today, the experience of building a democratic society requires a creative approach to democracy, the implementation of all the internal potential to achieve it without violating the principles of justice, prosperity and equality" [2,p.481]. After all, the role of independent, free and grounded thinking in the rapid development of the processes of democratization and liberalization of society, the improvement of the political system, including the strengthening of the multi-party system, which manifests itself in alternative views, the level of social consciousness of the population of our country, the growth of the political and legal culture, is incomparable. The concept of further deepening legal and democratic reforms and development of civil society in Uzbekistan pays special attention to this issue. In this concept, the need for further deepening of democratic processes, the practical participation of the population in the life of political consciousness and society, the reform of the information sphere in order to increase its activity, the provision of freedom of information and speech, for this purpose, the transformation of the mass media into a pulpit that freely expresses its views, ideas. After all, "understanding and understanding the changes of the period, the intelligence of the general public to it, the correct orientation of its essence, serves as an important condition for its correct solution" [3,p.623] .

Information stability is an important tool in the fight against foreign ideas and ideologies. We are witnessing the process of globalization, in particular, the Internet, other global media is now becoming a sharp tool of spiritual influence for various purposes. In such a situation, a person who does not have the ability to think independently can not withstand the pressure of moral threats. A person with the ability to think logically can distinguish between creative ideas and destructive ideas. No destructive idea, not even an ideology, can withstand the power of logic. This is why the communist ideology is in crisis, unable to withstand the influence of democratic thinking in the conditions of openness and political pluralism.

In order for communication to be effective, it must necessarily be attended not only by scientists and publicists, writers and propagandists, but also by leaders of parties and social organizations. "Face to face with the people" - this slogan is also one of the manifestations of ensuring the peace and well-being of citizens, this is an opportunity to assess objectively, in determining who is whom by each citizen. The announcement of a new concept of dialogue with the people, the establishment of Virtual Receptions and Public Receptions of the President and Prime Minister of the Republic of Uzbekistan, the introduction of an integrated vertical system for their management, as well as successful activities that completely changed the worldview of citizens. and experts point out that this new phenomenon requires a reconsideration of the theoretical foundations in the field.

The fact that today there is a phenomenon of political self-consciousness can also be seen in the fact that many layers of our society are covered by discussions, debates, debates. In particular, one of the important signs of democracy in our society is the debate in parliament, where there is no longer a place for the pre-determined monopoly truth. After all, "the most important task in the field of State Construction and administration is to influence and influence the role of the Parliament of the country being the legislative power." [4, p.37]. In this regard, the president of the Republic of Uzbekistan Sh.Mirziyoyev expressed such an opinion: "democracy begins with the parliament. Parliament is a school of democracy. Therefore, we must turn the national parliament into a school of true democracy. A really controversial debate, printsiplial dispute must first be on the pulpit of Parliament, right here. It is only then that the true image and position of each political party, each party faction in Parliament, will be clear." [5]

So why is there growing interest in controversy today? Is this situation connected with the rapid democratization of our society? Of course so!

**First**, only the collision of thoughts allows you to open a new one by denying and rejecting the denial, comparing it with the old one, finding a way out of the current situation, destroying the hardened dogmas and cleaning up the necessary pathways for further actions and developments in the development of thinking.

**Second**, non-traditional approaches to solving complex issues are developed during the discussion process, concrete practical proposals are put forward, generalized, and the initiatives put forward are evaluated.

**Thirdly**, the controversy raises interest in economic and social processes in the participants, helps to identify the political motivations and positions of the speaker, demonstrates the ability to resist hidden injustices, teaches to critically analyze the opinion of the opponent or to criticize his or her wrong behavior.

**Fourth**, debates stimulate social activism in people, increase interest in change in their work and country, increase mutual demand, self-criticism, and form a reflexive ability to control the execution of concrete decisions. Indeed, it is "the subject of reflection in reflexive thinking that requires a deeper understanding of the problem in the range of human-world relations" [6,p.232]. Therefore, heads and leaders of many state and public organizations strive to learn the principles of collective research on complex issues, to understand the essence of the mechanism of verbal conflict, and the psychology of debate. "It should be clear to all of us that where indifference and indifference prevail, where the most pressing issues are left to selfishness, spirituality becomes the weakest point. And vice versa-where sobriety and vivacity, high intelligence and contemplation prevail, where spirituality becomes a powerful force" [7, p.115-116] .

Therefore, the need for the integration of scientific debate in the system of socio-political life can be considered on the following four principles:

- The **first principle** is the need to ensure the emergence of alternatives. Its logical basis was the method of analysis. In this case, the phenomenon of dividing the whole into components, breaking it into pieces, looking at something from all angles and studying it is observed. As long as there is no alternative, then there will be no analysis, no method for scientific research. Without the study of alternative, the debate loses its essential features as a dialectical method. One of the necessary conditions of the dialectical method is that contradiction is the source of

diversity of thought, the main condition for the development of thinking. Such contradictions, on the other hand, are the result of a clash of alternatives. As non-alternative thinking becomes a reflection of loneliness, the dialectical method thus loses its meaning. In this case, the pluralism of ideas is removed as a starting point, resulting in a formal limited “unity”. In this case, the mechanism for resolving the contradictions is lost. In this case, the method works in an interrupted form.

The first principle determines that people are ready for confrontation, understand other approaches, new ideas, tolerant attitude towards confrontation. Each party has an equal right to demand the truth and to promote initiatives. To ignore this principle is to eradicate new thinking, to deprive the solution of the problem of its own dialectic from the beginning. Ignoring this principle results in the following: Leaders who are able to resist dogmatic views will not rise. As a result, many people develop a fear of new ideas and a desire to follow the same lifestyle. In their view, centralized power remains the most rational system of government. However, in a society where ideas are based on a single source, maximum uniformity is achieved, and the ideals in it are transformed into genius and worshiped. As a result, monism inevitably leads to the conservatism of most people. Ultimately, ignoring the first principle leads to neglect of creative individuals, suffocation of initiatives, persecution of the opposition, monopoly of a single thought.

- **The second** principle unanimously warns of the danger of unreasonable unity. Such unanimity leads to complete agreement, unconditional affirmation, adherence to an embedded way of thinking, blind faith. Although consensus is a concept close to consensus, they are achieved in different ways. Consensus in the discussion is a product of the struggle of ideas. Unity avoids struggle and competition. If, as a result of the analysis, the parties come to a common ground in many respects interrelated contradictions, then it is considered that a legitimate transparent step towards the truth has been made. Therefore, synthesis is the logical basis of the second principle.

The second principle requires all participants in the discussion to be vigilant against the absoluteness of monism. Underlying such an approach will be hidden the conditions that lead to the stagnation of thinking. The second principle is that there should be no monopoly on reality. Therefore, the right of a free-thinking minority to the truth must be equal to that of others. The second principle ensures the prevention of serious mistakes, the fight against the manipulation of the mind, creates an environment for criticism. On the contrary, any dominant idea pretends that everything is fine, that there are no obstacles in life. But in the end, such an idea will face a crisis.

Ignoring the second principle results in the formation of a state of slave psychology, careerism, habituation in society. People lose their social activism, they become indifferent observers and owners of stereotyped thinking. Favorable conditions are created for the formation of stereotypes of dogma and cult of personality. Thoughtless unity is an echo of people’s desperation. This is the consequence of blind faith.

**The third principle** embodies constructive criticism. Criticism and self-criticism are a way of identifying contradictions. The word “criticism” in the context of the debate means denying the interlocutor’s erroneous conclusions and defending the thesis. Contradictions in the discussion are resolved through speech analysis, opposition analysis. In criticism, the law of negation of dialectics is manifested. This law is the driving force of progress and development. Indeed, “the

development of knowledge and the renewal of the worldview take place in the process of denial and inheritance." [8, p. 525]

The third principle explains the need to check the purity of any alternative force, to eliminate false arguments, to actively defend the truth, to eliminate stereotypes in thinking, to prevent the spread of false ideas. Only criticism can resist sophism and demagoguery. While constructive criticism explains not only 'no' but also 'why not', in this way it shows the invalidity of the thesis, the failure of the argument. This is the basis of the constructive approach to the debate.

The third principle defines the possibility of eliminating errors in discussion, preventing the defeat of proof, protecting oneself from errors and unfounded conclusions, and promotes the development of critical thinking. The consequences of ignoring this principle are serious. A person may not suddenly be convinced which of these alternatives is right, and as a result may adopt a nonsensical idea at the beginning of the activity.

Many leaders avoid arguing because it will be difficult to "transfer" the raw idea into a mature team. If a leader is outside the realm of criticism, he or she will not even feel responsible for his or her unreasonable decisions. Lack of mutual control leads to all kinds of offenses. As a result, it will lead to obscene ways of resolving disagreements and contradictions: slander, corruption, slander, deception, anonymous letters, provocations. Without constructive criticism, science, economics, and eventually life will begin to stagnate, and transparency will not be possible. The third principle precludes people from blindly believing in something.

**The fourth principle** explains the need to ensure the social security of the individual. In a society ruled by leaders instead of laws, transparency and freedom of speech, whose security is not guaranteed, are easily suppressed. We know that during Stalin's repression, many were even deprived of their lives for expressing their free will. This principle is the principle that determines the adoption of laws and norms that guarantee the right of a citizen not to be oppressed and protected from criticism.

The Constitution of the Republic of Uzbekistan provides for the protection of the requirement of the fourth principle within the law, ie in Uzbekistan "Everyone has the right to freedom of thought, speech and religion. "Everyone has the right to seek, receive and impart information of their choice, with the exception of information directed against the existing constitutional order and other restrictions established by law." [9]

In a democratic state based on the rule of law, the principle of "idea against idea, thought against thought, enlightenment against ignorance" must be applied. Because, "it is possible to argue with the idea only against the idea, against the idea only against the idea, against ignorance only with enlightenment." [10]

## CONCLUSION

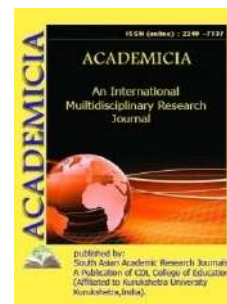
Debate plays an important role in discussing social issues and making the necessary decisions. The existence of debate can be assessed as an indicator of the realization of democracy. "The evolutionary path of development chosen by Uzbekistan requires a democracy based on a political and legal culture. Democracy must be introduced not by artificially accelerating and exporting, but by shaping the need for it. The formation of the need for democracy requires a developed political and legal culture of society. In other words, for democracy to exist, there must be people who are able to live in a democracy." [11, p.90]

These and other examples show that the discussion of social problems and the development of society can be ensured not only on the basis of the collapse of the old and the resolution of the new, but also through the dialectical unity of contradictions, that is, through dialogue. Indeed, "understanding dialogue through socio-cultural relations is necessary for a deeper understanding of the essence of the radical changes taking place in our society today, to see the future, to understand the mentality of our people and bring it into line with modern requirements" [12, p.112].

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## PSYCHOLOGICAL CHARACTERISTICS OF INTERACTION IN FOOTBALL TEAMS (ON THE EXAMPLE OF CHILDREN AND TEENAGERS SPORTS SCHOOL)

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### ABSTRACT

*A football game is a team game that helps team members develop qualities such as mutual understanding, good understanding, and team communication.*

**KEYWORDS:** *Football, Physical Education, Coach, Training, Style, Endurance, Endurance, Team, Role, Game, Teamwork, Speed, Interaction*

### INTRODUCTION

Team play involves the collaborative actions of all the players on that team. The main goal of team action is to organize the actions of all players and subordinate them to a single idea in order to achieve success. Collective action is organized using different systems. The placement of players in a team system is ultimately determined by their responsibilities in relation to the various game functions they perform. It facilitates competition with the team opponent through the use of certain communication systems. One of these systems is these mutual team ball transmissions. Mutual ball passes are the interaction of players in which one player passes the ball to another. Transmissions serve as a kind of intermediate link between individual and team movements in football. The player demonstrates his or her personal skills by deciding who to pass when and how, and implementing the decision made. At the same time, the transfer is a means of interaction of 2-3 athletes, that is, the implementation of group actions.

### MAIN RESULTS AND FINDINGS

Football belongs to the group of team sports. For him - the activity of the movement, aimed at defeating the opponent in teamwork with partners.



Given the fact that external signals change quickly and differently, football places high demands on the psyche of the player.

Hence, a good adaptation of the psyche to the various influences of the external environment; the ability to move and play skills in a creative approach based on anticipation of the actions of the opponent or partner. Football requires creative tactical thinking, the ability to play a combination game, as well as teamwork, discipline and self-control [1, 32].

The success of the defense depends not only on properly executed precautionary actions, interchangeability and mutual agreement of teams of players, but also on the ability of the defender to move individually against the player playing with and without the ball, i.e. how well the defender chooses the situation in relation to the player he is chasing. The correct choice of position is a guarantee of success of defensive actions [2, 45]. It follows that the interaction of the team and the resulting unity movement is a key factor in winning in football. The coaches of young football players, who are brought up in children's and youth sports schools, also absorb the interaction in these football teams.

In a football team, individual tactical moves in defensive mode include attempts to resist a player with and without a ball [1,27].

Actions against a player without a ball.

When moving against a player without a ball, the defender tends to:

- a) to prevent the opponent from taking possession of the ball, ie to "close".
- b) possession of a ball intended for an opponent.

Coaches teach young players in children's and youth sports schools this "closure" from an early age. Closing is when a defensive player changes his position on the field to make it harder for the opponent to take possession of the ball [1, 53].

To close the opponent, the defender must take a position between his goal and the player. The distance between the defender and the striker can be shortened or increased as the ball and the player move closer or farther towards the goal [2, 59]. The position also depends on the defender's running speed, the strength ratio of the couples fighting alone, and other factors.

Coaches teach ball communication between teams to form team communication. Capture of a ball is an action performed by a player on the defensive team to seize a ball passed to an opponent near the defender. Their success depends on the ability of the defender to choose the right situation, timely approach to the ball, assess the situation, speed. Usually, the distance between the defender and the striker is higher than when the ball is in possession. This is due to the fact that the defender is the active side in this situation and manages to move in the direction of the probability of the ball flying [3, 87-88].

Most of the tactical tasks that occur during a football game are solved using combinations. A combination is the action of 2 or more players who solve certain tactical tasks. This in turn serves to shape team communication [3, 90].

A football game consists of combinations and a chain of actions against them. Combinations can be pre-prepared and improvised during rehearsals, i.e., exactly during the game.

Each team consists of links, i.e. tactical units, which solve tactical tasks in interaction at certain stages of the game. Moving all the participants of the combination in a mutually agreeable way can lead to success [4, 69].

Each team consists of links, i.e. tactical units, which solve tactical tasks in cooperation at certain stages of the game. Moving all the participants of the combination in a mutually agreeable way can lead to success [4, 75].

As a result of playing sports, a person develops psychological structures. Knowledge, skills, abilities and habits are psychological structures. They develop and prosper throughout a person's entire life. For example, an engaged player (student, child) is associated with the ability to use their will-ideological, theoretical and practical knowledge, sports equipment and weapons during training; acquires and develops skills and abilities, habits of strict obedience to sports discipline.

The object of educational work carried out by a physical education teacher and a football coach is a certain person, a person. To nurture a disciplined, decent player who is part of a team, the coach must learn him as a person.

It is desirable that the coach of the football team and the athlete involved (student, child) know not only the psychology, but also the psychology of the sports team [6, 88].

Community psychology is the environment in which a particular group of children and adolescents are brought up in sports schools, their spiritual world. In the context of physical education and sports, a team, a group, a circle can be an example of a team [7, 98-99].

Thoughts, moods, relationships, traditions, needs and requirements constitute community psychology.

It should be noted that the psychology of the football team has a great educational and ideological impact. If a team unanimously condemns an athlete (student, child) who violates football discipline, an unscrupulous practitioner, this practicing player (student, child) will certainly change his or her attitude towards his or her sport and his or her duty. But, unfortunately, sometimes an unhealthy environment, unhealthy mood and interactions prevail on a football team. A physical education teacher and a football coach can prevent these negative changes by studying team psychology [7, 108-109].

1. Psychological processes - an event that consists of the emergence of mental phenomena, a legally consistent change and the transition from one stage of development to another, in which qualitative changes occur.
2. Psychological features are the main components of a person as a person, without which he can not perform any activity,
3. The relatively strong qualities that are formed in the process of human life are called psychological structures.
4. Psychological state is a person's positive and negative emotional experiences, which express his attitude to things and events in objective reality, to himself.

As an official organization, the football team will have specific tasks that both the coach and the sports team have been striving for since its inception. Fulfillment of the set tasks requires the activity of the coach and the team members to interact, to concentrate their efforts, to establish

formal contacts. "...During this process, the relationship between the participants of the joint activity is established, maintained and changed" [5, 64].

The formation of interpersonal relationships in football teams takes place on the basis of general laws in official organizations and goes through a complex, always non-directional path, which can be divided into several stages:

- the emergence of demand and its perception;
- the transformation of the need into a constant interest in this or that activity, satisfying the emerging need;
- compare their capabilities with the requirements of the activity to be met to meet the needs;
- formation of behavioral motives aimed at the search for activities that are able to meet the emerging needs.
- Establishing a relationship between the coach and the athlete in the process of activity, the emergence of a formal relationship that is able to meet the needs.
- The emergence of sympathy, friendship, common interests and interests on the basis of formal relations, the formation of informal relations [6, 64-65].

Each such relationship is further divided into formal and informal relationships.

The formal structure of the team occurs in the training process and in competitive activities. It is assumed that the correct adherence to the rules and instructions by team members will ensure that they meet the needs of their personal, coaching and superior organizations. However, in order for a team to function successfully as an official organization, it must have in its structure a "degree of freedom" based on certain "allowances" and preferences. These unintended, spontaneous interactions, behavioral norms, are called informal relationships in psychology.

As a result of performing such a complex activity, a player falls into various casual situations throughout his football life, and the success of overcoming them is directly related to the success of the activity itself. It is also possible to visually diagnose the presence of conflicts between players. Such a possibility was suggested by such scientists as V. Paranosich, L. Lazarevich. According to them, the destructive competition in the football team is accompanied by a number of characteristics that are manifested in communication and joint activities. These include trying to convince a player that another player is worse prepared than him, using non-sporting actions during training by the player, not trying to achieve his own success, but the athlete's joy at defeating his opponent, and so on. In a sports team, such situations can be explained by unresolved conflicts, destructive interactions between team leaders and leading players [5, 79-80].

In this regard, it is important to take measures to correct the behavior of leaders. According to Yu.L.Khanin, it is necessary to develop a program of correction of the actions of the coach and the team leader in conflict situations with the formation of the ability to deal effectively. To create such a program: to observe the process of behavior, to identify moments of unwanted behavior in leaders, to know to whom his behavior is directed, to study the psychological picture of such conflict situations through questionnaires and individual conversations, to discuss with the leader his behavior in crisis situations It is very important to explain its negative effects.

Students in children's and adolescent sports schools are usually in their teens. The age characteristics of these students require the right choice of their methods and means in making the right impact on the developing individual for their uniqueness. Addressing the principle of the individual approach implies that the pedagogical impact is appropriate to the player's capabilities, strength, and life experience. Therefore, it is necessary to take into account the physical, emotional, intellectual development of young people. Children, especially adolescents, grow up very quickly. It is very important for the teacher not to ignore the opportunities of complication that can occur in the implementation of different types of tasks, assignments that require maximum responsibility, spiritual zeal and whole will to achieve the goal [5, 40]. It is important to remember that within the same age, each person is unique in his or her inner world. It is a world of personal passions, passions, demands, thoughts, aspirations. That is why the educational process should be based on the individual characteristics of students. At the same time, it is necessary to create opportunities for the emergence of new, more valuable passions and needs, taking into account existing individual characteristics [5, 41]. In order to form young players studying in sports schools for children and adolescents as a single team, it is necessary to conduct separate psychological conversations with each of them, to prepare them as a garden of the team in case of their inner world.

## CONCLUSION

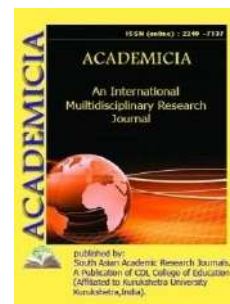
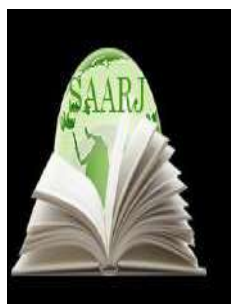
Bringing up a young player in a team is one of the leading principles of upbringing. Physical education pedagogy provides a wide range of opportunities for a teacher or football team coach to choose ways to address them. All forms of physical education of young players studying in children and youth sports schools, their content have great potential in the formation of social qualities of the individual. The organization of various competitions, the use of games and relays in the classroom, this important principle of physical education pedagogy can be successfully implemented in practice. It is only necessary to create situations of mutual responsibility and interdependence. This is achieved in a variety of ways.

In the first case, it is the responsibility of class activists to the community on physical culture. In another situation - the responsibility of one or two members of the team to the whole team. In the third case, it is the responsibility of all members of the team to its representatives. The coach's concern is not only the formation of a working relationship ("You have to"), ("We charge you"), ("You are responsible for this"), ie organizational and executive relations, but also care, kindness, compassion, mutual understanding relationship should also be. Only in these conditions can harmony emerge within the team and in personal relationships.

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## **LACUNAS IN UTKIR HOSHIMOV'S "THE AFFAIRS OF THE WORLD" (FROM CHINESE TRANSLATION EXPERIENCE)**

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### **ABSTRACT**

*In this article, the Uzbek people's writer UtkirHoshimov's work "The affairs of the world" focuses on the issues of translation, the image of the Mother in the novel, the words and lacunas that express the traditions of our people, and briefly gives information about the types and methods of translation.*

**KEYWORDS:** *Literary Translation, Lacuna, Types Of Literary Translation, Hizr, Mentality, Translation Studies.*

### **INTRODUCTION**

"All mothers in the world are very similar in their treatment of their children. So, this work is dedicated to you, dear Mothers!" Influenced by the above verses written by the author in the introductory part of the work, we decided to translate this story about Mother. Of course, no matter what society or country a person lives in, it is the Mother who always cares for him, nourishes and supports him from childhood. Indeed, the mother is valued by people of all nationalities, regardless of language or tradition. From the point of view of the mentality of the Chinese people, the country of the East, history has shown a special respect for the cult of Mother. The translations of literary works have an important role in the further development of friendly relations between the two peoples and in the deepening of the way of life of the two peoples.

### **THE MAIN RESULTS AND FINDINGS**

Today's process of globalization shows that the literature of a particular nation cannot be studied separately, whether it is literary studies or translation studies. This is because literature today is a universal treasure, created as a result of the interaction of the literature of different nations and



peoples. Translation studies play an important role in this regard. The founder of Uzbek translation studies Gaybullat Salomov said: "The essence of the translation process is to find alternative means of language in order to preserve the unity and integrity of the form and the content reflected in the original. In addition, selecting the most alternative and appropriate option among the several options available to translate the content of the original in another language is also one of the main requirements of adequate translation. Finding these alternative language tools and choosing the appropriate one requires conscious effort from translator." Lacuna (Lat. Lacuna - a broken place in the concept, a gap, hollow; French. Lacune - a gap, a deficiency) - in linguistics in the lexical system of a language is the absence of a word expressing a meaning, that is a lexicon without equivalent.

The term 'lacuna' was first coined in the scientific literature by Canadian linguists J.P. Vinet and J. Darbelnet, who commented: "The state in which the meaning of one word does not exist in another language"

O.A. Ogurtsova, in turn, gives a new definition of lacunae: "A lacuna is a grammatical category expressed by a word or a phrase (free and phrase logical combinations) that exists in one of the languages being compared and in the other doesn't

"Lacunae are formed because denotative semaphores in different languages cannot be fully equivalent. This can be explained by the fact that the name of a concept or thing does not exist in the second language in one of the compared languages.

"Lacunae are a phenomenon common to all languages of the world. This condition is called lacunae, which is caused by a complete mismatch of denotative semantics in different languages."

"Thus, the process of translation is a process of taking into account mental-psychological factors and lexical-semantic features, creative understanding of the text and reconstruction at the level of originality, which is primarily aimed at identifying non-equivalent lexicon.

In order for the translation to be understandable to the reader, it is necessary to be able to choose a right word or alternative word in the second language, the meaning of which is reflected in the original. That is why it is important to explain and quote lacunae in translation studies, that is, in literary translation.

As in any language, the Uzbek language has a lot of words that are specific to traditions and myths. During the translation process, it is important to convey the above aspects correctly to the reader.

.Consider the following sentences from the short story "ErmonBuva":

- **"Good morning, grandad"**, - he greets.
- *"Good morning" said Ermon calmly - Still, his voice doesn't sound serious: his voice as thin as a woman's, but extremely kind. Every time I see him, I remember Khizr told by my mum. Because Grandpa Ermon's hair, beard, and even the eyebrows that turned to his eyes were white. He wears a long white jacket. Grandma Habiba always washes and irons her clothes. The hairs on his chest, which are visible from the collar of his jacket, are also white. Only two faces are bright red. According to my mother, Kind people's face shines like angel. I don't know what an angel would look like, but I love Grandpa Ermon. I love him so much.*

- “你好！乖孩子。”虽然他的声音像女生一样尖细但他很善良。

- 我每次看见他就想起来妈妈讲的黑泽尔。因为艾芒爷爷的头发、胡子、连眉毛也白色的，穿白色的袍子。哈比芭奶奶总是洗干净、熨好他的袍子。他全身都是白色的，只两个面颊是红色的。用妈妈的话来说，艾芒爷爷就像天使一样。我不能想象天使怎么样，但我喜欢艾芒爷爷，很喜欢。

- “Nǐhǎo! Guāiháizi.” Suīrántā de shēngyīnxiàngnǚshēngyīyàngjiānxiáidàntāhěnshànliáng.

- Wóměicìkànjàntājiùxiǎngqīlámāmājiǎng de hēizéěr. Yīnwèiàimángyéyede tóufǎ, húzi, liánméimáoyěbáisè de, chuānbáisè de páozi. Hābībānǎinaizǒngshìxīgānjìng, yùnhǎotā de páozi. Tāquánshēndōushibáisè de, zhǐliǎnggèmiànjiáshìhóngsè de. Yòngmāmādehuàláishuō, àimángyéyèjiùxiàngtiānshǐyīyàng. Wóbùnéngxiǎngxiàngtiānshǐzěnmeyàng, dàn wǒxǐhuānàimángyéyè, hěnxǐhuān.

The word "Khizr" is used in the sentence, and we have explained it to make it clearer to the reader. Khizr, Hazrat Khizr, Khizr Buva, Khizr Elijah is a pious person mentioned in the Qur'an as "the servant of Allah". Khizr is interpreted in sources and oral narrations as a prophet, a great guardian. His real name is Umriya. It is said that he will live until the Day of Judgement. Here is a brief summary in Chinese:

他是一个先知。根据传说他是个永生不死了，住在各个地方。他总是帮助没有钱的人

Tāshìyīgèxiānzhī. Gēnjùzhuànshuōtāshìgèchéngyǒngshēngbùsǐle, zhùzàigègedìfāng. Tāzǒngshìbāngzhùméiyǒuqián de rén

Apparently, this word is also a lacuna and is common among the peoples of the Muslim East, including Central Asia.

In the following short story "Comfort" shows a conversation between author and gravedigger:

You see, 'said the old man thoughtfully,' it rained that night. It didn't stop until we buried him in the grave. As we buried him, the sun shone brightly.

The Uzbek reader may understand what gravedigger means by this, the subject of the conversation is the mother, but it will be incomprehensible to the Chinese reader. At this point, in the process of translating into Chinese, it is necessary to approach some additions and explanations. For example, by adding the word "mother" to the sentence, it is possible to convey the full meaning to the Chinese reader.

“你看，他小声地说——你妈妈去世那天下了大雨，送葬以后雨就停了太阳出来了。”

Níkàn, tāxiǎoshēng de shuō—nǐmāmāqùshìnèitiānxiàledàyǔ, sòngzàngyǐhòuyǔjiùtíngletàiyángchūlái.

Showing that even nature mourns the death of a mother can only be conveyed to the reader through comments in the translation. The phrase "It did not rest until we put him in the grave" has a deep meaning, and translating it into a single sentence can weaken the meaning of the situation. Therefore, the process of translating into Chinese requires skills such as various additions,

explanation of customs, and the appropriate use of comments in the correct delivery of spiritual experiences. That is why we have given the following quote.

乌兹别克传统如果葬礼时下雨表示亡者是好人。

*Wūzībiékèchuántǒngrúguǒzàngrǐshíxiàyuǎbiǎoshìwángzhěshìhǎorén.*

Another sentence from the above novel:

*Dressed in a white cottonyaktak(jacket) and with a grey beard, he stood up after blessing on his face:*

- *That's it, son! Take care about yourself. That's the way the world works*

- *He remains silent for a moment, and added: -your mother was very kind. she didn't lie in bed, she didn't bother anyone ... Not everyone dies like this.*

... 有一个穿着无领白衬衫(yaktak), 留白胡子的老挖墓人说阿门(把双手放在面前) 就站了起来 :

“别哭我的孩子，不要那么伤心。在这个世界上每个人最终都要去世。生活就是这样，没办法。” 他想了一会就接着说“你的妈妈，是真正的好人。她死临死都没得病，没依靠别人.....她走得很安详。

*...Yǒuyīgèchuānzhuówúlingbáichènshān (yaktak), liúbáihúzi de lǎowāmùrénsuǒāmén (bǎshuāngshǒufàngzàimiànqián) jiùzhànleqǐlái:*

*“Biékūwǒ de háizi, biùyàonàmeshāngxīn. Zàizhègeshìjièshàngmǐgèrénzuìzhōngdōuyàoqùshì. Shēnghuójiùshìzhèyàng, méibànfǎ. ” Tāxiǎngleyīhuìjiùjiēzhesuō “nǐ de māmā, shìzhēnzhèng de hǎorén. Tāsìlǐnsǐdōuméidébìng, méiyīkàobiérén.....tāzǒudéhěnānxiáng.*

*In order to make it clearer to the reader during the translation of the phrase "with a blessing on his face"thereris a definition: “把双手放在面前”*

Yaktak (jacket) – 乌兹别克族的男子传统衣服无领，无袋,平时白色的衬衫.

*Wūzībiékèzú de nánzǐchuántǒngyīfúwúling, wúdài, píngshíbáisè de chènshān.*

Yaktak(jacket) –(one layer, unlined clothing) long, open chest, men's jacket.

At the same time, as mentioned above, we have tried to convey the original meaning, avoiding literal, colloquial translation in order not to weaken the meaning. We used the word "Volidaimehriboningiz " to mean "mother" 妈妈 *mama* because it is the main word in Chinese. In the Uzbek language, we can replace "Volidaimehriboningiz to other synonymslike "volidaimehribon" , "ona" , "oyi" and others. Besides, the phrase "xo'pyarlaqaganodamekanlar" was translated “是真正的好人» (good man), that's why reader can understand the meaning easily. The last sentence, "Bunaqabeozoro'limharkimga ham nasibetavermaydi" ("Such a harmless death is not for everyone,") is a true Uzbek sentence, so we translated it without distorting the original meaning. “她走得很安详”.

There are also words that reflect the customs, traditions, and dress of each nation, which cannot be directly translated into other languages. That is why in the above sentence we have given a special explanation to the word “yaktak”.

There are also place names in the translation process, and we translated some of them and left some in Latin. For example, in the novel "Two Legends", the author encounters the word "Dombrobod" in a conversation with his mother, and the Uzbek reader immediately understands the name of the place and where it is, but for the Chinese reader it is a completely unknown word. We also gave a brief explanation:

- Is Tashkent a big city?
- It's a big city.
- Is there any bigger one than that?
- Maybe, but you have to love Tashkent to love those cities. If you want to love Tashkent, love our Dombrobod, OK?
- “塔什干是大城市吗？”
- “很大的城市。”
- “比塔什干大的没有吗？”
- “可能有。如果你想喜欢大城市，先要喜欢塔什干。要是想喜欢塔什干，先要喜欢Do'mbirabod（塔什干一个小区的名字），要喜欢我们的胡同，好吗？”
- “Tāshéngàndàchéngshì ma?”
- “Hěndàdechéngshì.”
- “Bǐtāshéngàndàdeméiyǒuma?”
- “Kěnéngyǒu. Rúguǒnǐxiǎngxǐhuāndàchéngshì, xiānyào xǐhuāntāshéngàn. Yàoshìxiǎngxǐhuāntāshéngàn, xiānyào xǐhuāndo'mbirabod(tāshéngànyīgèxiǎoqūdēmíngzì), yàoxǐhuānwǒmēndehútòng, hǎoma?”

Another example can be seen in the novel “Gilampaypoq”, in which the words "Juba" and "Jurabi" belonging to the third language are left in their original form without being translated into Chinese.

*Every year when I go on vacation, I bring carpet socks to my mom. It can be found in the Caucasus. They call it “juba” or “jurabi”. My mother prays at length, as if she got something unique. He brags to the neighbors that he has such a loving son. Her leg is sick. It swells and hurts when it gets cold.*

我每年夏天去疗养的时候都会给妈妈买一双羊毛袜。在高加索那边有各种各样的袜子。那儿的人把它叫做“Juba”或“Jurabi”。每次看到妈妈都会像得到宝贝似的感谢真主。她向邻居吹嘘，告诉他们她有一个好儿子。因为她有老寒腿，每当变天时都会腿疼。

Wǒměiniánxiàtiānqùliáoyǎng de  
shíhòudūhuìgěimāmāyīshuāngyángmáowà.Zàigāojiāsuǒnàbiānyǒugèzhǒnggèyàng de  
wǎzi.Nà'ér de rén bātājiàozuò “Juba” huò  
“Jurabi”.Měicikàndàomāmādūhuìxiàngdédàobǎobèishì de gǎnxièzhēnzhǔ.Tāxiànglínjūchūxū,  
gàosùtāmēntāyǒuyīgèhǎoerzi. Yīnwèitāyǒulǎohántuǐ, měidāngbiàntiānshídouhuìtūitēng

As in most Eastern countries, the Uzbek people have a variety of rituals and superstitions. We came across lacunae many times during the translation. Of course, the Chinese also have different myths, customs and rituals, some of which are familiar or close to us, some of which are completely different.

In this sentence, "Therefore, there were from the feathers of a blue crow to a celosia the nail in the kitchen ...". We have tried to preserve the original meaning so that the meaning of the situation in the sentence does not fade, and commented as follows:

备注：这就是迷信或个人建议此处最好加以说明。挂蓝乌鸦的羽毛是为了避邪。

Bèizhù: Zhèjiùshìmíxìn huò gè rén jiàn yì cǐ chù zuì hǎo jiā yǐ shuō míng. Guà lán wū yā de yǔ máo shì wèi le bì xié.

*Note: There is a superstition or personal advice, and blue crow feathers are hung to ward off evil.*

"Literary translation has many requirements, such as re-creating the author's style, preserving the rhythm and intonation of the work, reflecting the speech of the characters with their naturalness, giving national color, finding alternative variants of phraseology, expressing dialectal features. They show that the translator really has a decisive status.

## CONCLUSION

- There is no culture completely similar to each other;
- There is no alternative vocabulary within two languages, as there is no completely similar culture;
- Lacunarity occurs mainly in lexemes expressing nationality and customs;
- In the process of translation, quotations and comments play an important role in conveying the lacunas to the representative of another language.
- From the above considerations, it is clear that languages, cultures, concepts are different, but human feelings are never different, especially motherly love is the same all over the world.

We all know that the Uzbek and Chinese people's have always been in good relationship. Just as there are similarities between these two peoples, there is uniqueness in their daily habits, living conditions, expressions, and attitudes toward the family. The play covers the daily life of the Uzbek people. We hope that our translation work will contribute to the further rapprochement of the Uzbek and Chinese peoples in the future.

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## BASIC STAGES OF DEVELOPMENT OF PERSONAL CONSCIOUSNESS

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### ABSTRACT

*The main link in the development of consciousness is the formation of self-consciousness. It helps a person in many ways, for example: to reflect the world; to know and experience the inner world. Throughout a person's life, under the influence of a large number of social influences, his image of "I" develops. The article presents the stages of development of personality self-awareness during the period of ontogenetic development.*

**KEYWORDS:** *Personality, Self-Consciousness, Stages Of Self-Consciousness, "Image-I", Elements Of Consciousness.*

### INTRODUCTION

Self-awareness is the ability to introspect and recognize oneself as a person separately from the environment and other persons. While consciousness learns its environment, body and lifestyle, self-awareness is an acknowledgment of this awareness. Self-awareness as an individual consciously knows and understands his character, feelings, motives and desires. Self-awareness is understood as a psychic phenomenon, a person's consciousness of himself as a subject of activity, as a result of which a person's self-image is formed into a mental "image-I". A child does not immediately realize himself as I; during the first years, he himself very often calls himself by his name - as those around him call him; at first it exists for itself rather as an object for other people than as an independent subject in relation to them [1].

### METHODS

The link in the development of consciousness is the formation of self-consciousness. It helps a person in many ways, for example: to reflect the world; to know and experience the inner world. The main functions of self-consciousness are: human access to the causes and results of actions; understanding of oneself, self-esteem.

With a negative assessment, a person can engage in self-improvement, self-development, include protective mechanisms, i.e. eliminate traumatic information that develops internal conflict. When the subject perceives himself as an individual, he acquires a special protective function - the desire to protect his individuality from the threat of its disappearance.

Self-consciousness in psychology can be called differently, for example, the image of "I", self-image. It is considered not an inborn sign, but acquired. Throughout life, a person under the influence of a large number of social influences develops his image of "I". This psychological education, according to V.S. Merlin contains four elements of consciousness:

- distinguishing oneself from others;
- "I" as the active principle of human activity;
- Mental properties, emotional self-esteem;
- Social and moral self-esteem, self-esteem, formed on the basis of experience in communication and activity.

As you know, self-awareness is not the original fact inherent in man, but a product of development. However, the embryo of the consciousness of identity appears already in the infant when he begins to distinguish between sensations caused by external objects and sensations caused by his own body, the consciousness of "I" - from about three years old, when the child begins to correctly use personal pronouns. Awareness of one's psychic qualities and self-esteem acquire the greatest importance in adolescence and youth. But since all these components are interconnected, the enrichment of one of them inevitably modifies the entire system.

There are four stages (or stages) of development of self-awareness:

- The discovery of "I" occurs at the age of 1 year;
- By two or three years, a person begins to separate the result of his actions from the actions of others and clearly recognizes himself as an actor;
- By seven years the ability to evaluate oneself is formed (self-esteem);
- Adolescence and youth - the stage of active self-knowledge, search for oneself, one's own style. The period of formation of socio-moral assessments ends.

The formation of self-identity of a person as a member of society is affected by assessments of others and status in a group of peers, the ratio of "I-real" and "I-ideal," the assessment of the results of one's activities [2. 177].

## RESULTS

People know themselves through the development of self-awareness. This particular type of self-development refers to knowing one's body and mental state of the mind, including thought, actions, ideas, feelings and interactions with other people. "Self-awareness does not occur suddenly through one specific behavior: it gradually develops through a sequence of different behaviors, all of which are related to oneself."

Monitoring of their mental states is called metacognition. It is considered an indicator that there is some idea of oneself. It is developed on the basis of non-auto components using sensory

sources. By developing self-awareness through self-exploration and social experience, you can expand your social world and become more familiar with yourself [3. 4]

According to Emory University Philippe Roche, there are five levels of self-awareness that unfold at the beginning of development and six potential prospects, starting from "level 0" (without self-awareness), ahead of complexity "Level 5" (explicit self-awareness),

- Level 0: Confusion. At this level, a person has a degree of zero self-awareness. This person does not know anything about mirror reflection or the mirror itself. They perceive the mirror as an extension of their surroundings. Level 0 can also be displayed when an adult repels himself in the mirror, mistakenly taking his reflection as another person, for only a second.
- Level 1: Differentiation. A person understands that a mirror is capable of reflecting things. They see that the reflection in the mirror is different from what surrounds them. At this level, they can distinguish between their own movement in the mirror and the movement of the environment.
- Level 2: The situation. At this moment, a person can connect the movements in the mirror to what is perceived within his own body. This is the first hint of self-examination on the designed surface, where what is visualized in the mirror is special for itself.
- Level 3: Identification. This stage is characterized by a new ability to identify oneself: a person can now see that in the mirror is not another person, but in fact he is. This is seen when a child, turning to the mirror, turns to himself, how he relates to himself, looking in the mirror.
- Level 4: Persistence. Once a person reaches this level, he can identify himself outside the real mirror image. He is able to define himself in previous paintings that he looks different or younger. In addition, she feels a sense of "constant self."
- Level 5: Self-awareness or "meta" self-awareness. At this level, not only himself can be seen from the first person, but he is understood, that is, he is also seen by third parties. They begin to realize that they may be in the minds of other people. For example, how they are seen from a public point of view.

It should be borne in mind that the child, coming into this world, does not have the slightest idea about what is around them, about the meaning of others around them. Over the course of the first year, they gradually begin to recognize that their body is actually separated from their mother, and that they are "active, pathogens in space." By the end of the first year, they realize that their movement is separate from that of their mother. This is tremendous progress, but they are still quite limited and cannot yet know what they look like, "in the sense that the child cannot recognize his face." By the time the average baby reaches 18-24 months, he finds himself and recognizes his own reflection in the mirror, but in many African populations this does not happen until six years. He begins to recognize the fact that the image in front of them is himself. At the age of 24 months, the baby will observe and correlate its actions with the actions of other people and the environment. After the child has gained a lot of experience and time in front of the mirror, he is able to recognize himself in reflection and understand that it is him. Face recognition occupies a large central point in the development of their self-awareness. By the age of 18 months, the child can give his name to others [4. 144].

Self-awareness begins to form at the end of preschool age due to intensive intellectual and personal development. The child first acquires the ability to evaluate the actions of other people (most often close adults), and then his own actions, moral qualities and skills.

Self-assessment depends on the assessment of an adult, a teacher. An adequate image of "I" is formed in a child with a harmonious combination of knowledge gleaned from my own experience (what I can do, as I did) and from communication with adults and peers. The development of self-awareness in this period depends on the characteristics of family education. There is an awareness of his experiences, manifested in the fact that at the end of preschool age he is oriented in his emotional states and can express them with the words: "I am glad", "I am upset", "I am angry". Self-realization in time begins, that is, at the age of 6–7 years, the child remembers himself in the past, realizes himself in the present and imagines himself in the future: "when I was little", "when I grow up big". Rational components of self-esteem arise, awareness of some of their qualities and behavior, consistent with the requirements of adults. But despite this, the child judges himself superficially and optimistically. If he is asked to describe himself, then he will do this mainly from an external point of view: hair color, growth, favorite activities.

## DISCUSSION

Around school age, the child's awareness of personal memory becomes a sense of self. At this stage, the child begins to develop interests along with likes and dislikes. This transition makes it possible to realize the past, present and future of the individual in order to understand how conscious experiences are remembered more often. As preschoolers, they begin to give much more specific details about things. For example, a child will talk about the Los Angeles Lakers basketball team and the New York Rangers hockey team, instead of the baby only that he loves sports. In addition, they will begin to express certain preferences (for example, Tod likes mac and cheese) and will begin to identify certain possessions (for example, Lara has a bird (as a pet at home)). At this age, the child is in the Piage stage, name to the operational stage of development. The child is very inaccurate in judging himself, because he does not have enough ideas about his personality. For example, the child at this stage will not think that he is strong, has the ability to penetrate the jungle of the gym at school , and they will not be aware of the fact that they can solve a mathematical problem due to their ability to count [5.84].

Two special forms of self-consciousness appear successively: a sense of adulthood and the "I-concept." Feeling of adulthood - a teenager's attitude to himself as an adult, sensation and self-awareness to some extent as an adult.

There is interest in your inner world, and then there is a complication and deepening of self-knowledge. In other words, a teenager discovers his inner world.

Self-esteem in adolescence is low in its general level and unstable, but can be high (as a compensatory mechanism).

In the course of socialization, the person's relations with people, groups, society as a whole expand and deepen, and the image of his "I" develops in the person. The image of "I", or self-awareness (self-image) does not immediately arise in a person, but develops gradually, throughout his life under the influence of numerous social influences, and includes four components: awareness of the difference between oneself and the rest of the world; awareness of the "I" as the active principle of the subject of activity; awareness of one's mental properties,

emotional self-esteem; social and moral self-esteem, self-esteem, which is formed on the basis of the accumulated experience of communication and activity [6.].

Some begin to be aware of their emotions in their youth. Most children experience emotions such as shame, guilt, pride, and embarrassment from the age of two, but do not fully understand how these emotions affect their lives. Reaching 13 years, children get used to these emotions and begin to apply them in their lives. A study called "Building I" found that many teens show happiness and self-confidence among friends, but at the same time, hopelessness and anger among parents because of the fear that they will become disappointment. Teens also showed that they felt smart and creative among teachers, and shy and nervous among people they were not familiar with.

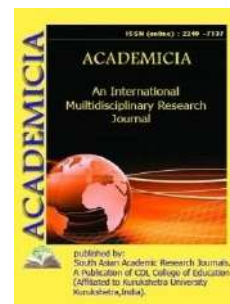
## CONCLUSION

In adolescent development, the definition of self-awareness also has a more complex emotional context due to adolescent maturity compared to those in the early stages of childhood, and these elements can be taken into account, but they do not limit their self-esteem. Self-concept and self-awareness in many other ways could refer to the final ROCHAT level of self-awareness, but they are still different in their own previous definition. Social interactions mainly separate the element of self-consciousness in adolescents, and not in childhood, and also in the future - developed emotional recognition skills in adolescents. Sanda, Pânișoară and Pânișoară demonstrate them in their work with adolescents and show that there is a mature sense of self-awareness among students who were 17 years old, in the future providing a clear structure with elements such as self-concept, self-esteem and self-awareness.

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## THE PRAISE OF MOTHERLAND IN AZIM SUYUN'S POETRY

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### ABSTRACT

*The article explores patriotic motives as one of the leading themes in the poems of the talented poet Azim Suyun. The artistic means used in his poems about the homeland are studied in terms of the poet's skill.*

**KEYWORDS:** *Artistic Image, Aesthetic Taste, Artistic Interpretation, Poet's Psyche, Life Episode.*

### INTRODUCTION

The artistic image reflects the form of life and creates a general view of the world; there are scientific ideas in the way. Also, the poetic image is a multifaceted concept, which not only expresses the subject, but also reflects the attitude of the lyrical "I". It is no coincidence that Jan Parodovsky did not express a well-founded metaphorical idea that "image is the blood of poetry". Certainly, the only raw material for a poetic image is the word, the power of the word, the subtlety and expressiveness of the image, the power of influence. Azim Suyun is one of our brilliant poets, who deeply understood the poetic power of the word and poured his tender feelings on paper.

### THE MAIN FINDINGS AND RESULTS

The national anthem is one of the eternal themes of literature. The poet connects one direction of his work with the homeland, the motherland. In their work, the homeland has become a unique poetic image, expressing various symbolic and symbolic meanings. One of the main directions in the work of the sensitive poet Azim Suyun is the theme of the homeland. If we look at his work of the sixties and seventies, we see that this theme is manifested in various forms and expressions.

In the poems of the poet, the homeland is like a plane tree. Elsewhere, it is manifested as the attitude of a prisoner of war captured. In general, attention is paid to the fact that the theme of the



homeland is reflected in the unity of this country with the brave, heroic people. In the poem “Plane”, written in the early years of the poet's career, the image of the homeland is reflected in harmony with natural phenomena. While glorifying the homeland in the image of a maple, the poet uses the image of a storm to create a vivid landscape. A raging storm bends the branches of the plane tree and tries to destroy it. But because the roots of the maple are firmly attached to the mother earth, it stands proud and vigorous. Here, the images of maple and storm are symbolic, expressing the motive of love for the motherland.

Poem “Prisoner” by the poet also reflects the patriotic motive on such high scenes through such vital, lively episodes. The captive boy is about to be defeated spiritually by his enemies, who once tell him that he has lost his mother and want to see tears in his eyes. But “he was proud, proud head”. The next time the enemies said to him, “You have lost your way”, but this time the proud head of the prisoner did not bow to the enemies.

The avenger did not know the boarder,

They said you lost your homeland

And the last pain in his eyes -

They wanted to see tears,

Drops of youth ... A shield ... John was that age!

It should be noted that here the poet expresses the concept of homeland through a very moving and vital episode. The fate of the captive is tragic, but his brave heart prefers to die proudly rather than bow to enemies. Here the poetic look of the poet is also marked by the choice of the most characteristic, the most honorable images, which are the honor of the young man. After all, both the mother and the beloved are as sacred to the young man as the motherland. These three concepts are intertwined in art as if they were life itself, and one requires the other. The skill of the poet is that he combines the images of mother and beloved with the image of the homeland that comes after him. The proud head, which remains proud in the news about the mother and husband, turns to life after the news about the homeland where their image is harmonized. After all, both the mother and the beloved are immortal with the notion that they are only the motherland. Although this poem was written in the seventies, it is one of the most beautiful and timeless poems written on the theme of homeland.

There is a certain harmony between the poet's poem “Homeland” and the poem “Nakurt village”. Although the poem “Homeland” embodies the wisdom that “everyone loves his homeland” through two small scenes, in its essence lies the love for the motherland, the native land.

In this poem, which is based on dialogue, his brothers and sisters living in the mountains ask how the people living in the desert live. Next time, the desert people will question him:

“How do they live, my friend?

In the midst of a bloody mountain?”

Apparently, the poet expresses the concept of homeland in the poem through two vital episodes - the love of the place where he was born and grew up, through the admiration of those who live in the desert through the mountains, and those who live in the desert to get used to the conditions.

In the poem of the poet “Nakurt” village, this content is expressed in full. Nakurt is the name of the poet's native village. Located in the middle of the Nurata mountain range, this village is surrounded by ravines, and in the open springs of each ravine there is a paradise where clear waters flow. The poet dedicates all his beautiful feelings to the mother earth, where the blood of the umbilical cord was shed.

As we read the poem, we witness the poet's pen ending with beautiful images that are similar to each other. The poet's lyrical protagonist begins by acknowledging that rainbow-like thoughts are playing in the horizons of the lodge, and that there is a home, a mother, who was born and raised against the backdrop of these rainbow-like thoughts. In the following verses, the poet goes on to describe the village of Nakurt. The poet expresses in the shepherd's tongue the pride of the wings of an eagle flying in the wind, the love of the endless expanses in the language of a shepherd, the child of a gazelle playing like light on diamond rocks, the mountain waterfall singing the song of sparrows singing at the head of springs. the eternity of life, the song of a little bird singing on a branch of a lily, the song of a lyrical hero, the mountain girl combing her hair in the moonlight near a golden fountain, and finally the stone wall, the muddy heritage for grandfather's house, and so on. Because the poet's flawless childhood, the happiest days of his life were spent on this land.

But in the poem, the poet not only describes the beauty of this native place in harmony with nature, but also its glorious past, the brave people who fought tirelessly, glorifying the sacred notion of homeland. Thus, through the image of a small village between the mountains, it creates a generalized image of the homeland.

We see that in the early days of Azim Suyun's work there was a desire to express the concept of homeland in an integral connection with the country of birth. His poem “Under the Horizon” has the same content as the above poems. Here, too, the landscape of the homeland is depicted in harmony with nature. Familiar landscapes in the poem, big rocks standing on the horizon, spruce groves in the sky, fast-flowing streams in the valleys, late ripening vines clinging to the trees, springs singing in the vast expanse, turquoise sky above the head, roaring walnuts, in short, the eternity of nature. moment. And here is a vital scene that unfolds at this moment:

There is a low hut on the hillside,

In front of the sofa, on the sofa -

The shepherd's gourd, sign,

Breathing breath in the stone oven...

It is obvious that in the center of the poet's poems about the homeland the image of his native land, the native village, occupies a leading place. The poet goes from the smallest to the largest, from the concrete to the generalization, and thus manages to reveal the glory of the motherland.

In some of his poems, the poet tries to illuminate the image of the homeland through national heroes and great historical figures. We see one of such heroes in his poems depicting the image of JalaliddinManguberdi, who fought against the Mongol invaders, especially Genghis Khan. The poet's poem “JaloliddinManguberdi” is reflected as a piece of history. In the poem, the poet glorifies the concept of homeland in the image of Jaloliddin by poeticizing the vital facts of the historical battle between Jalaliddin and Genghis Khan on the Sing River.

It is known from history that Jaloliddin, who fought heroically against Genghis Khan with a small army, threw his mother, beloved wife and son into the river before retreating, and jumped into the river on horseback and sailed to the other side. This vital fact was the basis for the poet to create a beautiful poem in the spirit of patriotism about the homeland.

Describing these life scenes in the poem, the poet emphasizes how much Jaloliddin loves both his mother and his beloved wife and child. The poet describes the vital fact that underlies such behavior as follows.

After all, Chingiz, Chingiz sucked alive the heart of a seven-year-old baby

And this holiday is waiting for you too

Bad luck.

Stop!

No one can be given live now

Rather than being left in the hands of the enemy happiness to die free!

The poet JaloliddinManguberdi tries to describe the fiery cries in his heart, all his hatred and anger for his enemy with all his might. The poet recreates the facts written in the history books through the poetic verses in their full scale, with the weighty essence, through the influential verses. Most importantly, this historical fact raises the poet's socio-aesthetic position to the level of pathos expressing patriotic motives.

Here,

A squint-eyed enemy

He shouted ...

The river suddenly became ...

And Jalaliddin on an Arabian horse

Playing the sword

He shouted:

“Thank you!”

My parents are my country!

My children are the right of my country!

My people are the right of my country!

You give me strength, Allah!

It is obvious that the poet expresses the image of the historical hero JaloliddinManguberdi in the poem, the love for the homeland, the strong hatred for the enemy through grassy interpretations through the image of a dramatic moment in his life. Here, the image of Jalaliddin is portrayed as a savage, brave and courageous hero, as in life itself. Most importantly, the poet was able to instill in the essence of the heroism of Jalaliddin a high sense of patriotism.

## CONCLUSION

Azim Suyun's work is wide-ranging and consists of colorful themes. At the same time, the main themes of the poet's poetry are the leading themes of the motherland, nature and human relations, love and affection, love for parents.

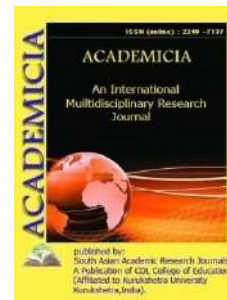
The theme of homeland occupies a central place in the poet's poems and is imbued with high patriotic ideas. Motives of love for the motherland are reflected in the poems of the poet from different angles: from the great human love for the native land, the steppe, the mountains, the springs and the world of medicine, to the birds and mammals, to the whole of Uzbekistan and our people.

Accordingly, we see that the poetic images created by the poet range from a small artistic detail to the peculiarities of our country and its place in the world community, to the peculiarities of the national values of our people formed over the centuries.

In general, among the examples of Azim Suyun's works completed during the first ten to fifteen years of his career, we see that his poems, irrigated with high patriotic motives and rising to the level of national anthem, are combined with his poetic conviction and high confidence.

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## FORMATION OF THE SKILLS OF PORTRAYING THE FUTURE TEACHER OF FINE ARTS IN PENCIL DRAWING

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### ABSTRACT

*The article deals with the techniques and skills of painting in the training of highly qualified teachers in the field of high fine arts. It also discusses in detail the skills of ancient master artists to improve their skills by copying from popular works of art, education independently.*

**KEYWORDS:** *Fine Arts, Methodology, Visual Techniques, Technical Skills, Academic Task, Composition, Line, Construction, Method.*

### INTRODUCTION

Over the past three years, economic growth has been observed in the country as a result of socio-economic changes. These processes set the task for universities to train a new generation of personnel for the renewed Uzbekistan. The "Concept of Development of the Higher Education System of the Republic of Uzbekistan until 2030" of the President of the Republic of Uzbekistan lists the following problems in the field of ensuring the quality of education in the higher education system: the current qualification requirements, curricula and programs are not focused on the formation of practical skills in graduates in terms of content; work on training in cooperation with higher education institutions and customer customers is not effective, the participation of employers in the formation of the content of higher education is insufficient; students do not have the skills of critical thinking, independent search and analysis of information; practical training in manufacturing enterprises is not effectively organized, the level of qualification of trained specialists does not meet the modern requirements of the labor market [1, 2019]. One of the conditions for overcoming the above problems is to improve the quality of training of future specialists in the field of fine arts.

It is known that a thorough mastery of the theoretical foundations of fine arts helps the student to see and understand the laws of the structure of all forms of nature, to accurately describe what he sees, and thoroughly prepares for future pedagogical activity. But these are not enough to become a skilled artist-educator in the future. Research shows that even if a student understands and remembers the basic theoretical principles of drawing from nature, there are cases when he is unable to apply the theoretical and practical knowledge he has acquired in practice. Therefore, in addition to theoretical knowledge, he must also have executive and technical skills to be able to depict in the fine arts. Technical skills are just as important to an artist as a young child who goes to high school needs to know the letters when writing calligraphy [2, 2006]. Free and skillful acquisition of technical skills allows the student to be fully committed to creativity, to realize creative abilities and to become a highly qualified artist-educator. A student who has mastered the art of drawing and technique is not able to feel free in the process of practical work and, as a result, is not able to fully express their thoughts and feelings. This applies to all types of art, especially pen painting, which is the basis of fine art. In ancient academic schools, great attention was paid to imaging techniques. Also, in ancient times, when artists first met their students, they gave students the task of making copies of masterpieces, and the main focus was on the technique of painting. These can be seen in the manuals of Julen, A.T. Skino, V.V. Pukirev, A.K. Savrasov. We also witness how such a wonderfully crafted work of art is so complete and elegant that the portrait of the great Eastern artist Kamoliddin Behzod, Sultan Hussein Boykaro, the king of Khorasan, was created through the technique of simple lines.

### THE MAIN FINDINGS AND RESULTS

The portrait of the protagonist of the work is arranged in a wonderfully harmonious way with the body part, which sits in an oriental sink. Her embroidered royal dress is adorned with floral patterns. This testifies to the fact that the teacher Kamoliddin Behzod was a high-level artist in the fine and applied arts. Figure 1. In the play we see that the law of perspective to be taught in European schools does not follow the requirements of realistic art such as light-shadow relations, but through simple local lines the protagonist is depicted in a form that pleases the tall, slender, delicate-looking beauty. This testifies to the fact that the unique artist of the East Kamoliddin Behzod has a high level of technique and skill in the fine arts [3, 1970].

One of the ways to develop the creative activity of a young teacher-artist in academic classes is to focus on the study of the skills and creative process of mature artists. Famous Uzbek artists U. Tansiqbaev, R. Akhmedov, M. Nabiev, G. Abdurahmonov, Z. Inogamov, A. Mirzaev, B. Jalolov, J. Umarbekov, R. Khudoyberganov, A. Nuritdinov and others, foreign artists Leonardo da Vinci, Salvador Dali, Henri Matisse, Paul Gauguin, Claude Monet, Pablo Picasso, Paul Cezanne, V. Surikov, K. Bryullov, A. Ivanov, V. Shishkin, and others, and the different interpretations of images in the works. By showing maturity, we can thus engage young people in an active creative process. This sometimes does not give sufficient results in the professional training of a future art teacher. Therefore, in addition to the academic tasks performed in the classroom, the educator should be given independent assignments to copy from the exemplary works of great artists as homework. These assignments not only teach the student to depict images more expressively, but also teach how master artists use visual aids. Some theorists see technology as an automated skill, a craft, far removed from creativity. But in reality, technical skill is the pinnacle of creativity. The development of technical skills has a great impact on the creative





activity of a young artist. An artist who does not have professional skills cannot create a perfect artistic image, which means that he cannot successfully solve a given problem.

In many cases, an important issue about the technique of depiction in the professional training of a future artist-educator is sometimes forgotten. It is therefore a mistake to say that the development of technical skills and abilities is not a creative activity is a mistake that has no scientific basis. The professional skills acquired by the student not only determine the quality of his pedagogical, educational process, but also help him to show his creative abilities. Ability is the foundation of any great person's talent.

Many years of scientific research, the results of pedagogical activities and examinations show that hand movement skills and practical exercises in drawing are manifested in three stages:

- Training the hand in different movements and performing a series of separate exercises (circular, semi-circular, vertical and horizontal lines, etc.).
- Achieving free movement of the arm muscles during visual activity.
- Improving the ability of the hand to move freely on the paper surface.
- Develop technical skills in observing and depicting nature.
- Depending on the nature of the task, highlighting the desired areas of the work, drawing light lines on the secondary parts, etc.).

In the elementary courses, the skills are initially expressed very loosely in the student, and then they are strengthened in the process of developing the right skills. It should also be noted that the image must have a 'pattern of action' in order to correct them when errors are made in the imaging process. Well-known psychologist B.F. Lomov writes about skills and abilities: "Skill is built on a complex mental process. Exercises are performed in conjunction with a system of skills appropriate to each type of activity. To achieve this, a person must have possessed only the necessary skills and knowledge system. "Skillful action" is what always determines the success of a job. The system of knowledge in the field of fine arts (law of perspective, proportions of shapes, linear constructive structure, light-shadow relations, shape plasticity, etc.) together with the system of skills determines the student's readiness to solve problems independently [4, 2008].

It is well known that in visual activity, knowledge is manifested in three forms: imagination, skill, ability. Being able to describe skillfully also develops the student's mental movements. To act skillfully means to act "intelligently", to plan work processes independently, to find the most appropriate ways of action in any situation.

Skill and ability differ from each other in some respects, and skill is inherent in the ability to perform an action automatically. Skill, on the other hand, is manifested in solving new problems. It seeks to find the right path in new circumstances, and involves creativity, not just as a return to the skills previously acquired in previous experience. For example, a student who has mastered the rules of fine arts in the educational process and has achieved high rating results may face some difficulties in demonstrating their knowledge in the field practice. Therefore, the process of

acquiring professional skills occurs and improves during continuous creation. It would be wrong to consider this process to be a simple mechanical operation.

Mastering the basics of fine art is a creative process, but it manifests itself differently in each student. In many cases, the low level of technical skills of the student also means the emptiness of his creative activity: the high level of technical skills, on the contrary, means the predominance of his great creative potential. At the same time, it is wrong to confuse the concepts of "drawing technique" and "style". Just as every poet has a unique style in the word and sentence structure of the writer, so does the artist have a unique style, which is related to the inner experiences, characteristics and actions of the creator. There are many technical methods of working with pencils, charcoal, sanguine, ink and other materials in the fine arts, and a certain technique of drawing can be achieved by a student only during a long practice.

Each type of fine art technique has its own characteristics. The student should be able to imagine what results can be achieved in the process of making images using a pencil, charcoal, sanguine, and how to achieve a volumetric, plastic perfect depiction of a particular shape with a single material (simple black pencil). For example, when working with charcoal or sanguine, different techniques can be used in the depiction: in the first case, shaping is limited to the shape, in the second case, the bar is combined with the shading. In the long run, the technique of drawing in the study of etudes and tablets, for example in the depiction of active animals in a zoo, is no longer necessary. This will require other techniques and materials. For example, by replacing a pencil with a pen or brush, the student saves a lot of time and is able to express the shape more fully and meaningfully in the picture.

When we talk about technical skill, we first mean the means of expressing creativity that have a strong meaning. Artistic form can be expressed in different technical ways. The task of the academic picture of education is to be able to apply these technical methods to students and to show them in practice by which methods. For example, the baroque technique of drawing for a graphite pencil is more appropriate, which we see in the artists of the old academic school: for charcoal, sanguine, sanguine - pink color is suitable for drawing larger images. We can see them in the works of famous artists such as Leonardo da Vinci, Albrecht Durer, and Rafael Santi.

However, it is also not possible to prioritize any method of drawing alone. The student can achieve good results on his own initiative, with the method and technical method he wants, and sometimes it is better to use the method suggested by the educator. In such cases, a certain pedagogical skill is required from the teacher, which requires the student to direct the characteristics of individuality in the desired direction. The educator should not try to influence the student and force him or her to work in his or her own way. Often educators, when correcting a student's work, show the technique, not the drawing technique: completing a small part of it and instructing the student to continue in this way, if the student feels that he is working in a different way, then he stops the work and begins to correct the picture of the student again. This style of work of the educator extinguishes the creative initiative of the student. For a young artist to be successful, it is necessary to ensure that his hands, eyes, and thoughts are in order, that his mind directs the movements of the hand, and that the eye checks the correctness of these movements. This simple truth should be known to teachers of fine arts, and should draw the attention of their students to it.

To help the student acquire drawing skills and abilities, he or she should be given special assignments that train his or her hand, eye, and mind. For this exercise to be effective, the following is required: 1) the student's desire to improve the quality of each practical exercise. 2) try to work better every time. 3) take into account the results and understand the reasons for the mistakes made in each task. 4. Self-control. 5) gradually move from simple to complex tasks to complex tasks. 6) proper allocation of time. 7) be critical of their work, be able to recognize the achievements of peer artists around them, and try to touch them. 8) always be a healthy competitor among your teammates.

The study of technical methods is inextricably linked with the nervous system and brain activity. The artist has been carefully preparing his hand movements for many years in the process of performing practical exercises.

These rules are very relevant today and help us to choose the right methodology when working with future artists-educators. The above rules also help to understand the reasons why some students achieve unexpected and intense success in drawing.

In the past, such cases were simply understood as innate talent. Many years of pedagogical experience show that almost every educator identifies a group of very talented students at the beginning of the school year. After that, their number decreases, and in the end only one or two remain. The opposite may be true, as the teacher begins to produce very skilled artists from students he does not trust. This shows that the growth of a young artist, the development of his creative abilities depends not only on his innate, natural talent, but in many respects on his serious and tireless work on himself.

It is also important to properly organize the training sessions and provide them with methodological guidance. The student must master the basics of penmanship, fine arts, as well as prepare himself for pedagogical activities. This is the main purpose of the classes at the Faculty of Fine Arts.

The future artist must be able to properly organize pedagogical training, master the scientific foundations of modern psychology and physiology. Only then can they find more effective ways to work with labs.

In the development of creative abilities and mastery, in freedom of movement and consciousness in drawing, as well as in keeping pace, it is of great importance. Maintaining rhythm during practical exercises not only improves line and tinting techniques, but also helps to see the image correctly and expressively.

Sometimes young people are not able to accurately and clearly depict the constructive shape of a shape when drawing a simple cube or prism. The lines come out crooked, the parallel lines don't match. The shape comes out clear and convincing only if you move the hand to feel the rhythm, draw vertical lines at the same time, and then the side.

This method is especially helpful in drawing a person's head and body. Too many teachers find this mandatory. For example, in order to position the head pieces correctly, the educator suggests that when marking the right cheekbones, mark the left side immediately, mark the right temporal bone and mark the left side immediately, mark the upper border of the right eyelid, and mark the left eyelid border.

However, the development of technical skills should not be carried out in isolation from the scientific basis and creative activity. The hand must do the work; its movements must be subject to the will of the mind. The success of creative activity depends on the precise adaptation of thought and movement processes.

Visualization is a source of information that a painter needs. Therefore, the task of the educator is to direct the student to the active perception of nature, to instruct him in accordance with a specific purpose in the performance of this or that stage of drawing.

## CONCLUSION

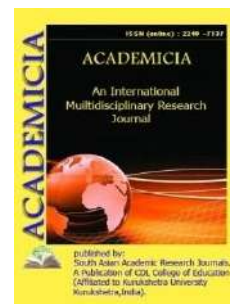
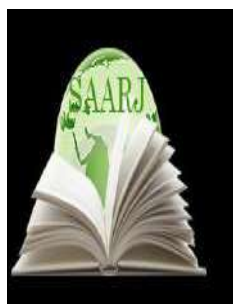
Many years of observation show that the development of creative ability is hindered by the fear of failure at work, being overly demanding. Careful monitoring of student work, the right approach to each of them, allows you to make the desired impact. The educator's praise, encouragement, and respect for his students are beneficial for creative activity. However, the method of motivation is useful only when it is consistent with the emotional attitude, the will of the student, the ability to work, the ability to self-assess.

As the use of different materials is allowed to draw the plates, the painters begin to show their creative abilities in different ways. The one who works with the brush first tries to show the movement of the volume, to show the 'big shape', while the one who works with the pen or the pen tries to use the meaning of the lines in the picture.

Summarizing the above considerations, it should be noted that in order to educate students successfully, the educator must take into account the unique individual characteristics of each of them. Each student requires special attention, and only in this way can the educator achieve great results in the development of creative abilities of his student.

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## ISSUES WITH CONTRACTIONS OF SOME PARTS OF SENTENCE FORMED WITH COMPARATIVE FORM OF PREPOSITIONS “比 Bǐ” IN CHINESE LANGUAGE

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### ABSTRACT

*Comparison sentences are used to express the difference in quality and level, high or low, when made with the help of 比 bǐ prefixes. Basically two people, two objects, or differences in the levels of two states are compared. The words before and after the 比 bǐ prefixes have the same properties and structure. If the words before or after the 比 bǐ prefixes are the same, you can omit one. This article focuses on the fact that certain words are dropped when comparatively expressed with the help of 比 bǐ prefixes, the changes that occur in the sentence as a result of the words falling, and the omitted words do not affect the content of the sentence.*

**KEYWORDS:** *Analogy, Comparison, Analogy, Comparative Degree, Prefix, Object Of Comparison, Subject Of Comparison, Abbreviation, Omission, Keyword.*

### INTRODUCTION

Sentences in the context of comparison are represented by 比较句 *bǐjiào jù* terms in Chinese. If we look at the analysis of this word, 比较 comparisons mean *bǐjiào*, 句 *jù* sentences. There is no Chinese equivalent of the words comparison, analogy, and comparison in Uzbek, all of which are referred to as 比较句 comparisons. [6, 2001]

There are many ways to express the difference or similarity of things and events, states and qualities, and levels in Chinese, and in the research work, the specific construction models of the constructions selected from them, the functions of the sentence are analyzed. In modern Chinese, comparative sentences can be divided into two main groups:



The first group: comparative methods of expressing the difference, high or low, of quality and degree;

The second group: comparative methods of expressing the similarity of the levels of an object, an event, and a state.

## THE MAIN FINDINGS AND RESULTS

In Chinese, comparisons are used to compare how high or low the differences between words, things and events, situations and qualities, and levels are. Helps to make the speech stylistically concise and fluent. In such sentences, comparisons are expressed not only in adjectives, verbs, nouns, but also in adjectives [4, 1986].

In Chinese, there are many types of expressions of differences and similarities between things and events, states and qualities, and levels, and when the object of comparison is compared using 比 *bǐ* prefixes, the cut represents the result of the comparison. It basically puts the object or situation being compared, then 比 *bǐ* prefixes, then the object being compared, and then the result of the comparison, depending on the location. Semantically, the main structure is a case between a section with 比 *bǐ* prefixes and acts as a case in the sentence [3, 1962]. Comparing the differences in quality and level with the help of 比 *bǐ* prefixes, it is mainly done by the following form: [A (Subject) + 比 *bǐ* B (adverbial modifier) + predicate].

By comparing the differences in quality and level through 比 *bǐ* prepositions, if the words before or after the 比 *bǐ* prepositions are the same or similar in meaning, dropping one i.e. reduction will help the sentence to come out smoothly and smoothly. Below we will consider several different methods of their:

**1. The declension of the main word (中心语 *zhōngxīn yǔ* sentence core.** In the sentence, the main meaning is the word, and the sentence revolves around the same word.). If the noun A and B, which came before and after the 比 *bǐ* prepositions, is in the form of the pronoun identifier + 的 *de* the main word is in the form of the noun suffix", if the central parts are also the same, then in most cases the compound element that comes after 比 *bǐ*, that is, the main word "B" can fall. Just enough to keep the 的 *de* from attaching with the handle. For example:

1. 小英的布娃娃比他的(布娃娃)好看

*Xiǎo Yīng de bùwáwabǐtāde(bùwáwa)hǎokàn.*

*Xiao Ying's fabric toy is more beautiful than his fabric toy.*

2. 老虎的爪子比耗子的(爪子)大。

*Lǎohǔ de zhuǎzibǐhàozide(zhuǎzi)dà.*

*A real silk dress is more expensive than her dacron (from her dacron shirt).*

3. 真丝的衬衫比他的确良的(衬衫)贵。

*Zhēnsīde chènshān bǐtādiquè liángde(chènshān)guì.*

*The tiger's paws are bigger than the rat's.*

的 *de* cannot be omitted in these statements. If 的 *de* is omitted, the translation will change. [7, 2008] For example:

小英的布娃娃比他好看。

1. *Xiǎoyīng de bùwáwabǐtāhǎokàn.*



*Xiao Ying's fabric toy is more beautiful than that.*

2. 老虎的爪子比耗子大。

*Láohǔ de zhuǎzibǐhàozidà.*

*The tiger's paws are larger than those of a rat.*

3. 真丝的衬衫比的确良贵。

*Zhēnsī de chènshān bǐ dìquèliánguì.*

*A real silk shirt is more expensive than a dacron.*

Because the appearance of Xiao Ying's soft toy is comparable to that of "him"; The size of a "tiger's claw" and a "mouse's" body can be compared, and the price of a "real silk shirt" and a "dacron" can be compared. This means that if the horse falls after the 11 prefixes in the comparative sentence, the drop of 11 when the rhyme comes with the determiner cannot be omitted, either because the meaning of the sentence has changed [8, 1999].

The abbreviation method cannot be used when the defining keyword refers to kinship. For example:

1. 这些孩子的父母都比你们的父母年轻。

*Zhèxiē háizi de fùmǔ dōu bǐ nǐmen de fùmǔ niánqīng.*

*The parents of these children are all younger than your parents.*

2. 你的弟弟比我的弟弟淘气。

*Nǐ de dìdì bǐ wǒ de dìdì táoqì.*

*Your brother is smarter than me.*

3. 他们的领导比我们的领导能体谅不清。

*Tāmende língdǎo bǐwǒ mende língdǎo néng tǐliàng bùqīng.*

*Their leader is more nationalistic than our leader.*

**2. The omission of the main word and the auxiliary word 的.** Such statements, in turn, are subject to certain grammatical rules, and we can observe several types of them. They are:

1) If A and B are involved in such sentences, then B cannot have a definite article, which means that in addition to the main word, the auxiliary word may also be omitted [9]. That doesn't change the meaning. For example:

1. 他的字比我(的)(字)潦草。

*Tā de zì bǐ wǒ (de)(zì)liáo cǎo.*

*Her hieroglyph is more beautiful than mine.*

2. 王先生的行李比你(的)(行李)多。

*Wáng xiānshēng de xínglǐ bǐ nǐ(de) (xínglǐ) duō.*

*Janob Vanning jamadoni senikidan ko 'p.*

*Mr. Van's suitcase is bigger than yours.*

2) When A, B are used to compare time sequences or different spaces, 的decan usually be omitted. It is enough to keep the identifier of time and space [4, 1986]. For example:

1. 今年他的收成比去年(的)(收成)好多了。

*Jīnnián tā de shōucheng bǐ qùnián de shōucheng hǎoduō le.*

*This year's harvest is much higher than last year's.*

2. 老李这个月的收入比上个月(的)(收入)少。

*Lǎolǐ zhège yuè de shōurù bǐ shànggè yuè de shōurù shǎo.*

*Lao Li's income this month is less than the previous month.*

3. 我们家北京的亲戚比天津的亲戚多。

*Wǒmen jiā Běijīng de qīnqī bǐ Tiānjīn de qīnqī duō.*

*We have more relatives in Beijing than in Tianjin.*

3) If the key words of A and B are a person or thing and an event, it is better to omit it together with the *de*. For example:

1. 南方的夏天比北方(的夏天)热。

*Nánfāng de xiàtiānbǐběifāng (de xiàtiān) rè.*

*Summer in the south is warmer than in the north.*

2. 十年前的我要比现在(的我)更糊涂。

*Shíniánqián de wǒyàobǐxiànzài (de wǒ) gènghútu.*

*Ten years ago I was more confused than I am now.*

**3. Fall of the detector.** In the equestrian phrase A and B, if the determiner is the same and the keyword is different, then the determiner in the part following the 11 preceding auxiliaries may be omitted. [6. 2001] For example:

1. 我看他的法语说的比英语流利。

*Wǒ kàn tā de fáyǔ shuō de bǐ yīngyǔ liúlì.*

*I think he speaks French more fluently than English.*

2. 他的小说比诗歌写得好。

*Tāde xiǎoshuō bǐ shīgē xiědéhǎo.*

*His stories are better written than his poems.*

**4. The omission of a similar part between the determiner and the keyword.** If the descriptive and key words are the same in A and B 2 noun phrases, then we can abbreviate the preceding or following similar parts of prefix 比 *bǐ* [10, 1996]. For example:

1. 你的口头表达能力比(你的)笔头(表达能力)好。

*Nǐde kǒutóu biǎodá nénglì bǐ(nǐ de ) bǐtóu( biǎo dá néng lì ) hǎo.*

*Your speech is better than your ability to express it in writing.*

2. 我们学英语的时间比(我们)学法语(的时间)长。

*Wǒmen xué yīngyǔ de shíjiān bǐ ( wǒ men ) xué fáyǔ ( de shí jiān ) cháng.*

*We spend more time learning English than we do learning French.*

3. 他们 (前进的脚步) 比我们前进的脚步快。

*Tāmen (qiánjìn de jiǎobù) bǐ wǒmen qiánjìn de jiǎobùkuài.*

*We are faster than them.*

**5. The possessive-cut has in simple sentences or the cut-off is dropped.** If there is a simple sentence consisting of a cut with components A and B, and the cuts in the possessive participles are the same, we can shorten the components before or after 比 *bǐ*. If the owners of the cut-offs are the same, then we can reduce it to only after 比 *bǐ* [7, 2008]. For example:

1. 他睡觉比我(睡觉)早。

*Tā shuìjiào bǐ wǒ ( shuì jiào ) zǎo.*

*He goes to bed earlier than me.*

2. 我(吃饭)比他吃饭香。

*Wǒ ( chīfàn ) bǐ tā chīfàn xiāng.*

*Her food is delicious from my meal.*

3. 我学汉语比(我)学日语快。

*Wǒ xué hàn yǔ bǐ (wǒ) xué rì yǔ kuài.*

*Learning Chinese is faster than learning Japanese.*

4. 我住在北京比(我)住在广州好。

*Wǒ zhù zài Běijīng bǐ (wǒ) zhù zài Guǎngzhōu hǎo.*

*I live better in Beijing than GuangJoo.*

Sentences 1-2 in these examples can be changed as follows: 他比我睡觉早 *tā bǐ wǒ shuì jiào zǎo*, 我吃饭比他先 *wǒ chī fàn bǐ tā xiāng*. Sentences 3-4 cannot be changed. That is, 学汉语比我学日语快 *xué hàn yǔ bǐ wǒ xué rì yǔ kuài*, 住在北京比我住在广州好 *zhù zài Běijīng bǐ (wǒ) zhù zài* cannot be said. Abbreviations cannot be used if both the possessive and the participle are in the same word and the participle is not the same. For example:

你吃盐比他吃米多。

*Nǐ chī yán bǐ tā chī mǐ duō.*

*You eat more salt than you eat rice.*

**6. When “A 比 B” occurs, the front part A of the 比 bǐ front auxiliaries falls.** The words “A 比 B” compare the state of the same event at different times and in different places. Part A can be abbreviated if the preceding part of 比 bǐ prefixes means 现在(now), 当时(then), 在这里(here). For example:

1. 微风起来,吹动她的短发,确乎比去年白得多了。(现在)

*Wēi fēng qǐ lái, chuī dòng tā de duǎn fā, què hū bǐ qù nián bái dé duō le. (xiànzài)*

*The wind was blowing and her short hair was fluttering, and it was really much whiter than last year. (now)*

2. 我的身体比前好多了。(现在)

*Wǒ de shēn tǐ bǐ qián hǎo duō le. (xiànzài)*

*I am much healthier than before. (now)*

3. 今天我们比第次谈得多。

*Jīn tiān wǒ men bǐ dì cì tán dé duō.*

*We talked more today than we did the first time.*

4. 这几个孩子都比在那里听话。(在这儿)

*Zhè jǐ gè hái zǐ dōu bǐ zài nà lǐ tīng huà. (zài zhèr)*

*These guys are smarter than they were there. (here)*

**7. If both A and B are simple verbs or adjectives, the word will not fall.** If both parts A and B are all verb conjunctions or adjective conjunctions and consist of the same components, then they are not abbreviated in most cases [11, 2013]. For example:

1. 长一点比短一点好。

*Cháng yì diǎn bǐ duǎn yì diǎn hǎo.*

*A little length is better than a little short.*

2. 有文化比没有文化好。

*Yǒu wén huà bǐ méi yǒu wén huà hǎo.*

*The presence of culture is better than the absence of culture.*

In the case of the above example, or when the situation in the language is understandable. We can also drop the component before the 比***bǐ*** prefixes.

## CONCLUSION

The results of the article analysis came to the following conclusions:

- the purpose of comparing certain events, phenomena, characters, properties to each other is to determine the difference between them or to contradict them, to show that they are incompatible with each other. 比 the preposition is used to denote the difference between the quality and the degree, high or low, and is mainly used in the mutual comparison of the difference in the levels of two persons, two subjects or two cases;

- If the object of comparison is being compared using 比***bǐ*** prefixes, the cut represents the result of the comparison. It basically puts the object or situation being compared, then 比***bǐ*** prefixes, then the object being compared, and then the result of the comparison, depending on the location.

If the words before or after the 比 prefixes are similar, the part after the 比 prefixes is usually omitted. It does not affect the content of the sentence and helps to make the sentence concise and fluent;

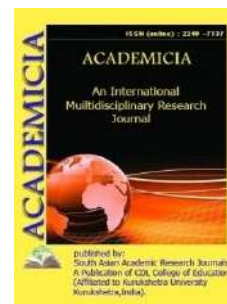
- The problem of missing some words occurs in eight different cases. These include the omission of the main word, the omission of the auxiliary word, the omission of the determiner, the omission of the similar part between the determiner and the main word, the omission of the possessive in simple sentences, or the omission of the participle, [A 比B] + case The issue of the fall of the “A” section before the 比***bǐ*** front assistants was considered in detail.

- However, if both A and B are simple verbs or adjectives, the fact that the words do not fall out shows the uniqueness of this construction. When the comparative sentences were expressed through 比 prefixes, it was found that the problem of dropping some parts of the sentences differed from other comparative constructions in its variety and convenience to the speaker.

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## A STUDY ON CORNEAL COLLAGEN CROSS-LINKING EFFECT ON QUALITY OF LIFE IN BULLOUS KERATOPATHY PATIENTS

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### ABSTRACT

**Aim:** To evaluate the effect of corneal cross-linking (CXL) on quality of life in patients with bullous keratopathy. **Methodology:** Ten patients with painful bullous keratopathy to whom CXL treatment was applied were included in the study group. Ten consecutive patients with painful bullous keratopathy who didn't accept CXL treatment were admitted as the control group. SF-36 (Short Form-36) questionnaire was performed to all patients at baseline, and repeated at 1, 3, 6 and 12 months. **Results:** A significant improvement in "Physical Functioning" and "Vitality" subscales starting from the first month after CXL treatment, continuing upto the postoperative 6th month ( $p=0.04$ ,  $p=0.01$ , respectively) was achieved. An improvement in "Bodily Pain" subscale was achieved starting at the 3rd month, and continued until the 6th month, but did not carry on upto the 12th month ( $p=0.01$ ,  $p=0.01$ ,  $p=0.02$ , respectively). Improvements in "General Health" and "Social Functioning" subscales at 6th month ( $p=0.04$ ,  $p=0.01$ , respectively), and "Mental Health" at 3rd month ( $p=0.01$ ) were obtained. Unfortunately, there was a deterioration in "Physical Functioning", "Bodily Pain", "General Health", "Vitality" and "Social Functioning" subscales starting from the 6th month, with statistically significant variations between the 6th and the 12th months ( $p=0.02$ ,  $p=0.02$ ,  $p=0.01$ ,  $p=0.02$ ,  $p=0.01$ , respectively). In the control group, there was a significant deterioration in "Physical Functioning", "Bodily Pain", "General Health", and "Social Functioning" subscales between baseline and the 12th month ( $p=0.02$ ,  $p=0.04$ ,  $p=0.02$ ,  $p=0.03$ , respectively). **Conclusions:** CXL may be a useful



*alternative method in symptomatic treatment of bullous keratopathy by temporarily improving the quality of life.*

**KEYWORDS:** *Bullous Keratopathy, Collagen, Cornea, Cross-Linking, Quality Of Life, SF-36.*

## INTRODUCTION

Corneal cross-linking (CXL) is an innovative approach to increase the mechanical and biochemical stabilities of the corneal stroma to halt keratoconus progression (1-3). The aim of CXL is to create new chemical bonds inside the corneal stroma tissue by application of riboflavin (vitamin B2) and ultraviolet A light (UVA, 370 nm). The light-induced production of oxygen radicals results in the formation of additional chemical bonds between collagen fibrils to induce stiffening of the cornea. Although, the genesis aim of CXL procedure was the treatment of keratoconus, a role for CXL has also been suggested for other forms of corneal ectasia and a number of non-ectatic corneal diseases, such as infectious keratitis, bullous keratopathy, and corneal ulcers (4).

Bullous keratopathy, caused by endothelial dysfunction, leads to chronic corneal edema, epithelial bullae, recurrent erosions, and subsequent visual impairment and ocular discomfort (5). With the [deterioration](#) of the endothelial pump function, fluid accumulates in the extracellular spaces between the collagen fibers and lamellae. CXL reduces this corneal edema by inducing more concentrated cross-linked fibers and reducing possible gaps for fluid accumulation (5-8). Due to these potential utilities, CXL has been suggested as a promising alternative method in managing bullous keratopathy by reducing ocular discomfort, increasing visual acuity and probably postponing or even eliminating the need for corneal transplantation (5-7).

Recently, assessing quality of life with general purpose or disease specific questionnaires has become popular. Health-related quality of life is defined as “health included physical, psychological and social areas that are affected by different areas such as person’s experiences, beliefs and expectations”. Health-related quality of life is important for measuring the impact of the diseases to persons lives (9). Short Form 36 (SF-36) is a general purpose quality of life scale that provides extensive measurements (10). The scale is easy to apply and it has a wide range of use (11).

In the present study we evaluated the effects of UVA CXL following intrastromal 0.1% riboflavin administration on quality of life and visual acuity in patients with bullous keratopathy.

## METHODOLOGY

This prospective, comparative, single-center, nonrandomized cohort study was conducted between June 2011 and February 2013. Ten *patients with unilateral painful bullous keratopathy waiting for corneal transplantation were included in the study group*. Ten consecutive patients with painful bullous keratopathy who didn’t accept CXL treatment, were admitted as the control group. Patients with active corneal infection, history of herpetic keratitis or chemical injury, pregnancy, autoimmune or connective tissue diseases were excluded.

Besides routine examination (best corrected visual acuity (BCVA), slit-lamp biomicroscopy, intraocular pressure (IOP) measurement) SF-36 questionnaire was also performed to all patients at baseline. All examinations and the SF-36 questionnaire were repeated at 1, 3, 6 and 12 months

after baseline for the control group and after CXL treatment for the study group. BCVA was measured on a decimal scale and converted to the logarithmic scale [logarithm of the minimum angle of resolution (logMAR)].

Each CXL procedure was performed by the same operator (EK), according to the same protocol. The patients were treated in an operating room under topical anesthesia. Mean operation time was defined as one hour. Eye drop instillation preceding treatment consisted of one drop %0.5 proparakain HCl (Alcaine®, Alcon, Fort Worth, Texas, USA), beginning 5 minutes before the procedure. After applying Betadine antiseptic solution and setting the sterile field with a blepharostat, the central corneal epithelium was mechanically debrided with a 15 blade, over a 9-mm diameter. The cornea was impregnated with a photosensitizing solution of riboflavin 0.1% with 20% dextran T500 (Ricrolin®, SOOFT, Montegiorgio, Italy) by corneal instillation at a rate of one drop in every 2 minutes for 20 minutes. After verification of the UVA laser source unit's calibration using a UVA power meter, the corneal collagen was polymerized for 30 minutes (Vega CBM X-Linker, CSO, Italy LED-UVA single 370-nm beam, 3 mW/cm<sup>2</sup> ± 10%, 5.4 J/cm<sup>2</sup>). The UV beam's focus was checked initially with an aiming beam produced by 2 centering LED (644 nm), and the irradiation was stopped automatically in every 5 minutes for checking the correct focalization of the UV beam. During this second step, riboflavin was instilled regularly to maintain its stromal concentration. After abundant rinsing with balanced salt solution and instillation of one drop of tobramycin (Tobrex®, Alcon, Fort Worth, Texas, USA), a soft bandage contact lens was placed. Postoperative treatment included topical tobramycin four times daily until closure of the epithelial defect, and topical artificial tears (Refresh Tears®, Allergan, Irvine, CA) for at least 1 month. All patients were seen again on the first and the 7th postoperative days, to assess epithelial healing and the absence of infectious complications and to remove the bandage contact lens.

Statistical analyses were performed using SPSS 15.0 (SPSS Inc, Chicago, Illinois). Normal distribution assumption couldn't be accepted for some parameters according to the Shapiro Wilks W-test. Therefore, non-parametric tests were used. Evaluation of intragroup inter temporal changes were evaluated by the Friedman test. When statistically significant results were obtained by the Friedman test, Wilcoxon test was used for dual comparison. Intergroup comparisons were conducted by U-Test (Mann-Whitney) and Chi-Square test. Results were presented as mean ± standard deviation (SD), median, minimum-maximum values. In all analyses, p<0.05 was considered statistically significant. This study was performed in accordance with the principles of the Declaration of Helsinki, after *Ege University* Ethical Committee approval. Written informed consent was obtained from all patients participating the study.

## RESULTS

Mean age of the study and the control groups were 61.5 ± 18.2 (range, 30-79) and 60.4 ± 17.7 (range, 30-80) years, respectively (p=0.9). Male to female preponderance in the study and the control groups were 7:3 and 6:4, respectively (p=1.00). Mean preoperative BCVA in the study and the control groups were 2.29 ± 0.9 (range, 0.52-3.10) and 2.27 ± 0.9 (range, 0.80-3.10) logMar, respectively (p=0.9). Mean preoperative IOP in the study and the control groups were 18.3 ± 6.6 (range, 12-30) and 14 ± 1.4 (range, 12-16) mmHg, respectively (p=0.1). In the study group, 5 patients had pseudophakic bullous keratopathy, 3 glaucomatous bullous keratopathy and 2 aphakic bullous keratopathy, while the control group consisted of 7 pseudophakic bullous

keratopathy, 2 glaucomatous bullous keratopathy and 1 aphakic bullous keratopathy. No statistically significant variation in BCVA and IOP between pre- and postoperative 12 months were detected in the study group (respectively;  $p=0.6$ ,  $p=0.06$ ). No complications due to CXL occurred in the study group.

When scores of SF-36 questionnaire were evaluated for the study group a significant improvement in “Physical Functioning” and “Vitality” subscales starting from the first month after CXL treatment ( $p=0.04$ ) continuing upto the 6th month of the therapy ( $p=0.01$ )(Table 1) was observed. An improvement in “Bodily Pain” subscale was achieved starting at the 3rd month after CXL, and continued until the 6th month ( $p=0.01$ ,  $p=0.01$ , respectively), however this improvement did not carry on until the 12th month ( $p=0.02$ ). Improvements in “General Health” and “Social Functioning” subscales at the 6th month ( $p=0.04$ ,  $p=0.01$ , respectively), and “Mental Health” at the 3rd month ( $p=0.01$ ) were obtained. Unfortunately, there was a deterioration in “Physical Functioning”, “Bodily Pain”, “General Health”, “Vitality” and “Social Functioning” subscales starting from 6th month, with statistically significant variations between 6th and 12th months ( $p=0.02$ ,  $p=0.02$ ,  $p=0.01$ ,  $p=0.02$ ,  $p=0.01$ , respectively). No statistically significant differences were noted in “Role-Emotional” and “Role-Physical” subscales ( $p=0.2$ ,  $p=0.5$ , respectively).

In the SF-36 scale evaluation of the control group, a significant deterioration in “Physical Functioning”, “Bodily Pain”, “General Health” and “Social Functioning” subscales between baseline and at 12th month were encountered ( $p=0.02$ ,  $p=0.04$ ,  $p=0.02$ ,  $p=0.03$ , respectively) (Table 2). It was observed that “Physical Functioning” and “General Health” subscales started to deteriorate by the 6th month in the control group ( $p=0.03$ ,  $p=0.02$ , respectively). No statistically significant difference was noted in any of the other subscales.

## DISCUSSION

Bullous keratopathy is one of the leading indications for keratoplasty all over the world (6,12). Although, the main indication for keratoplasty in these patients is visual loss due to hazy cornea, the secondary indication for keratoplasty is the disabling pain that restricts their daily life. Bursting of epithelial bullae causes significant pain, tearing and conjunctival hyperemia by leading corneal nerve endings to expose (13). CXL offers an alternative approach for reducing ocular pain by limiting the occurrence of macro- and microbullae. This treatment method may provide the greatest benefit to patients by reducing their pain (5-7).

As pain is one of the most important human senses, it is almost the most common complaint in clinical practice. Pain is accepted as a complex interaction including physical, behavioral, emotional and cognitive dimensions (14). Persons react differently to pain, moreover their pain durability and accepting that pain may also vary. It may be considered that all of this reflect on their quality of life (15). Having negative cognitions, affect the emergence of pain, such as playing a role in the perception of pain, pain severity and quality of life (16) The course of pain and quality of patients heal by the development of positive and effective cognitions, and starting to use appropriate dealing ways (15,17).

Herein, we used SF-36 questionnaire evaluating the general quality of life scale for all patients. One of the most important features of this scale is its self-evaluation format. Moreover, it can be completed within five minutes, and both negative and positive aspects of health status can be evaluated with this test (18). The questionnaire consists of 36 items which assess eight health

concepts: physical functioning (PF-10 items), role limitations due to physical problems (RP-4 items), bodily pain (BP-2 items), general health perception (GH-5 items), vitality (VT-4 items), social functioning (SF-2 items), role limitations due to emotional problems (RE-3 items), and mental health (MH-5 items) (10). These 35 items evaluate the last 4 weeks of the person. SF-36 also includes one more item – which is not used in the measurement - that assess changes in respondent's health status during the past year (10). Extensive background information on the SF-36, as well as standard scoring algorithms and interpretation guides are available in the literature (4,12,18). For each tested quality of life domain, item scores are coded, summed, and transformed into a scale from 0 (worst) to 100 (best) using the standard SF-36 scoring algorithms (18). SF-36 was translated into Turkish and validation studies of Turkish version of SF-36 were carried out in 1999 by Kocyigit et al (19).

To the best of our knowledge, no publication in the literature has ever evaluated patients with bullous keratopathy during 1 year with an objective quality of life scale, such as SF-36. In 2008, Krueger et al (7) performed CXL on a patient with advanced bullous keratopathy for the first time, and reported that a follow up of 6 months demonstrated a pain decrease in the patient (7). In another study, CXL was performed in 3 patients with bullous keratopathy and the bullous changes of the epithelium markedly improved in the following 8 months, resulting in loss of pain and discomfort in all patients (5). However, no objective evaluation scale was used in neither of these studies(5,7).

Ghanem et al (6) performed CXL on 14 painful patients with pseudophakic bullous keratopathy and used “National Pain Education Council” for the measurement of ocular pain intensity. They reported a significant reduction in pain scores at the first month, but this improvement declined and returned back to baseline values by the 6th month (6). After CXL treatment, the scores for “Physical Functioning”, “Vitality”, and “Bodily Pain” subscales improved significantly, however distinct from Ghanem et al’s study, these improvements started at the 3rd month and continued upto the 6th month.

The earlier improvement in “Physical Functioning” and “Vitality” subscales than “Bodily Pain” subscale might be caused by the psychological relaxation related to receiving a treatment during this time. Similar to “Bodily Pain” subscale, “Mental Health” subscale also improved at the 3rd month. However, “General Health” and “Social Functioning” subscales improved by the 6th month. This improvement delay in these subscales might be related to the warily approach after the treatment. The earlier higher scores for “Mental Health” subscale support the effect of pain on mental health. The deterioration in “Physical Functioning”, “Bodily Pain”, “General Health”, “Vitality” and “Social Functioning” subscales after 6 months, goes along with the temporariness of the treatment.

In the control group, a significant deterioration in “Physical Functioning”, “Bodily Pain”, “General Health” and “Social Functioning” subscales between baseline and 12 months after was determined. These results promote the quality of life getting worse in the course of bullous keratopathy.

Some studies report that in patients with bullous keratopathy CXL treatment might induce an increase in BCVA (6,7,20). Ghanem et al (6) observed an increase in BCVA at first month, but there was no difference between the 6th month and baseline values. Kozobolis et al (20) also observed a significant improvement in BCVA, in two patients with bullous keratopathy and

ulcerative keratitis after CXL treatment. Kruger et al (7) reported one case with a significant improvement in BCVA at the 6th month of CXL treatment. However, we detected no significant difference in BCVA of the treated patients.

The results of this study support that CXL is successful in the symptomatic treatment of bullous keratopathy by temporarily improving the quality of life. CXL may become a useful alternative method in the treatment of bullous keratopathy by extending the time of keratoplasty, particularly in patients with limited visual prognosis.

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**TABLE 1. SF-36 SCORES AFTER CXL TREATMENT**

	<b>Pre-op</b>	<b>Post-op 1. month</b>	<b>Post-op 3. month</b>	<b>Post-op 6. month</b>	<b>Post-op 12. month</b>	<b>P</b>
<b>Physical Functioning</b>	55.5±34.5 (70) (0-95)	65.5±30.2 (80) (15-100)	71.5±29.3 (85) (20-100)	73±24.2 (82.5) (25-100)	60±28.7 (70) (10-90)	<b>0.01</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month 6. month – 12. month					<b>0.01</b> <b>0.02</b> <b>0.04</b> 0.7 <b>0.02</b>
<b>Bodily Pain</b>	44.2±25.9 (43.7) (0-77.5)	61.2±31.6 (56.2) (0-100)	69.2±29.5 (72.5) (0-100)	69.2±27.7 (72.5) (0-100)	53.5±27.3 (56.2) (0-90)	<b>0.001</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month 6. month – 12. month					0.05 <b>0.01</b> <b>0.01</b> 0.2 <b>0.02</b>
<b>General Health</b>	48±11.8 (45) (35-70)	48.5±15.1 (45) (35-80)	54.5±19.7 (47.5) (35-90)	56.5±17.6 (52.5) (35-90)	48±11.8 (45) (35-70)	<b>0.01</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month 6. month – 12. month					0.7 0.2 <b>0.04</b> 0.9 <b>0.01</b>
<b>Vitality</b>	50±13.7 (47.5) (35-80)	61±20.3 (55) (35-95)	64.5±16.4 (60) (45-85)	62.5±14.9 (60) (45-85)	51.5±11.3 (50) (35-75)	<b>0.002</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month					<b>0.01</b> <b>0.01</b> <b>0.01</b>



	Pre-op - 12. month 6. month – 12. month					0.5 <b>0.02</b>
<b>Mental Health</b>	60±19.4 (66) (28-80)	64.4±16.7 (68) (36-84)	72.4±14.5 (70) (52-96)	71.6±11.9 (70) (52-88)	58.4±14 (66) (36-72)	<b>0.003</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month 6. month – 12. month					0.2 <b>0.04</b> 0.06 0.5 0.1
<b>Social Functioning</b>	51.2±29.7 (50) (0-100)	60±29.3 (62.5) (12.5-100)	71.2±20.4 (68.7) (37.5-100)	82.5±17.8 (81.2) (50-100)	58.7±28.2 (50) (25-100)	<b>0.002</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month 6. month – 12. month					0.09 0.08 <b>0.01</b> 0.1 <b>0.01</b>
<b>Role-Emotional</b>	30±36.6 (16.6) (0-100)	40±43.8 (33.3) (0-100)	50±45.1 (66.6) (0-100)	50±45.1 (66.6) (0-100)	30±39.9 (0) (0-100)	0.5
<b>Role-Physical</b>	30±36.8 (12.5) (0-100)	35±41.1 (12.5) (0-100)	35±41.1 (12.5) (0-100)	37.5±44.4 (12.5) (0-100)	30±34.9 (12.5) (0-75)	0.2

\*It's showed that mean±SD values at the first line, median values at the second line and minimum-maximum values at the third line.

\*\*p<0.05 was considered statistically significant and are showed in bold.

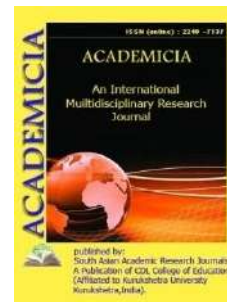
**TABLE 2. SF-36 SCORES IN THE CONTROL GROUP**

	<b>Pre-op</b>	<b>Post-op 1. month</b>	<b>Post-op 3. month</b>	<b>Post-op 6. month</b>	<b>Post-op 12. month</b>	<b>P</b>
<b>Physical Functioning</b>	80.5±31.2 (95) (0-100)	79±32 (95) (0-100)	76±31.9 (92.5) (0-100)	76.5±31.1 (90) (0-100)	75.5±31.1 (90) (0-100)	<b>0.01</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month					0.1 0.06 <b>0.03</b> <b>0.02</b>
<b>Bodily Pain</b>	41±21 (38.7) (12.5-67.5)	39±22.3 (33.7) (12.5-67.5)	39±23.5 (38.7) (0-67.5)	39±23.5 (38.7) (0-67.5)	30.2±31 (27.5) (0-67.5)	<b>0.01</b>
	Pre-op - 1. month					0.1

	Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month					0.5 0.5 <b>0.04</b>
<b>General Health</b>	52±30.6 (62.5) (5-90)	52±27.8 (57.5) (10-90)	48.5±24.1 (55) (10-75)	46±26.5 (57.5) (5-70)	44±24.8 (57.5) (5-65)	<b>0.04</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month					1 0.3 <b>0.02</b> <b>0.02</b>
<b>Vitality</b>	53.5±19.4 (52.5) (10-85)	50±21.9 (47.5) (5-90)	51±24.2 (47.5) (0-90)	51±21.1 (50) (5-85)	49±14.6 (45) (25-80)	0.08
<b>Mental Health</b>	57.6±14.6 (58) (36-76)	54±16.9 (56) (28-76)	55.6±18.4 (56) (32-76)	53.2±19.7 (48) (20-80)	52.8±14.7 (48) (36-72)	0.2
<b>Social Functioning</b>	58.7±18.6 (62.5) (12.5-75)	62.5±16.6 (68.7) (25-75)	61.2±19.9 (68.7) (12.5-75)	61.2±19.9 (68.7) (12.5-75)	51.2±18.1 (56.2) (12.5-75)	<b>0.000</b>
	Pre-op - 1. month Pre-op - 3. month Pre-op - 6. month Pre-op - 12. month					0.08 0.1 0.1 <b>0.03</b>
<b>Role-Emotional</b>	50±52.7 (50) (0-100)	50±55.7 (50) (0-100)	50±53.6 (50) (0-100)	50±52.8 (50) (0-100)	50±53.4 (50) (0-100)	0.5
<b>Role Physical</b>	42.5±47.2 (25) (0-100)	42.5±45.3 (25) (0-100)	42.5±47.4 (25) (0-100)	42.5±48.2 (25) (0-100)	42.5±46.4 (25) (0-75)	0.4

\*It's showed that mean±SD values at the first line, median values at the second line and minimum-maximum values at the third line.

\*\*p<0.05 was considered statistically significant and are showed in bold.



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## ON ANALYSIS OF SPEECH BASED ON THE TRANSFORMATION MODEL

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### ABSTRACT

*This article explores the transformational model and its role in linguistics. The focus is on the analysis of the objects listed below.*

**KEYWORDS:** *Transformation, Application Model, Conversion, Nominalization, Derivation Process, Invariant and Variant*

### INTRODUCTION

The selective application of syntactic structures in the speech process occurs, of course, mechanically. This is because the speaker never thinks about which structural form to use when composing a sentence in his native language. He uses the necessary syntactic structures based on his speaking skills and experience. Of course, such an opportunity is inextricably linked to the speaker's many years of experience and skill. This is exactly what the speaker refers to the basic (nuclear) devices and the transformations that occur on their basis.

Since we are using the concept of transformation, we first have to give it a brief explanation. Transformation is directly related to the concept of meaning, because the transformation occurs only when the syntactic structures formed on the basis of a certain basic structure are common in content. This, in turn, requires that all syntactic structures formed in the transformation process be common in content. Such syntactic structures are called *transformations*.

### MAIN RESULTS AND FINDINGS

It is known that the theory of transformation was introduced into consumption by American scientists. This was based on the research work of linguists such as Z. Harris, N. Chomsky. By transformation, they mean the formation of other derivative structures while preserving the content of a particular given sentence. According to Z. Harris, there should be a lexical

commonality between the transformed sentence and its transformations (derivatives). The scholar also notes that the transformations with the main sentence must be semantically the same [1.237]. However, with some exceptions, he argues, affirmations and interrogations can also be studied as transformations.

In the theory of Z.S. Harris, we read the following: "We must consider the factor of meaning. Because the semantic weight does not change in the transformation. If a difference is observed between two structures that are in a transformational relationship with each other, this difference may be in the external grammatical status. For example, if NVN requires sentence status, NSVing N represents a group of nouns in the status of a phrase. It can also be observed that there are emphatic and stylistic differences between the transformations. We see this phenomenon in the active and passive forms of speech. Among some transformations, however, semantic differences based on specific morphemes are also observed. For example, the semantic inconsistency between the affirmative and the interrogative forms of speech can be a proof of this. "

However, in our opinion, the study of sentences that are not common in meaning in the form of transformations can cause some inconsistencies. Commenting on this, N. Turniyazov notes: "... what is problematic for researchers in describing the phenomenon of transformation is the question of meaning. This is because in some research papers, this interpretation of statements and interrogative pronouns or command and interrogative pronouns (i.e. in the form of transformations - R.S.) obscures the description of the issue a bit. In our opinion, the emergence of the phenomenon of transformation must fully comply with the commonality of meaning between the transformations "[2; 61-62].

Nevertheless, as Harris's theory of transformation has become popular, in many cases affirmation, interrogation, and command are studied as mutually transformational. For example, J. Buronov gives the following statements in the form of transformations:

- *The doctor is coming*
- *Is the doctor coming?*
- *The doctor will see the patient*
- *Whom will the doctor see?*
- *When will the doctor see the patient?* [3;50].

In our view, it is not a mistake to look for the point of intersection of the transformational model with the applied model in relation to the components of the transformers. However, we think that the main focus should be on the expansion or contraction of syntactic forms of transformations. For proof, let's look at the following example:

1. *These words of his mother aggravated the disappointment in the middle (H. Gulom. Tashkent residents).*
2. *Alijon did not dare to answer this question (H. Gulom. Tashkent residents).*

The following transformations can be made on the basis of the material of the first of the given examples:

1. The frustration in the middle was aggravated again by these words of the mother.

2. The sadness in the middle is aggravated again by the words of the mother.

At the same time, we first use a *conversion* transformation, in which we observe a change in the syntactic functions of the components of the sentence: instead of the possessive in the first preposition, we see that the word disappointment in the transformation (in the middle) performs a syntactic function. In the second transformation, we observe that the sentence is replaced by a phrase and a *nominalization* transformation is used.

In the second of the examples given, a similar derivative situation is observed:

- This question made Alijon, who did not dare to answer, think.
- Alijon can't answer the question.

It appears that at the level of each of the transformations generated in the derivation process, the components are connected in a uniquely applicable manner. If we pay attention to the second of the transformations of the given sentences, that is, the nominalization transformation, we observe that the number of components of the transformations is reduced by one or two, and on this basis we can prove the intersection of the transformative model with the applicative model. However, such a situation is not observed in the first transformations of both sentences, since the number of components in them is common to the number of components in the main sentences.

According to M.V.Vsevolodova, the transformational paradigm requires a kind of communicative paradigm. If we approach the problem description from this point of view, then we see that the environment also plays an important role in the relationship between the applied model and the transformational models. In this process, additional distribution in particular has a special influence. Naturally, the statements that can be formed in a particular speech environment are surrounded by and subject to the distributive and cognitive-pragmatic factors inherent in that environment. We can explain this by the example of the basic statements discussed above and their transformations.

Each speech distribution creates conditions for the formation of transformations. In this process, of course, there is also the opportunity for the intersection of applicative and transformational models. Of course, the emergence of such an opportunity is inextricably linked not only with the distribution of speech, but also with the style of speech of the speaker. We can easily observe this in the fact that everyone uses different syntactic structures to express a particular idea. For example:

- Ёз кечалари қисқа. Қоронғи тушгунча алламаҳал бўлиб қолади. (Х.Ғулом. Тошкентликлар).
- Meaning: Summer nights are short. It will be late until dark. (H. Gulom. Tashkent residents).

In this case, the applicative connection of the components of the first sentence takes place within the subject-predicate relationship, while in the second sentence, in addition to the subject-predicate relationship, the "-cha" applicator is also involved. It is observed that the components of the sentences given in this way are interconnected within their own levels.

The first of these statements requires a basic structure in terms of derivation, and the second requires a derivative structure (i.e., a derivative). The derivation process is used by the speaker in a specific way to convey a particular idea. In other words, an idea is expressed through two

syntactic devices. However, the distributive environment in which the derivation process takes place also provides an opportunity for the formation of several more syntactic devices. This can be called an additional distributive opportunity:

1. *Because summer nights are short, it stays late until dark.*
2. *Summer nights are short and stay late until dark.*
3. *Summer nights are short so it gets late until dark.*
4. *The reason it stays late until dark is because the summer nights are short.*

It seems that the transformational model currently creates five different possibilities for expressing an idea, and therefore, in addition to invariant devices (in addition to basic structures), the syntactic paradigms of transformations can also be easily applied in speech. This, in turn, also allows the speaker to select syntactic structures.

When we talk about the transformation model, it is also important to note that all types of transformation can be interchangeable. In the examples given above, we have seen that *conversion* and *nominalization*, as well as types of transformation called *contamination*, can partially replace each other. But this should not be seen as a permanent opportunity. This is because the exchange of transformations that can take place in some derivative environment is in some cases impossible. [4;90].

1. *Jamil blushed with anger (Oybek. Childhood).*
2. *The coolness of the morning breeze gives peace of mind (Oybek. Childhood).*
3. *Azam and I are going in a car (Oybek. Childhood).*

Transformations of sentences:

1. *It was Jamil who blushed with rage - Jamil blushed with rage.*
2. *Hearts rest from the coolness of the morning breeze - Rest of the souls from the coolness of the morning breeze.*
3. *We are going in a car.*

At the same time we see that the transformational possibilities of the first and second sentences are the same. In other words, in both cases, the conversion and nominalization types of the transformation take a derivative direction. However, in the next example, we observe that there is only a way for substitution (exchange).

It should be noted that in none of the types of transformations, called conversion, substitution, nominalization, we can not observe the true intersection of the transformative model with the applicative model, and in these cases the problem of expanding the syntactic form of speech is not reflected. However, a relatively different picture emerges in the type of transformation called contamination. [5;40]. For example:

1. *A bonfire on the street. Poplar and apricot sarjins are burning (Oybek. Childhood).*
2. *Surprised by this news, Oynisa had to look towards the pulpit (H. Gulom. Tashkent residents).*



In the first of the given examples, no contamination transformation took place. To make it happen, you have to mix two independent sentences, small and large, according to the applicative connection of the components:

*Poplars and apricots are burning in the street fire.*

In this transformation, the applied model and the transformational models literally intersect. At the moment, in our opinion, the application model is rising to its highest level. Indeed, it is not only the applicative connection of words that occurs, but also the applicative relationship of the two sentences, and at the same time the applicative model intersects with the transformation. Of course, transformation does not happen by itself. Its formation is based on certain means. In this case, the affix

“-da”, which is added to the word bonfire, acts as an applicator that provides transformation.

In this case, the transformation process takes the form of the following formula:  $P_1 + P_2 = P_3$

The extended form of the symbols given in the formula allows us to form an idea of the formal operation showing the intersection of the applied model with the transformational model.:

$P_1 = N_1 X N_2$ ;  $P_2 = X_1 X_2 X_3 N X_4 V$ ;  $P_3 = X_1 X_2 X_3 N X_4 X_5 X_6 V$ .

At the same time, the intersection of applicative and transformational models is simultaneously leading to an expansion of the syntactic form of speech. The formation of a complex structure from the intermingling of two sentences of this type is called the method of synthesis. Apparently, at the same time, the fact that the applicative model has undergone a transformation and thus demonstrated inter-sentence activity is an indication that it has not only some sort of tool, but also a large synergistic weight. True, the concept of synergetics means self-management. However, we can observe the same in the system-structural relationship of language units within the applicative model.

It should be noted that in the process of intersection of the applied model with the transformational model, it is necessary to correctly determine the syntactic model of the sentence and the syntactic positions of its components, because it is very important in the formation of synonymous transformations [6; 57-58]. In other words, the interpretation of the question of which of the components of the material being transformed, in particular, which of the statements involved in this process are in the function of the basic structure and which is to follow it, always requires serious attention. This is because in the process, some of the words being transformed also change their linguistic status. In this case, the sentence can become a phrase or serve as an identifier of one of the components of the base sentence. Moreover, as we have seen above, it is not always possible to form complex sentences from elementary sentences by means of an application model. Perhaps it is also possible to obtain information about their applicable related components by converting complex sentences into elementary sentences.

Naturally, we see that the interaction of two simple sentences within an applicative model always leads not only to the syntactic derivation of complex simple sentences, but also to the formation of compound sentences (complex syntactic devices). All such operations are inextricably linked with the cognitive-pragmatic environment (situation) that prevails in the process of intersection of the applicative model with the transformational model. Evidence of opinion can be observed in the speaker's style of speech and in his choice of syntactic models:

1. A low plank climbed over the wall and landed in the yard. There is no living soul. (Oybek. The sun does not darken).

2. The tortoise is crawling. Their necks are crooked, their eyes are dead (A.Mukhtor. Maple tree).

In both of the examples given, we see a specific way of speaking. Because at the same time the syntactic structures that can easily fit into the structure of a sentence are given by the speaker in the form of separate sentences. These statements can be combined through a transformation that takes place through an applied model. This, in turn, suggests that messages conveyed within a cognitive-pragmatic environment (situation) may occur in other ways:

1. *A low plank climbed over the wall and landed in the courtyard where no one was alive.*

2. *A dead tortoise with a crooked neck and crawling eyes.*

Apparently, there are two ways to convey a particular message at the discretion of the speaker, who is under the influence of a cognitive-pragmatic environment, namely, the use of particle devices or complex sentences with extended syntactic forms. The second of these methods, of course, requires the intersection of the transformation with the applicative model.

It should also be noted that at the disposal of the speech environment in most cases there are paradigms of syntactic structures adapted to give a certain expression of thought. We called this the communicative paradigm above. The communicative paradigm is broad, and its scope includes the transformation of simple sentences into compound sentences and compound sentences into simple sentences. In this case, mainly exchange, contamination transformations are used:

1. *Onabibi could not find anything to worry about, but she did not go to work again (A.Mukhtor. Maple tree).*

2. *Guzar, the streets were deserted, no one was visible (A.Mukhtor. Maple tree).*

In the first example, the syntactic derivation of a compound sentence (complex syntactic device) is observed in the speech environment in which there is an opportunity for syntactic derivation of the following sentences, each of which requires text status [1;28]:

1. *Онабиби бундан ҳеч хавотир оладиган нарса тополмаган бўлса ҳам, қўли ишга бормади.*

2. *Бундан ҳеч хавотир оладиган нарса тополмаган Онабининг қўли барибир ишга бормади.*

3. *Онабиби бундан ҳеч хавотир оладиган нарса тополмагани билан, қўли ишга бормади.*

Meaning:

1. *Onabibi didn't find anything to worry about, but her hand didn't go to work.*

2. *Unable to find anything to worry about, Onabibi's hand didn't go to work anyway.*

3. *Although Onabibi couldn't find anything to worry about, her hand didn't go to work.*

At the same time, the formation of the first and second sentences takes place within the framework of the so-called type of transformation in the broadest sense of the substitution. Here

we understand substitution, that is, exchange in the broadest sense, because in the transformation process, the operators of syntactic derivation take place: *-sa ham, bilan*. Both of these tools acquire syntactic activity in the process of exchanging an equally complex complex syntactic device given in the basic sentence with a subordinate component device in the sense of barrier. However, in subsequent transformations, both in the main sentence, the applicative model is more passively involved. In the second transformation, however, we see that the contamination transformation is applied because the syntactic form of an equally complex complex syntactic device shifts to an extended simple sentence. Moreover, most importantly, the applicable and transformational models intersect here. In the second example, it is observed that the complex syntactic device given has the following derivation possibilities:

1. *Гузар, кўчалар ҳувуллаб қолгани учун, бирор кимса кўринмас эди.*
2. *Гузар, кўчалар ҳувуллаб қолгани тўфайли, бирор кимса кўринмас эди.*
3. *Ҳувуллаб қолган гузар ва кўчаларда бирор кимса кўринмас эди.*

*Meaning:*

1. *Guzar, because the streets were deserted, no one could be seen.*
2. *Guzar, because the streets were deserted, no one could be seen.*
3. *No one could be seen in the deserted guzars and streets.*

At the same time, it is difficult to call the first two of the transformations a complex syntactic structure formed on the basis of an applicative model. But in the next transformation there is a simple sentence derivation in which the syntactic form is expanded by means of an applicative model.

True, the derivation operators used in transformations that require the complex syntactic structures given above (*-sa, ham, bilan, uchun, tufayli*) can be broadly called applicators. Such means, as L. Tener had previously mentioned in part, were called junipers. Their task is to connect independent words or nodes (wraps) formed by independent words to each other. The scientist gives the following example: *Les hommes craignent la misère et la mort - People are afraid of poverty and death.*

At this point, the “et” binder involved in the example given in French comes in the conjunctive status. The scientist showed that junipers can be compared to cement, which forms an inter-nuclear bond. It is noteworthy that the issue of expanding the syntactic structure of the sentence through the conjunctions was also emphasized by L. Tener.

We understand conjunctions not only as a derivative medium that binds the components of simple sentences, but also as a derivative that connects the components of compound sentences and complex syntactic constructions. Nevertheless, in the above transformations, we cannot observe the intermingling of the sentences given in the main sentence in the transformational process by means of the applicative model. In the second transformations of the first example and in the third transformations of the second example, the applicative and transformational models are literally intersecting. In other words, in this process, the derivation capabilities of a complex syntactic device are fully reflected.

In the analysis of the examples given, it should also be noted that each transformation exists based on the invariant form of a particular sentence. But the concepts of invariant and variant here differ sharply from the invariant and variant between phoneme and background, morpheme and morph, word and word form. If the concepts of invariant and variant between language units are of a constant nature, then the sentence and its invariant and variant forms are of a variable nature [7]. The point is that we always define its variants (transformations) based on the statement given for analysis. This, in turn, suggests that we need to know that the underlying sentence obtained for each analysis is invariant in nature.

When talking about invariant and variant structures, it should be noted that each variant structure (transformation in our examples) differs from the invariant structure in some respects. We see evidence of this in the update of derivation operators (applicators) and in the change of grammatical and semantic status of transformations. For example, if an invariant structure requires a complex syntactic device with an equal component, the transformation of the transform into a device with a dependent component or a simple sentence is an example of this. It is also important to have additional distribution options in the derivation process. It is precisely because of these possibilities that a favorable situation arises for the formation of the syntactic paradigm of transformations.

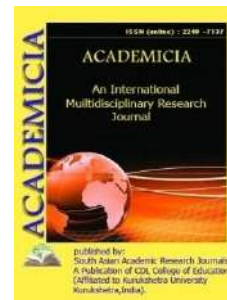
## CONCLUSION

In general, it is a very complex process, in which language, speech, cognitive-pragmatic and anthropocentric factors all intersect. Because if the expression of a particular idea is inextricably linked with the communicative process, then the choice of language units, speech model is closely related to the human factor and the speech environment that governs it. It should also be noted that regardless of whether the human factor is governed by the speech environment, without one of them, the other will not. More precisely, without the human factor, the speech environment (situation) cannot occur. It is therefore difficult to imagine the process of the speaker and the speech separately. In this process, the speaker deals with the selection, use, and, in general, the verbalization of speech quanta in continuous language material. This, in turn, suggests that the derivation process is directly related to semantic (e.g., semantic aspects of speech material), cognitive (e.g., concept selection for the formation of specific information), grammatical, and pragmatic factors.

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## THE STATE OF CEREBRAL VENOUS HEMODYNAMICS IN PATIENTS WITH HYPERTENSIVE ENCEPHALOPATHY

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### ABSTRACT

*The article presents the results of the analysis of clinical and functional features of venous cerebral circulation in 105 patients with hypertensive encephalopathy. The study revealed signs of cerebral venous dysfunction in 85 (81.0%) patients. Patients with venous Disgaea on the background of hypertensive encephalopathy were divided into 2 groups depending on treatment method: with the use of the drug Cytoflavin and without its use. Cerebral hemodynamics was studied in patients by duplex scanning of extra-and intracranial arteries before and after the course of treatment in 30 and 60 days. Patients with hypertensive encephalopathy on the background of treatment with Cytoflavin showed improvement in cerebral venous hemodynamics on the 30th day of treatment, but significant differences were found on the 60th day of treatment. Thus, the drug Cytoflavin quite effectively affects the state of cerebral venous hemodynamics, which allows us to recommend its use in the treatment of patients with hypertensive encephalopathy with the presence of venous cerebral dysgenia.*

**KEYWORDS:** Hypertensive Encephalopathy, Cerebral Venous Circulation, Cytoflavin.

### INTRODUCTION

Until recently, the study of the venous component of cerebral circulation lagged significantly behind the studies of arterial hemodynamics, which is partly due to the anatomical complexity and significant variability of the structure and difficulties in diagnosing blood flow disorders in the cerebral veins and sinuses of the dura mater, as well as the lack of simple objective methods



for diagnosing venous circulation disorders Interest in studying the features of the venous circulation of the brain and attempts to evaluate its importance in the cerebral circulation are determined on the one hand with a tendency to increase the number of patients suffering from vascular disease, on the other - the active development and introduction of modern imaging technology [1, 2010; 2, 2014; 5, 2007].

## THE MAIN FINDINGS AND RESULTS

Regional changes in the tone of intracranial veins lead to venous congestion and impaired cerebral circulation with atherosclerotic lesions of the brain vessels, arterial hypertension and hypotension, chronic lung diseases, cardiac pathology. It was recorded that compression of the jugular, brachiocephalic and vertebral veins is recorded in 15% of patients with hypertension; signs of impaired venous outflow of the brain are found in 91% of cases of hypertension, and in patients with stage 1–2 hypertension - in 55% of cases. At the same time, the compensatory capabilities of the brain and its circulatory system are so great that even serious difficulties in the outflow of venous blood for a long time may not cause clinical manifestations of increased intracranial pressure and impaired brain functions, so early diagnosis of this pathology causes certain difficulties [3, 2018; 4, 2015; 9, 2010].

However, changes in venous circulation are one of the important pathogenetic mechanisms for the development of vascular diseases of the brain. Two-thirds of the volume of the cerebral vascular bed is the venous section, but more than 90% of all works on vascular pathology of the brain are devoted to arterial blood flow. Underestimation of the venous section of cerebral circulation prevents the correct understanding of the pathogenesis and clinical picture of chronic cerebral ischemia [1, 2010; 7, 2009; 8, 2010].

*Purpose.* To study the features of cerebral venous hemodynamics of the brain in patients with hypertensive encephalopathy (HE) during therapy with Cytoflavin.

*Patients and research methods.* The study included 105 patients with arterial hypertension (AH), accompanied by hypertensive encephalopathy (HE), who were examined in the neurological department of the clinic of the Tashkent Medical Academy.

Of these, 85 (81.0%) patients had signs of venous cerebral dysfunction (B. Gafurov, 2018), the average age was  $58.7 \pm 6.34$  years. They constituted the main research group. 20 people (19.0%) without signs of ICD constituted a control group. Patient groups did not differ in age, sex, and stages of HE.

Clinical criteria for venous cerebral dysfunction were complaints caused by venous cerebral discirculation, such as morning pasture of the face and eyelids, a symptom of a “tight collar”, symptoms of “sand in the eyes” and “high pillow”, a family “venous” history, neurological symptoms, in the development of which venous cerebral discirculation plays a special role.

Patients of the main group suffered from hypertension (GB) for more than 8 years (average  $12.4 \pm 6.1$  years). In accordance with the classification of the Scientific Center of Neurology (1985), 29 (34.1%) patients were diagnosed with stage I HE, 32 (37.6%) stage II, and 24 (28.2%) stage III (Table 1.).

Patients of the main group — patients with VCD on the background of HE, were divided into two groups. Group 1 consisted of 39 people who, along with basic therapy, received Cytoflavin

from 1 to 30 days inclusive, at a dose of 2 tablets 2 times a day. Patients of 2 groups - 46 people received basic therapy.

The study of cerebral hemodynamics was carried out using a duplex-triplex scanner LOGIQ C-5 Premium. Echolocation of extracranial arteries was performed with a linear transducer with a frequency of 10 MHz, visualization of intracranial vessels using transcranial location with a phased transducer with a frequency of 2.5 MHz. Patients from the selected groups performed duplex scanning on the first day before treatment, on the 30th day, and also after 60 days (after taking Cytoflavin).

Statistical processing using the statistical 8.0 application.

### *Results and its discussion*

During the examination, the following syndromes were revealed in patients - cephalgic (87.6%), vestibular (72.9%), asthenic (54.2%), pulmonary syndromes (29.4%) and moderate (68.7%) cognitive impairment. It should be noted that in the main group the frequency of cephalgic syndrome was 95.8%.

Patients of the main group more often complained of night and morning headaches (89.2%) of occipital localization (45.8%) or diffuse nature (58.1%), bursting (22.7%), dull (68.3%), on the pastiness of the face and eyelids in the morning (92.9%). Complaints of dizziness, asthenic manifestations, and memory loss were noted in both groups with the same frequency: dizziness - in 46.7% of patients, memory loss for current events - in 52.8%, fatigue - in 62.4%, unmotivated anxiety - in 41.5% of patients.

"Venous" complaints in patients with ICD were significantly more likely than in the comparison group (Table 1.). Patients of the main group had an expansion of saphenous veins of the frontotemporal temporal region in 44.3% of cases, saphenous veins of the neck and upper shoulder girdle - 28.7%; which significantly prevailed ( $p < 0.001$ ) compared with patients in the control group who had an expansion of the saphenous veins of the frontotemporal region in 15.4%, in the neck and upper shoulder girdle in 13.8% of cases.

Decrease in corneal reflexes, soreness of exit points and hypesthesia in the innervation zone of the first branch of the trigeminal nerve and dissociation of knee and Achilles reflexes, in the development of which venous discirculation plays a role, in patients with CVD were determined already at the first stage of HE. But significant differences in these indicators are visible only in the group with GE III. For all three indicators, they were observed significantly more often than in patients with CG and patients with GE of the main group (Table 2).

**TABLE 1. "VENOUS" COMPLAINTS IN THE GROUP OF PATIENTS WITH HYPERTONIC ENCEPHALOPATHY (HE)**

	Main group		Control group	
	n	%	n	%
Females	49	57,6%	11	55,0%
Average age	58,7 ± 6,3		69,6±9,2	
<b>Stage of HE</b>				
I	29	34,1%	6	30,0%
II	32	37,6%	10	50,0%

III	24	28,2%	4	20,0%
<b>Symptoms</b>				
Symptom "tight collar"	72	84,7% *	4	20,0%
Symptom "high pillow"	69	81,2% *	2	10,0%
Symptom "sand in the eyes"	57	67,1% *	5	25,0%
Pastosity of the face and eyelids in the morning	79	92,9% *	6	30,0%

Note:

\* - significant differences between the main group and the control group ( $p < 0.05$ )

**TABLE 2. NEUROLOGIC SYMPTOMS IN PATIENTS WITH HE COMPARED WITH CONTROL GROUP**

	Main group		Control group	
	n	%	n	%
Decreasing of corneal reflexes	45	52,9% *	4	20,0%
Soreness of exit points and hypesthesia in the innervation zone of the first branch of the trigeminal nerve	59	69,4% *	2	10,0%
Dissociation of patellar and axilles reflexes	34	40% *	3	15,0%

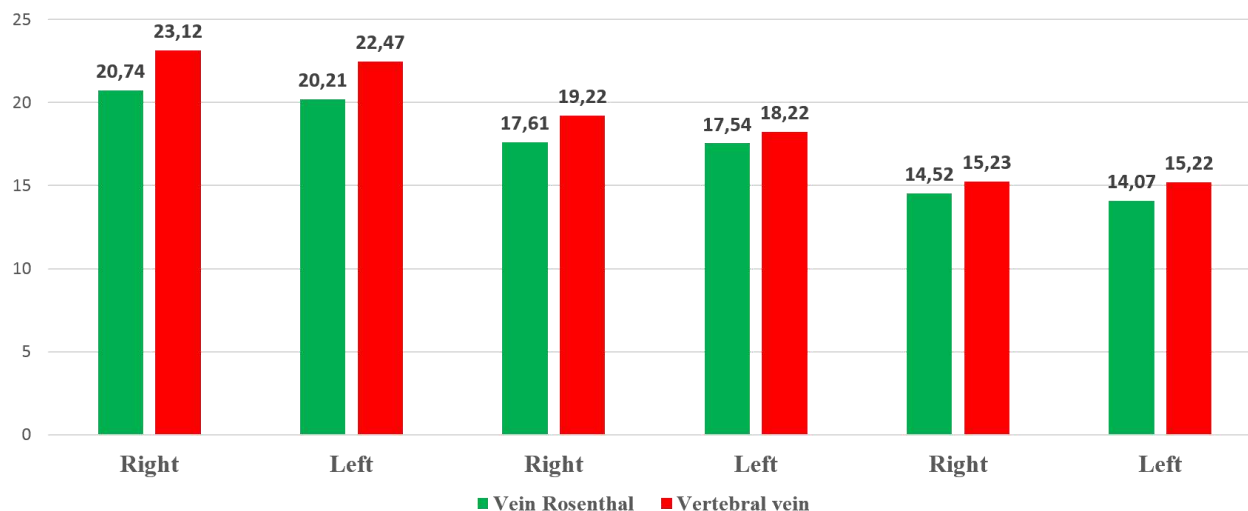
According to the REG data in patients of the main group, difficulty in the venous outflow was revealed in 100.0% of cases. In patients with GE I, violation of the venous outflow was characterized by normo-hypertonic (32.5%) and arterial-hypertonic type of REG (65.7%), a decrease in the pulse blood supply of cerebral vessels (21.1%), in patients with GE II arterial-hypertonic type of REG (57.1%), vertebrogenic effect on the vertebral arteries (45.2%), decreased pulse blood filling - in 25.8% of cases. In the group of patients with group III HE, the arterial-hypertonic type of REG was found in 87.5%, vertebrogenic effect on the vertebral arteries - in 67.5, the decrease in pulse blood filling - in 48.9% of cases, which is significantly more common in all three indicators, than in groups of patients with GE I and GE II, respectively.

After a course of treatment with Cytoflavin, a decrease in the frequency and intensity of headaches was observed in 75.4% of patients, dizziness - in 48.2%. All patients noted an improvement in overall health, a decrease in asthenic manifestations. In this group of patients, the frequency of so-called "venous" complaints, namely night and morning headaches, face pastiness in the morning, and a feeling of "falling asleep eyes in the sand" in the morning, decreased significantly (72.6%). In patients of the main group, a significant decrease in the number of points on the HIT-6tm scale was observed on average from 65.2 to 32.8 points, in the control group - from 53.7 to 49.8 points.

All patients underwent a scan of the internal jugular, vertebral veins, central retinal veins, and Rosenthal veins. In the study of venous hemodynamics, some features of the state of the venous cerebral bed were found: in the main group, 85 (100%) patients showed an increase in the linear blood flow velocity (LSC) along the Rosenthal veins, 65 (76.5) - along the vertebral veins, and

54 (63 , 5%) - along the central retinal vein, 51 (60.0%) - along the direct sinus; in the control group, acceleration of blood flow through the Rosenthal veins was noted in 14 (70.0%) patients, along the vertebral veins - in 5 (25.0%), along the central retinal vein - in 7 (35.0%), by the direct sinus - in 6 (30.0%).

**Diagram 1. The state of venous hemodynamics (Vps, sm/s) in patients with HE associated with VCD during treatment with cytoflavin**



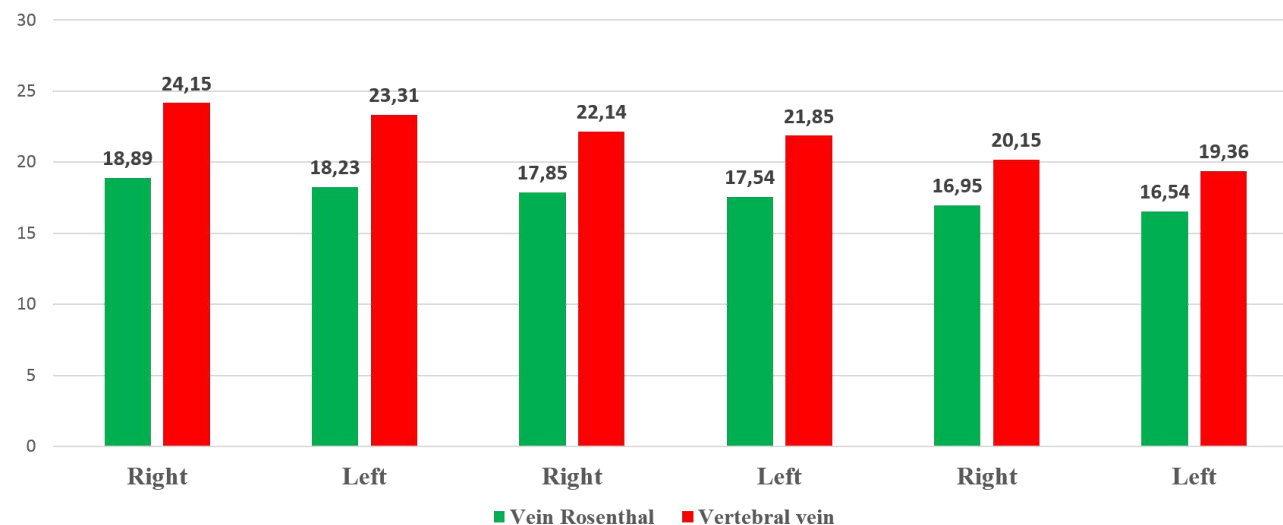
**Before treatment**

**After 30 days**

**After 60 days**

In the analysis of venous hemodynamics in the group of patients with VCD receiving Cytoflavin, a statistically significant decrease in BFV in the Rosenthal vein and vertebral veins was observed after treatment on the 60th day of treatment with Cytoflavin (chart 1). It should be noted that after treatment, a significant decrease in BFV in this group was recorded in comparison with the corresponding indicators before treatment, as well as in comparison with the group of patients who received basic GE therapy. A slight improvement in speed indicators was also recorded in this group, but it was not significantly significant (diagram 2).

**Diagram 2. The state of venous hemodynamics (Vps, sm/s) in patients with HE without VCD during treatment with cytoflavin.**



**Before treatment**

**After 30 days**

**After 60 days**

As a result of a comprehensive clinical and instrumental analysis of the effectiveness of course administration of the drug Cytoflavin in patients with GE, there was a subjective and objective improvement in the form of a decrease in complaints of night and morning headache, pasty face in the morning, dizziness, fatigue, as well as an improvement in General well-being and normalization of speed indicators of venous hemodynamics.

## CONCLUSION

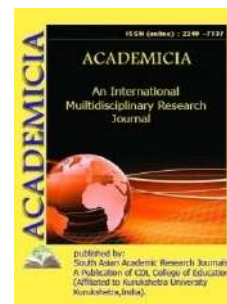
In the majority of patients with HE (91.0%), according to the REG-examination, venous cerebral dyschemia is registered, which is manifested by characteristic "venous" complaints that reduce the working capacity and quality of life of patients. Therefore, the use of venoprotective drugs of Cytoflavin and detralex in the treatment of GE appears to be pathogenetically substantiated and promising, especially with course treatment and taking into account the corresponding comprehensive drug exposure on the most important pathogenetic factors of the development of HE.

As a result of treatment with Cytoflavin, a significant improvement in the majority of indicators in patients was noted (based on the analysis of complaints, dynamics of the neurological status and hemodynamic parameters). Thus, the preparations of Cytoflavin are quite effective in relation to the effect on the state of cerebral venous hemodynamics, which allows us to recommend its use in the complex treatment of patients with HE with the presence of venous cerebral dysfunction.

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## TRADE RELATIONS AND THE DEVELOPMENT OF CRAFTS IN CENTRAL ASIA IN THE LATE XIX AND EARLY XX CENTURIES

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### ABSTRACT

*This article provides information on trade relations and caravanserais, markets, shops in Central Asia in the late XIX - early XX centuries, which were a source of income from trade. It is also said that the cities located on the cavdo roads played an important role in Central Asia's trade with neighboring countries. In turn, various raw materials, including cotton, silk, wool, astrakhan leather, cattle skin, silk and cotton yarn, various handicrafts and dried fruits were exported from the region. It has been scientifically analyzed that foreign goods such as industrial goods, Indian tea, spices, dyes, precious stones, sugar, and medicines produced in factories and plants of Russia and European countries were brought to Central Asia. During this period, trade and handicrafts were taxed separately, that is, the types of taxes in the markets could be broker money, place money, market money, and so on. Islamic, zoomorphic, geometric, epigraphic and astral-celestial ornaments were widely used in the decoration of handicrafts. The handicrafts produced also reflected the traditional and distinctive local features of Central Asia.*

**KEYWORDS:** Trade, Tax, Handicraft, Artisan, City, Village, Ware, Product, Market, Cotton, Silk, Jeweler, Fruit, Shop, Aksakal (Elder Person)

### INTRODUCTION

Economic growth and the growth of productive forces in the cities of Central Asia led to the location of trade caravanserais at the crossroads of the Great Silk Road, the strengthening of the interaction of cultures of different peoples, that is, the emergence of socio-economic relations. This process has also taken place due to the policies and natural-geographical conditions of the ruling circles of different states. As a result, it has had a significant impact on the ethno-political situation and socio-economic relations in the region.

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## MAIN RESULTS AND FINDINGS

The great changes in the development of production in the cities of the Central Asian khanates date back to the second half of the XVIII century. During this period, "internationally, including the Russian market in the second half of the eighteenth century, as a source of raw materials for Central Asia and demand for certain handicrafts, encouraged as much reconstruction as possible in domestic production relations"[1.286]. After the conquest of the Central Asian khanates by the Russian Empire, civil wars in the country ended. Economic, cultural and trade ties have been restored and expanded in the country. The products of local artisans will be exported to Russia, and the demand for them in the domestic market will increase with the influx of handicrafts.

Samarkand, Bukhara, Tashkent, Shakhrisabz, Karshi, Khiva, Urgench, Kokand, Margilan, Andijan, major centers of domestic, foreign and transit trade played an important role in the socio-economic and cultural development of the Central Asian khanates in the late XIX - early XX centuries. From the various products needed for daily living needs created by local artisans in these cities, the raw materials needed for various craft industries are made by urban craftsmen. The artistic handicrafts made by them were traded with the goods produced by the people living in the neighboring countries and in the surrounding villages.

In the transformation of Central Asian cities into shopping centers, the size of the markets also depends on their location, what kind of products they sell and their specialization. For example, the gray market, the leather market, the horse saddle market, the knife market, the carpet market, the cotton market, the vegetable and horticultural markets were separate. A.Vamberi said about the city markets during his stay in the Bukhara Emirate in the XIX century: "The markets are a dazzling sight with the diversity of peoples, clothes, customs in the eyes of a foreigner"[2.361].

Crafts associations have been established in the cities, such as Samarkand, Bukhara, Tashkent, Shakhrisabz, Karshi, and more than a dozen guzars [3.230]. Such guzars were mainly inhabited by artisans engaged in a particular type of craft, and their workshops were located in the courtyards where they lived [4.248]. There were also artisan associations with separate shops and workshops at the market or near the stalls. Hence, it can be observed that in the development of trade the specialization of handicraft associations and the proximity of cities to the trade routes. Sometimes the production of handicrafts is considered to depend on natural - geographical and political processes. In this regard, the fact that there were many mountainous areas in the Eastern Bukhara principality, as a result of the demand for the protection of the principality, there was a great need for the production of weapons. Swords, spears, shields, knives, water cannons, truncheons and various large and small weapons, small items were produced in the arms workshops. Iron and coal ores used in Yurchi, Boysun and Sherabad principalities were used. The Boysun principality had 25 ore smelting furnaces, which employed 50 people. Although the workpieces made with ordinary pressing force are made for hard work, the imported high-quality blacksmiths, such as guns, needles, nails, begin to squeeze out the products of labor made by local craftsmen [5.17]. Especially in the 80s of the XIX century and the beginning of the XX century, as a result of the construction of railways in the territories of the Central Asian khanates, a wide access to local markets for Russian products was opened. Many local craft workshops find themselves in a difficult economic situation.

With the transfer of the railway network from the Russian Empire to Turkestan, the territory of the Central Asian khanates, iron, cast iron, tin, brass, tin, steel, mercury, bitter stone, glue,

amylene from paints, various metal products, glassware, leather products, non-ferrous metals, medicines, sugar, sugar and other products were imported [6.136.]. Also, after the invasion of Tsarist Russia, high-quality porcelain, textiles, precious stones, jewelry, spices, dried fruits and other products from China, India, Iran and Afghanistan entered the Russian markets through the cities of the Central Asian khanates [7.56] as well as delivered by those country merchants and Bukhara merchants. By the end of the 19th century, the import of metal from Russia to Central Asian cities had increased 10 times and metal products 2/3 times [8.114].

The sale of handicrafts was done by artisans, brokers and traders in local markets. In the city markets there are special rastas for craftsmen, jewelers and blacksmiths. The artisans themselves also sold handicrafts in the workshop shops. Traders who had written permission from a representative of the Russian government in the Bukhara Emirate and the Khiva Khanate were able to open shops in local markets [9.147.]. Information was given that he was planning to open a store and sell his goods. Products are made in cash or by exchanging a certain amount of goods.

In the Surkhandarya oasis, "beqasam (national cloth)" is also a favorite fabric of the locals. Beqasam fabric is thin-striped and differs from "alacha (shovel)" by its quality and method of preparation. His 48 "arshin" of the highest grade cost 12 soums and 60 tiyins, and coats made of it cost up to 9 soums. The people of the oasis made coats, jackets, coats and blankets from "beqasam". The locals made clothes for men from cotton woven pencil fabric, the pencil was in the form of a rougher fabric. For women's and children's clothing, coarser fabrics were also used. In addition, velvet and adras fabrics are also much older fabrics, mostly woven at home. Women's and children's clothes, skullcaps, blankets and pillows are sewn from velvet. Velvet weavers weave 2 arshin of velvet a day and sell it for an average of 2 soums for 70 tiyn. Velvet is a favorite fabric of goldsmiths and was used to make various items.

The settlers "chigatoys" and "togchi" were engaged in various branches of handicrafts, such as blacksmithing, carpentry, textiles, sewing, pottery, milling, handicrafts, embroidery, doppichi, etiquette, leather. The semi-settled population of "kungrads", "juzs", "mangits", "saroyes" were mainly engaged in weaving carpets, making the necessary equipment for pastures [10.160.]. The exchange of goods with the settled population and semi-settled people living around the city, along with a large number of handicrafts such as sheep, goats, cattle, as well as raw materials for the textile and leather industries - wool, leather and various district carpets. In addition, the agricultural population exchanged various agricultural products, such as melons and vegetables, for handicrafts [11.].

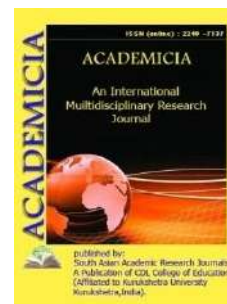
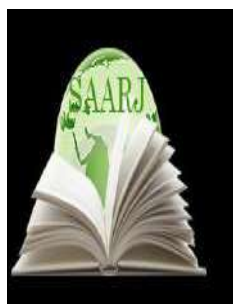
In the late nineteenth and early twentieth centuries, there were about 40 types of taxes in Central Asian cities. In addition, the main tax levied on artisans and traders is income tax, with Muslim traders charged an amount of 40 "chervon" for each "rasta (stall)" in foreign coins, while Russian traders are charged up to 12 "chervon". There is also a "zakat" tax of 40/1 of the income from the sale of products made by artisans. Another type of tax levied on artisans and merchants was the "ulpon (tribute)," which was very difficult for small artisans and merchants to pay. [12.]. In the markets, artisans and traders also had payments such as "place money", "tea money", "market money" [13.185].

## CONCLUSION

In short, in the late nineteenth and early twentieth centuries, craft associations in Central Asian cities had their own centuries-old traditions and customs. This is due to the fact that the patriarchal relations of trade unions in society are well preserved. That is why social relations between people have remained unchanged for centuries.

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## TEACHING PRAGMATICS IN A FOREIGN LANGUAGE CLASS AND ITS IMPORTANCE IN LANGUAGE LEARNING

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### ABSTRACT

*This article discusses the importance of the role of pragmatics in teaching and learning a foreign language. The issue of teaching pragmatics in a foreign language classroom is relevant today, as the younger generation who is learning a foreign language must be familiar with its language levels and rules of language use in order to learn and communicate successfully in social and academic environment. But often foreign language teachers are unable to present pragmatic ability in the classroom as long as there are shortcomings in how to teach pragmatics or they are not able to put it into practice sufficiently. At a time when the prestige of foreign language teaching and learning is growing, the number of studies on pragmatics teaching is also increasing. It is especially important to develop the skills between the teacher and the student to be able to use it in communication, especially in requesting and inviting.*

**KEYWORDS:** *Foreign Language Teaching And Learning, Pragmatics, Qualification, Pragmatic Competence, Language Skills*

### INTRODUCTION

At present, with the rapid development of new technologies and sciences around the world, especially in our country, there is a growing demand for learning a foreign language and its effective use in communication. Therefore, in recent years, our country has undergone significant reforms in the system of teaching and learning foreign languages, which is to raise the prestige of our country in the world arena and ensure that the younger generation is educated to the fullest. Therefore, learning or knowing two or more languages provides the basis for the learner to use it effectively in the future. When learning a language, it is important not only to use it in the classroom or in communication between peers, but also to communicate with people



of other nationalities, whose main purpose of learning a foreign language is to study their culture and linguistic origins. To achieve this goal, in teaching pragmatics, it is necessary to pay more attention not only to the practical component of a foreign language, but also to its linguistic component.

Various studies conducted around the world emphasize that foreign language learners should not only know linguistics, but also have its pragmatic competence, i.e. learn and develop the function of language and the rules of its use [13, 16]. Language is a complex system used for social or cultural communication and necessary for interaction between people. Therefore, how, with whom, and how to use a language depends on how well the student has mastered the language. Teaching pragmatics in a foreign language classroom and understanding more of its specific features will undoubtedly help to learn a foreign language effectively.

### **THE MAIN PART**

Research in many countries shows that it is precisely the lack of pragmatic skills in foreign language teaching that makes it difficult to communicate it effectively to the listener or reader. According to a study by Cohen, foreign language learners can learn the entire syntactic context and lexical layer of a language well, but no one can guarantee that this reader will be sufficient to convey their goals without knowing the pragmatic layer of language [8]. Although our Russian-speaking students seem pragmatically gifted when they speak Russian, it is still difficult for this ability to reflect in their foreign languages. That is why they should learn the pragmatic aspects of the language in the foreign language classroom by applying pragmatics. This in turn teaches pragmatics, allowing them to express their ideas more pragmatically and fluently.

#### **The need to teach pragmatics in a foreign language class**

Teaching pragmatics and introducing it in foreign language classes is one of the most effective and important approaches. Research by Kasper has shown that the process of teaching a foreign language serves to increase students' pragmatic competence. In addition, many studies in this area have focused on the teaching of pragmatics and its important role in enhancing the pragmatic skills of students learning a foreign language [3, 12, 16, 17].

In addition, a study by Bardovi-Harlig discussed the need to teach pragmatic aspects of language in the acquisition of pragmatic knowledge in a foreign language-teaching environment [4]. Another study showed that teaching pragmatics does not have sufficient opportunities in a foreign language-learning environment. This is due to the lack of local experts who communicate in the language during the study of a foreign language, and therefore students tend to pay more attention to the rules of the language rather than communicating in the process of learning it from non-native speakers of a foreign language [15].

At the same time, in teaching a foreign language, teachers do not use the full potential of the language and as a result, the use of the language in the mind of the student prevents the increase of pragmatic information. The reason is that teachers and students combine the same language and social environment in a pragmatic learning process, and cultural ties between countries are limited because they speak the same language. The situation would have been much different if there had been a clash of multi-linguals and cultures in the classroom, especially if there were students learning the same foreign language as their mother tongue. Because this changes the social environment and gives students, the opportunity to learn the language through a natural



process, and it becomes much easier to acquire pragmatic competence. In Uzbekistan, almost all teachers and students communicate outside of class, mainly in Uzbek, and then in Russian, Karakalpak and Tajik. During the study of a foreign language, however, it is used only formally in the classroom, and this does not create the basis for its natural wrapping. However, it would be wrong to say that this is the same in all educational institutions, because, for example, in order further improve the language, some students go to tutoring courses, or especially students in higher education institutions study a foreign language in a specialized way. In such cases, of course, it is much easier to learn and practice the pragmatic layer of the language. However, it is wrong to conclude that they are learning it completely, because sometimes even a student who speaks the language very well can make spiritual mistakes when communicating in a foreign language, such as in asking, inviting, requesting, or apologizing.

In addition, some studies have suggested that teaching pragmatics leads to “success” in various fields [4, 5, 16]. The above-mentioned research emphasizes the need to teach pragmatics in different situations in a foreign language environment. A study by Alcen-Soler (2005) suggests that pragmatics should be used to enhance the pragmatic aspects of foreign language learners and help them develop social connections. In other words, the importance of teaching pragmatics is to give foreign language learners a purposeful knowledge of the socio-cultural rules of language, and to form it continuously throughout communication and to teach the differences between two languages naturally by creating a foreign language environment rather than rules.

Although there is a growing interest in teaching pragmatics today, it is still not fully covered in practice, i.e. in the process of learning a foreign language. This is because many foreign language curricula, although language learners know when and how to use certain language rules, are unable to produce words that are pragmatically appropriate for foreign language learners or sentences that need to communicate based on the spoken context. Consequently, foreign language teachers need to incorporate pragmatics into their teaching practices in the process of language teaching, as teaching pragmatics facilitates the formation of skills to ask, demand, request or suggest in the learning process and enable students to communicate successfully in any situation.

In particular, the use of language in some of the material created may not serve as a good source for adequate communication between the speaker and the listener [6]. In other words, teaching materials are not designed with pragmatics in mind, therefore it is difficult for teachers to combine it with pragmatics in the process of teaching a foreign language, and sometimes pragmatics is completely overlooked. In addition, the lack of opportunities to demonstrate pragmatic aspects in a foreign language-learning environment, as well as the lack of opportunities to put language aspects into practice, make it more difficult to achieve the functional ability of a language in foreign language teaching. Thus, the need to learn pragmatics is more serious for foreign language learners, who do not communicate effectively with professionals who know the foreign language at the native language level and are not able to use the foreign language effectively because of the same social environment in the classroom [1, 9].

Furthermore, Casper argues that it is difficult adequately develop many features of pragmatic competence without knowing or learning some methods of teaching pragmatics. In his view, if the form-function of students' native language is similar to that of a foreign language, some features of pragmatics can be developed without teaching it. Unfortunately, most students do not

know what they have, so they do not use it effectively. Therefore, first, it is necessary to inform foreign language students about what they know in their native language and encourage them to use a foreign language by teaching pragmatics. Based on the above, it can be concluded that foreign language teachers can be a key role model for Uzbek students in achieving pragmatic competence. However, for this, a teacher who teaches a foreign language to Uzbek students must be well aware of the pragmatic knowledge of the language being studied.

### **Research in the field of pragmatics**

Pragmatics is one of the most important components of communication, and this field has developed mainly as part of linguistics since the late twentieth century, first as a field of study and then as the best developed field of linguistics. The field of pragmatics is the growth of the dynamics of language learning in linguistics, which studies the meaning of the words of the speaker in the context in which he is speaking. Many linguists, enlighteners, have studied pragmatics over the years and scholars, and various perspectives have been identified throughout the study [11, 18, 20].

In our country, many researchers in this field have conducted their research as well, in particular, in the pragmatics and Uzbek linguistics such as N.Mahmudov, Sh.Safarov, A.Nurmonov, D.Lutfullaeva, S.Muminov, M.Khakimov, D.Khudoyberganova, S.Boymirzaeva. The contributions were invaluable. In their research, they studied pragmatics in connection with different levels of Uzbek linguistics.

Research has also suggested that pragmatics is a field that studies “the functioning and interpretation of language in relation to the context of use” [7]. In addition, another study shows that pragmatics is the study of “meaning in use,” which focuses on how the mother tongue speaker is used in the development of various functions of language in social and cultural communication [19]. These include aspects that play a key role in speech development, such as how the level of politeness is conveyed, how speech acts are performed in different communication environments, the direct impact on the syntactic structure of speech, and the “speech interpretation” of the goal.

In addition, the pragmatics of foreign language learners is a feature of this communicative competence, and such pragmatic aspects must be selected successfully and purposefully so that they are designed to be more challenging, interesting, and engaging in the foreign language classroom. In addition, pragmatics does not focus on grammatical knowledge, but on how well students can use the language in communication in a foreign language classroom. Pragmatics also aims to help the reader create meaning rather than developing a perfect grammatical structure. Therefore, Shauer argues, the most basic definition of pragmatics is “the coding and decoding of words spoken by the narrator and the listener” [18]. It can be seen that the above definitions focus on the meaning of the word, taking into account the similar features of pragmatics.

In fact, previous research in foreign language learning and teaching in pragmatics has emphasized the need to help language learners improve their ability to ask, beg, and communicate successfully in a variety of situations during speech [2, 17]. The results of previous research provide ample evidence of the need to develop pragmatic skills for foreign language learners. Nevertheless, it is worthwhile for students to experiment in different contexts using different models to gain a deeper understanding of how they can develop such a skill in their

classrooms. It is also important to conduct goal-oriented strategic lessons to learn pragmatics. The results of the study found that strategy-based teaching was effective in developing the four skills of listening, speaking, reading, and writing for foreign language learners.

On a regular basis, opinions have been expressed by researcher Kim on the need to establish forms of motivation and supportive attitudes towards teaching and learning pragmatics [14]. In his research, he examined students' attitudes toward learning pragmatics, and the results of the study showed that students were more interested in learning pragmatics and that they needed to consider pragmatic features when communicating in a foreign language. The researcher concluded that teaching pragmatics developed students' communication skills and use of speech acts, improved their pragmatic awareness of socio-cultural differences, and boosted confidence in their communication in a foreign language.

Learning pragmatics also helps foreign language learners to use a second language or a foreign language successfully and communicate effectively. According to the researchers, it is important to have enough learning or skills in pragmatics when using a foreign language, as extensive pragmatic assistance has been argued that it provides a basis for a foreign language learner to use language and its functions for positive and understandable communication [10].

Thus, pragmatics is an important feature in the teaching and learning of any language and contributes greatly to the growth and development of the language. Consequently, the study of pragmatics is the most important element of academic achievement for foreign language or second language students. In addition, teaching pragmatics in the classroom is very important and can be effective in developing students' awareness of learning speech acts, especially in the process of asking for and communicating something in a foreign language [8]. Research by Casper and Rose suggests that the basic laws of pragmatics are important in the teaching of pragmatics, such as speech acts, speech function, the art of addressing, barriers to communication, and conversation structure [12]. Focusing on these aspects increases language learners' awareness of language use in the classroom setting. Therefore, teaching foreign language pragmatics plays an important role in raising the language awareness of Uzbek students.

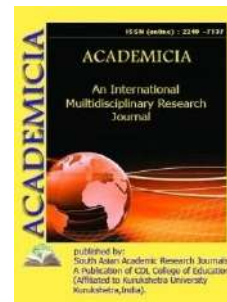
## CONCLUSION

In summary, this article explores the main role of teaching pragmatics in a foreign language as a new method, as well as its essence and features. It also presents various studies on the teaching of pragmatics in the study of foreign languages, the role of pragmatics in the study of foreign languages by Uzbek students and the features of its effective use in communication. Research has shown that the study of pragmatics leads to the effective and correct use of language in a foreign language classroom, especially the formation of the etiquette of asking in a foreign language and the study of its strategies helps the student to communicate in that language without spiritual errors. Since pragmatics is also the key to success in language learning, its effective use allows the teacher to create a foreign language environment in the classroom in a natural way, and students consolidate the knowledge they have acquired in the classroom.

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## PROVERBS ABOUT THOUGHTFUL CONVERSATION

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### ABSTRACT

*The following article discusses the expression of issues related to speech culture, ethics of conversation, culture of treatment, also it discusses role and importance of proverbs in upgrowing the youth about thoughtful conversation, that can be taken into separate group.*

**KEYWORDS:** *Speech Culture, Culture of Treatment, Ethics Of Conversation, Proverbs, Aphorisms, Correctness Of The Speech, Brevity, Conciseness*

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### INTRODUCTION

From the first days of independence, the main focus of the country's leadership has been on the restoration of cultural and spiritual heritage, preservation of values, inculcation of the ideology of independence in the minds of our people. In the conditions of independence, the country aims to implement a national model of training mature personnel who can fully meet today's requirements, to cultivate young people who are aware of the achievements of science and understand their national identity. Also, the issue of radical reform of education, the introduction of world-renowned advanced pedagogical technologies, the cleansing of the education system from outdated ideological views and obsolescence, the training of highly qualified personnel has become one of the most pressing tasks of state policy. "The supreme tasks of inculcating the idea of national independence in the minds of our compatriots, the future of the country - the formation of the younger generation as a harmoniously developed person have risen to the level of state programs" [2,2001]. It is well known that one of the manifestations of perfection is manifested in a person's speech, etiquette, culture of behavior.



## MAIN RESULTS AND FINDINGS

The perfection of a society's speech activities is also usually shaped in a variety of ways. Uzbek folk proverbs are one such tool. Therefore, it is observed that folk proverbs address almost all issues related to the formation of perfection in speech activity.

For example: *Avval o'yla, ketin so'yla; Aytilgan so'z – otilgan o'q; So'z qadrini bilmagan, o'z qadrini bilmas; Sihat tilasang – ko'p yema, izzat tilasang ko'p dema.*

Meaning: *Think before you speak; The word is a shot; He who does not know the value of the word, does not know his own value; If you want health - don't eat a lot, if you want glory - don't say a lot.*

Therefore, proverbs are one of the means of forming such qualities in the upbringing of the younger generation. It is true that the role of folk proverbs in ensuring the effectiveness of speech and enhancing the art of speech is also invaluable.

For example: *Anglamay so'zlagan, og'rimay o'lar; Aravasiga tushdingmi – ashulasini ham aytasan; Ariqni suv buzar, odamni so'z (gap); Yig'inga kirganda tilingni tiy, u yog'ini o'zing bilasan* [1,1984].

Meaning: *He who speaks without understanding, dies without pain; Did you get in the car - you also sing; The stream is polluted by water, the word (speech) of man; Keep your tongue out when you enter a meeting, and then you know what will happen.*

Uzbek folk proverbs, as it is known, are a separate system that increases the richness of the language, rounding and harmonizing according to their semantic, grammatical and phonetic structure, and is one of the special units. Just like phrases, it acquires the status of a lexical unit and is recorded in dictionaries. Language becomes the unit that provides wealth, and in this respect it becomes the wealth of the hand. At the same time, it is one of the pictorial means of language. As long as it is a visual medium, it will be the focus of attention of those who pay attention to speech. Every speaker strives to choose them. Thus, it serves to create exemplary, effective speech and provides effective speech communication.

Therefore, proverbs have not appeared today. They have been formed by our people over the centuries, polished and refined over time. It is a cream of ideas about nature and society, the changes that are taking place in it, the different relationships between people. According to these features, on the one hand, it is close to philosophy, on the other hand, it reflects the peculiarities of artistic creation. Proverbs play an important role in the Uzbek folklore as the most concise but universal genre. The article reflects the way of life, cultural and spiritual level of our people, deep philosophical observations, national identity, conclusions based on the results of experiments. In its meanings, it refers to the spiritual heritage of our people over the centuries. It briefly and clearly reflects the life experience of our ancestors, conclusions about nature and society, lifestyle, human relations, education, profession, advice. The proverb is easy to absorb, memorized, as it contains ideas in a concise, concise, clear, logical, effective way. Therefore, it is among the genres of folk oral art. It later began to move from oral to written literature as an easy and convenient, effective means of expression. Therefore, proverbs are actively used today in the form of oral and written speech. Some of them have been used only in certain periods of our history, while some are still used in our speech today. It also appears that the nature and vitality of proverbs are directly related to the history of the people. As time goes on, some of them go out of consumption, while others come into our speech. The proverb is often referred to in fiction

as a subtle and beautiful expression of thought. If we look at the history of Uzbek literature, we see that proverbs from Mahmud Kashgari have been used in the works of artists to this day. If we look at the pages of the past, Mahmud Kashgari's "Devoni lug'atit turk" contains about 400 proverbs and examples common among the Turkic peoples, Muhammad Sharif Gulkhani's "Zarbulmasal" has more than 300 proverbs, Sulaymonqul Roji's "Zarbulmasal" and the fact that more than 400 articles have been used confirms our view. Proverbs were used in the works of many writers of the late XIX, first half of the XX century and later, including A. Kadyri, Fitrat, Behbudi, Hamza, Oybek, A. Qahhor, S. Ahmad, P. Kadyrov and many others. . This is complemented by the fact that there have been many studies that have revealed issues such as the impact of the language of the work, as well as the skill of the authors in the use of proverbs. Proverbs are one of the genres of folklore, characterized by the diversity of their types, which are equally relevant to all areas of human activity. Among them are issues of speech culture, communication etiquette.

Of course, there are a lot of folk sayings related to the etiquette of conversation. All of them emphasize the need to assess whether a person has perfection, especially in this regard, and to pay special attention to the issues related to the formation of perfection in them. In addition, there are many articles that emphasize this very idea: *"O'ynab gapirsang ham – o'ylab gapir"*; *"Bilmagan qopib gapiradi, bilgan topib gapiradi"*; *"So'zingga ehtiyot bo'l boshing ketmasin, Tilingga ehtiyot bo'l, tishing sinmasin"*. Meaning: *"Even if you play and talk - think and talk"*; *"He who does not know speaks, he who knows speaks"*; *"Be careful of your words, do not lose your head, be careful of your tongue, do not break your teeth."* So, all such proverbs are examples of very logical situations, rules and laws, which have come from life-tested situations, have been experienced, recognized by the people. Without thinking, without knowing the background of the word, without taking into account the situation, the mood of the interlocutor, the time, and many other aspects, every word that comes into the mouth can lead to very bad consequences. Many other issues, such as the fact that this can degrade the speaker, and the circumstances related to a person's cultural level, are reflected in the above articles. Expressing the thought of thinking in a thoughtful, calm, unhurried way in the brain shows that a person is a civilized person in this respect. This quality, which is one of the main signs of being a perfect human being, is the ability to think, to form it in a person. It was this seemingly small feature that had to be used in all the means of education. (A person who speaks thoughtlessly is punished - embarrassed, specially trained, reprimanded, warned, when the time comes, he is specially treated. Fiction, stage productions, and many other means are used to teach thinking). In other genres of folk oral art, many other ideas are expressed in legends. In religious books (the Qur'an and the hadiths) there are separate notes on contemplation: *"So'zni ko'p so'zlamasdan biroz oz so'zlagin, ming so'zli chigalni bir so'z bilan yechgin"*; *"So'zni o'ylab so'zla, shoshilma, qo'nimli bo'l, shoshilib so'zlangan so'zning oqibati o'kinchli bo'ladi"* (Yusuf Khas Hajib). Meaning: *"Speak a little without saying a lot, solve a thousand-word mess with one word"*; *"Speak the word thoughtfully, do not rush, be calm, the end of a hasty word will be regrettable"* (Yusuf Khas Hajib).

There are many proverbs in the books of Uzbek folk proverbs, which indicate that people think of every sentence, and they contain the issues of developing this skill.

People took a very responsible approach to creating proverbs. Because the article should express as much meaning as possible in as few words as possible. The wise Plutarch said: *"Nutqning*

*kuchi oz so'z bilan ko'p ma'no anglata olishidadir*". Meaning: "The power of speech lies in the fact that it can mean a lot in a few words." Similarly, the sage I. Winkelman says: "In the art of speech, it's harder to speak succinctly than to talk too much". Both thoughts require a great deal of thought in the brain, the expression of speech in general. Noting that it is important to think carefully about "what to say" and "what not to say," the famous speaker Cicero said: "One of the greatest virtues of a speaker is not only to say what is necessary, but also not to say what is not necessary." At the same time, he is conveying this idea to the speaker (in the original sense, i.e., in relation to the speaker-speaker in general). P. Chekhov rightly said: "Speech is one of the strongest pillars of culture, both now and in the past." After all, the speaker thinks about his speech, takes it seriously, and then speaks. Indeed, as L.N Tolstoy put it, "Uncertainty in the Word (Speech) is undoubtedly a sign of uncertainty of thought." It is important to think the idea, mature it, and then state it in a speech mode. The writer A.Qodiri said: "It takes a long time to speak a word and compose a sentence from it". That is, each sentence must be thought out very carefully and then said. This is the main characteristic of a perfect man. Yusuf Hos Hajib writes:

*"Bor so'zni so'z sanab tebranmasin til,*

*Ko'rib, o'ylab so'zla, keragini bil"*. ("Qutadg'u bilig")

Meaning: "Let not the tongue tremble at every word,

*See, think, and know what you need. "*

A. Navoi's "Word is countless - it is countless"; "Disregard for the word - self-regret"; It is not in vain to use proverbs or sayings such as "The root of the disease of the body is to eat a lot, and the cause of the disease of the heart is to eat a lot." Alisher Navoi, quoting the above-mentioned thoughts on reasoning, reinforces his opinion with the following words: "If he has a healthy brain, his speech will be pleasant and error-free." Prof. S. Ibragimov said: "The subject of speech culture is a very broad concept. It is, first of all, to follow the language culture (it is a deeper speech), to speak and write correctly, appropriately, in an understandable way, based on the norms of speech, and at the same time to follow the ethics of speech, to be sober, smooth, pleasant. Only those who have noted certain aspects of the topic of speech culture as a broad concept (other aspects of speech, such as logic, clarity, eloquence, communication etiquette, are not reflected in the ideas expressed, that is, are not included in the definition). Because the culture of speech covers all issues related to speech activity (there are aspects such as knowledge, humility, honesty, honesty, patriotism, generosity, eloquence, openness, sincerity...). Knowledge of the power of words, folk proverbs, and adherence to the most logical ideas repeatedly emphasized in expressions, of course, require deep thought. Because all Uzbek folk proverbs, without exception, were created by the people with the aim of forming a perfect man. Therefore, if we pay attention to the thematic content of folk proverbs, we can see that they cover all aspects of human activity, and even proverbs are created that lead to maturity within a particular profession: "Olim bo'lsang, olam seniki"; "Er haydasang, kuz hayda, kuz haydamasang, yuz hayda"; "Obro' topay desang, kam de, sihat topay desang, oz ye...". Meaning: "If you are a scientist, the world is yours"; "If you plow the land, plow the autumn, if you do not plow the autumn, plow the face"; "If you want to find prestige, say less, if you want to find health, eat less." The conciseness and conciseness of the form in the proverbs, the depth and sharpness of the content, and thus the combination of such ideas as the promotion of the most important morals, humanity, and the call to humanity and honesty are astonishing.

Nowadays, everyone, especially young people, need to be taught to think carefully about the situation, the mood of the interlocutor, other situations, the time, place, topic, different course of the conversation, to talk about the goals and objectives of the interlocutors. It is becoming more and more important to teach them to think deeply, to form calmness in them. That is why our people have the following proverbs and sayings that have been used since ancient times:

*Think first, then speak; He who speaks without understanding, dies without pain; The wise speak both thoughtfully and farsightedly; Think a thousand, say a thousand; Think at night, get up the next day; Think more, speak less; He who speaks thoughtfully will be praised, and he who speaks thoughtlessly will be ridiculed; It is the work of a fool to say what comes into his mouth...; Don't say eight without counting, don't say thirty without thinking; Think without speaking; Return yourself from where your word has returned; Be careful with your tongue so that your teeth do not break (there are also options - A.A.) [1,1984; 5,1987-1988; 6,1990]; If he utters any word, the insane person will say only the words he needs; Speak the word knowingly, let your word be a seeing eye to the blind; Think the word carefully first, then speak, speak only when asked, and finish the word immediately. Listen more, don't talk too much yourself, speak intelligently, model the word with knowledge; The word that speaks knowingly and wisely is a sign of wisdom, and the word of the ignorant is the word of the ignorant.* There are many proverbs and sayings of this type told by folk sages. They say, *"Think first, then speak."* Because words spoken without thinking kill the soul... Words that come out of a person's mouth are like snow, rain and hail. It is not for nothing that they give life to people or kill them "[4,2017]. Because thoughtless words can "hurt" people, because our wise people say that "the tongue is sharper than a sword", so it is necessary to protect it - to be able to manage it. Otherwise, his "wound" will be severe and incurable: *"The knife wound will heal, the tongue wound will not heal."* A person's attention to language in the process of communication, his perfection in all respects, depends on this upbringing and knowledge. Such issues are exemplary ideas, which are emphasized in folk proverbs and proverbs. That is why it is necessary to pay attention to language: *"Pay attention to language - pay attention to people"*. The thoughtless, inappropriate sentence is reassuring: *"Keep your tongue, don't break your teeth."* All of these proverbs are tried and tested life experiences told by our people and that can come to mind because of not thinking.

## CONCLUSION

Therefore, the role of proverbs in ensuring the observance of speech etiquette, etiquette in the process of communication, the effectiveness of speech, its effectiveness is invaluable. Of course, this needs to be studied and taught in the process of upbringing. All of them have served to form a perfect man in all periods. It is clear that these wisdoms and proverbs have a special place in both education and communication today. However, unfortunately, few of them are found in the educational process. Among teachers and educators, there are few who promote them at events. So, one of the defining characteristics of perfection is the need to think, to speak, which is related to the culture of speech. While this is considered in the context of a culture of communication, etiquette, the role of folk proverbs in the formation of this characteristic, positive feature in young people is invaluable. Effective use of them in the education system will always be the most important tool.

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## ANALYSIS OF SOURCES OF FINANCING OF INVESTMENT ACTIVITIES OF TEXTILE ENTERPRISES

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### ABSTRACT

*The article analyzes the sources of financing investment activities of textile companies. The practice of financing investment projects of textile enterprises, using their funds, bank loans and foreign investments were identified. The process of financing investment activity at industrial enterprises and methods for assessing the effectiveness of investment projects are investigated.*

**KEYWORDS:** Industry, Textile Enterprises, Investment Activity, Investment Financing, Investment Strategy, Sources Of Financing, Equity, Bank Loans, Foreign Investments.

### INTRODUCTION

It is clear that, the main tasks of industrial enterprises, which are an important link in the economy of the country, are the development and modernization of innovative products to produce, sell new types of products and ensure their competitiveness. Note that, in the current context of liberalization and development of the economy, the search for sources of investment to implement the above tasks and their involvement in the financing of investment projects of enterprises is the crucial issue.

In order to ensure the sustainable development of the textile industry, one of the leading sectors of the industry, a comprehensive solution to the problems associated with other sectors of the economy, the government is taking large-scale measures to effectively use and further develop the production potential of textile enterprises. The development of the textile industry in the country, the improvement of the mechanism for financing the investment activities of textile enterprises and the support of these activities through large-scale investments appear to one of the important tasks of today's day and age.



The investment activity of textile enterprises is directly related to the economic recovery of the country's industrial sector. Investments include all types of property and intellectual values that are invested in the objects of entrepreneurial activity, which ultimately results in a positive financial result.

Currently, the investment activities of textile enterprises are carried out within the framework of public investment programs. At the same time, the peculiarity of financing the investment activities of textile enterprises is that they require a large amount of money. Therefore, the financing of investment projects of textile enterprises requires a large number of financial resources for them. The use of advanced methods in the analysis of the cost-effectiveness of investment projects is a factor in the successful implementation of the investment strategy of the enterprise.

### **LITERATURE REVIEW ON THE SUBJECT**

There are different opinions among foreign and local economists on the financing of investment activities of enterprises, their management and development of investment strategies. Each of the scientists and researchers is distinguished by the fact that they have their own approach and opinion on investment, financing investment, the effectiveness of investment projects, financing the investment activities of enterprises. Among such scientists and researchers as Z.Bodi, R.Merton, B.R.Mihaela, L.L.Igonina, V.V.Kandeeva, E.V.Dmitrieva, E.A.Kuznetsova, I.S.Vinnikova, D.G.Gozibekov, B.S.Mamatov, D.Y.Khojamkulov, M.B.Pulatova, N.I.Kenjaev can be included. These economists have studied the problems of modern principles of financing and management of investment activities in the real sector of the economy and industrial enterprises.

Z.Bodi, R.Merton in their works expressed their views on investment projects, planning of investment projects and improvement of production methods of investment projects, development of strategies for the implementation of investment projects and the analysis of its financial basis [1].

B.R.Mihaela developed a methodology for conducting financial analysis of publicly funded investment projects in her research, taking into account the economic and financial condition of enterprises and scientifically substantiating the need to have the necessary information to determine investment-financing opportunities before analyzing the risks associated with the investment project gave [2].

L.L.Igonina studied important issues such as attracting investment in production, identifying sources of financing for investment activities of real sector enterprises, as well as developing a mechanism for attracting funds to the economy [3].

V.V.Kandeeva while analyzing the innovation and investment activities of industrial enterprises, identified the relationship between the development of innovation and investment activities of industrial enterprises and the mechanism of its management [4].

In her research, E.V.Dmitrieva highlighted the problems of developing a system of financing the investment activities of industrial enterprises and attracting investment based on their sectoral characteristics, as well as the development of modern mechanisms for financing the investment activities of industrial enterprises [5].

E.A.Kuznetsova, I.S.Vinnikova studied the methods of assessing the effectiveness of investment projects of industrial enterprises, analyzing the reasons for the lack of innovation in improving the efficiency of investment projects of industrial enterprises in their research [6].

In his scientific literature, D.G.Gozibekov covered the issues of investment, investment climate, investment policy, investment projects, financing of vain investment activities and attracting investments to the economy [7].

B.S. Mamatov, D.Y.Khojamkulov in their scientific works focused on traditional and discounting methods of assessing the financial efficiency of investment projects, as well as the analysis of cash flows in investment projects [8].

M.B.Pulatova, studying the investment projects in industrial enterprises and modern directions of their management, expressed her views on the classification of investment projects [9].

In his research, N.I.Kenjaev developed scientific proposals and recommendations on improving the complex examination of investment projects [10].

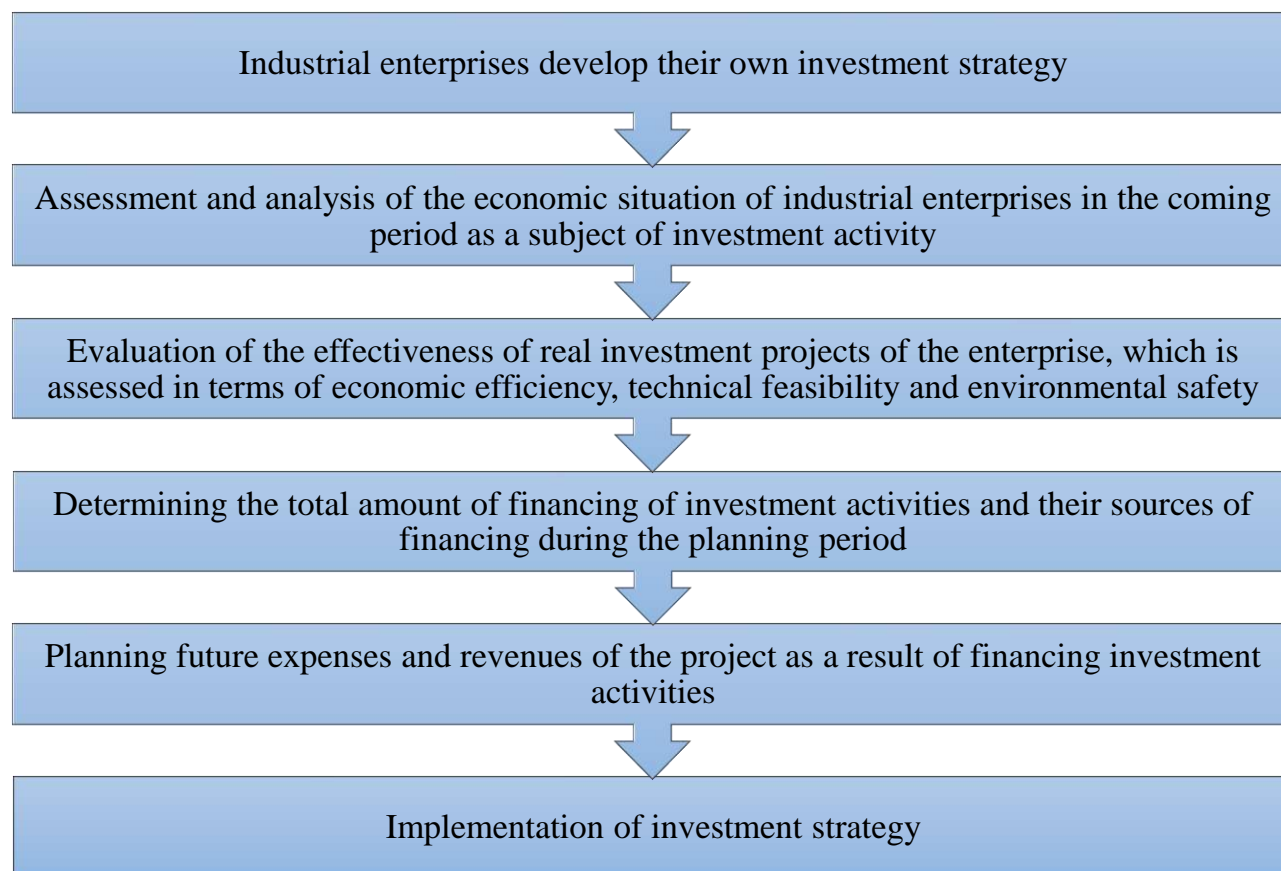
The development of investment financing in the industrial sector, in particular in the textile industry, has become one of the priorities of the state, and in order to achieve its supply, great attention is paid to attracting investment in the sector, including foreign investment.

In Uzbekistan, along with the automotive, oil and gas, chemical, mechanical engineering, pharmaceutical and radio electronics industries, it requires constant modernization of production in the textile industry and the widespread use of scientific advances. Therefore, the involvement of the most modern equipment and technologies in industrial enterprises remains one of the priorities today.

## ANALYSIS AND RESULTS

Improving the effective investment activity of textile enterprises and, accordingly, the mechanism of continuous financing of investment activities means sustainable growth of the enterprise. Nowadays, as the main source of financing investment activities of textile enterprises is a real investment, it is important to find additional sources of financing for their investment projects and to raise funds to finance investment activities from their profits. We know that one of the most important tasks today is to choose the sources of funding for investment projects. This shows the interdependence of investment and financial activities of the enterprise.

When financing the investment activities of industrial enterprises, foremost, the enterprise must develop its investment strategy. Through this strategy, the company will gradually finance the planned investment projects. The stages of the process of financing investment activities in industrial enterprises are shown in Figure 1.



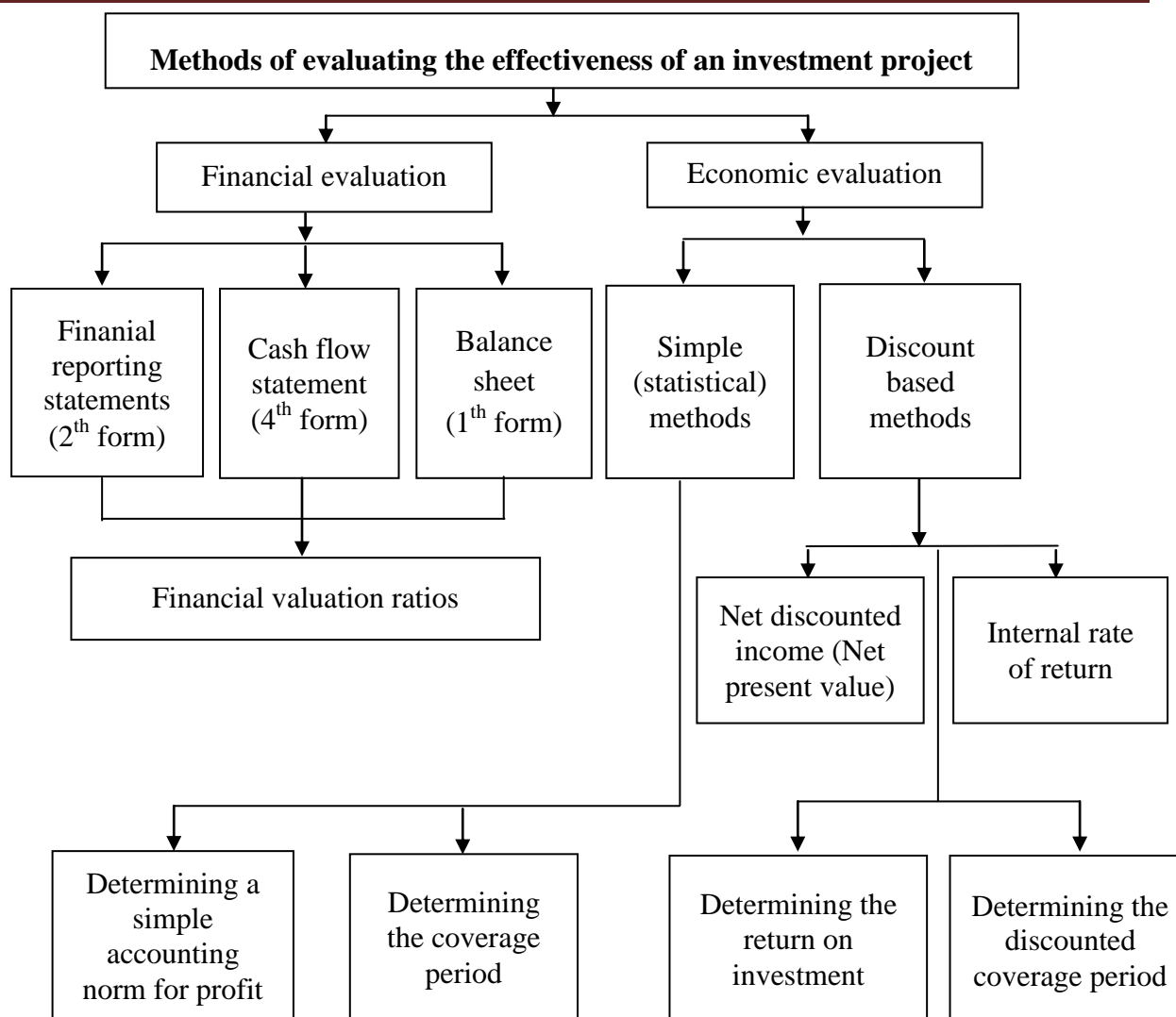
**Figure 1. Stages of the process of financing investment activities in industrial enterprises [11]**

As a result of the planned implementation of the stages of the financing investment process activities in industrial enterprises, the most important task will be to consider the effectiveness and efficiency of investments aimed at financing the investment activities of enterprises.

Generally speaking, making investment decisions is a very difficult task for any enterprise, the main criterion of which is to increase the wealth of the investor, to increase the value of the enterprise. Its factors are the growth of enterprise income, financial risk or reduction of production costs, increase the level of efficiency of the enterprise [12].

Researches show that, the evaluation of the effectiveness of investment projects of enterprises is carried out based on two criteria, namely, financial and economic evaluation. Both of these criteria for evaluating the effectiveness of an investment project are complementary.

The task of financial evaluation is to determine whether an enterprise has sufficient financial resources to meet its total financial obligations to implement the project on time. On a figure 2 below shows the basic detection methods for the two types of criteria.



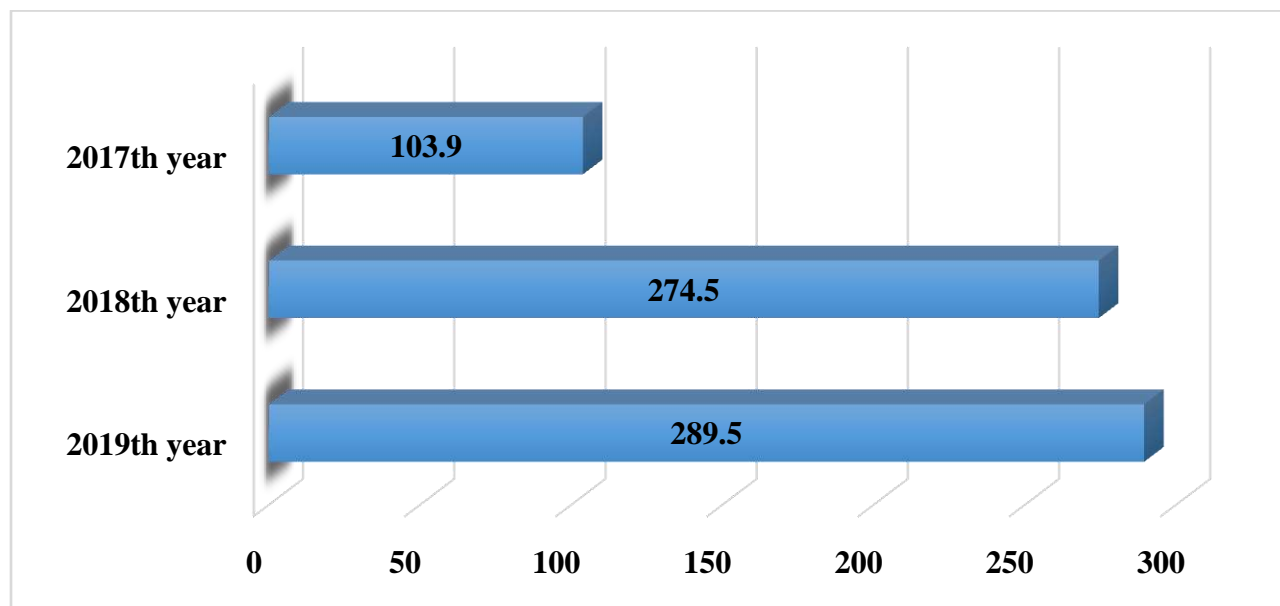
**Figure 2. Assessing the effectiveness of investment projects [13]**

Financing of investment activities of textile enterprises is carried out through external or internal sources. The most common sources of external financing of investment activities are own funds, bank loans, syndicated loans, raising funds through the issuance of shares and bonds, and foreign investment. Internal resources are significantly scarce, and often their size is not sufficient to finance the investment activities of enterprises, which increases the need for external sources of financing.

The first of the internal sources of financing the investment activities of textile enterprises is the company's funds. The development of an efficient investment mechanism for the enterprise will increase the competitiveness of the enterprise in the economy in the future and lead to the efficient circulation of idle funds.

Based on Figure 3 below, we analyze the dynamics of financing of investment projects of textile enterprises from their funds over the past three years, with a total value of 33 projects worth \$ 103.9 mln. in 2017, 57 projects worth \$ 274.5 million in 2018, and in 2019 85 projects with \$

289.5 mln. value was financed from their funds. In 2019, the financing of investment projects of textile enterprises at their own expense increased by almost 280% compared to 2017.



**Figure 3. Dynamics of financing of investment projects at own expenses of the textile enterprises (in mln. US dollars) [14]**

Studies show that the object of directing the existing funds of textile enterprises are:

- purchase and installation of new equipment and devices, technical means;
- financing of new innovative ideas;
- construction and commissioning of new buildings and structures;
- repair, renewal of fixed assets;
- increase the range of products;
- staff training.

The peculiarity of the investment activity of textile enterprises is that investments in these enterprises are made in the form of real investments, financing of investment activities through other types of investments is rare in practice.

In financing the investment activities of textile enterprises, it is expedient to proceed from the investment activity and its specific features. Investment activity is an activity related only to the process of making investments. Spending a relatively large amount of money on an investment activity is important in achieving a profit or other beneficial effect.

Thus, the development of the industrial sector is very important in ensuring the development of the country's economy, which is explained, first of all, by the intensive development of the economy and the attraction and development of new technologies.

In the Address of Sh.Mirziyoyev, President of the Republic of Uzbekistan to the Oliy Majlis dated January 24, 2020, it was mentioned that deep measures are being taken for the widespread introduction of public-private partnership mechanisms in transport, energy, roads, utilities,

medicine, education, as well as energy, oil and gas, geology, also in deep structural reforms in transport, road construction, agriculture and water management, drinking water and heat supply, and in a number of other sectors, also was noted that modernization and competitiveness programs are being implemented in 12 leading industries, resulting in an increase in industrial production by 6.6% in 2019 [15].

In 2019, \$832.3 million, in other words, it increased by 151,0 % compared to 2018, was allocated from all sources of financing under the state program to finance investment projects of textile enterprises, which are a key component of the industrial sector. US dollars or 151.0% more than in 2018. Of this amount, \$ 373.5 million were invested in textile enterprises, \$169.3 mln. in bank loans and \$ 289.5 mln. in foreign investments. It should be noted that no investment projects under the state program have been funded from other sources. This indicates the need to identify other sources of financing for investment activities in enterprises (Table 1).

**TABLE 1 ANALYSIS OF SOURCES OF FINANCING INVESTMENT PROJECTS IN TEXTILE ENTERPRISES (IN MLN.USD) [14]**

<b>№</b>	<b>Sources of financing investment projects</b>	<b>2017<sup>th</sup> year</b>	<b>2018<sup>th</sup> year</b>	<b>2019<sup>th</sup> year</b>
1	Own funds	260,7	274,5	289,5
2	Loans from commercial banks	103,9	262,8	373,5
3	Foreign investments and loans	23,8	13,5	169,3
4	Other sources	0	0	0
	<b>Total</b>	<b>388,4</b>	<b>550,8</b>	<b>832,3</b>

In order to ensure economic growth in textile enterprises, in the current conditions of economic development of the country, it is necessary to create a system of additional market incentives for investment development in the strategic future, taking into account the requirements of natural resources and environmental safety of commodity-technological specialties'. Economic growth in textile enterprises is able to provide the necessary investment resources for qualitative changes in the national economy and technological modernization of production.

The size and growth of the domestic market for textile enterprises is a key factor in investor decision-making. Significantly, the role of the state in the use of mechanisms that encourage investment in all sectors of the economy.

## CONCLUSIONS AND RECOMMENDATIONS

In our country, there is a lack of own investment sources (own funds of the enterprise) in financing the investment activities of textile enterprises. Due to the poor financial performance of enterprises, the financial condition of enterprises deteriorates, because of which they feel the need for external sources of financing to finance investment activities.

One of the conditions for attracting funds to finance the investment activities of textile enterprises is to increase the natural flow of investment, taking into account the experience gained in the field of investment cooperation. To do this, the country must take the necessary measures to increase the attractiveness of the investment climate and local investment opportunities of enterprises. This has a positive impact on the investment activity of the enterprise and creates the basis for the creation of a specific mechanism for financing investment activities.



When financing the investment activities of textile enterprises, it is necessary to pay attention to the following:

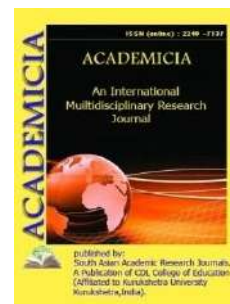
- creation of a mechanism for the use of funds raised in the financing of investment activities in textile enterprises;
- creation of conditions for the use of non-traditional methods (for example, venture financing) in addition to traditional methods in attracting funds to finance the investment activities of textile enterprises;
- Use of innovative tools (introduction of digital financing (crowd funding)) in the financing of investment projects in textile enterprises.
- Development of a mechanism for financing investment projects in textile enterprises in order to ensure the modernization of the material and technical base of textile enterprises.

Only an effective mechanism of financing investment activities will ensure high efficiency of the enterprise. Moreover, in turn, such a system will help the company to realize and achieve its goals.

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## THE EFFECT OF ENSURING THE CONTINUITY OF MATHEMATICS SCIENCE IN TERTIARY -INSTITUTION ON THE EFFECTIVENESS OF TEACHING

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### ABSTRACT

*The article discusses the features of teaching mathematics to students. The questions of teaching combinatorics and mathematical analysis are considered. The article shows the features of studying mathematics in the Humanities, the faculty of natural Sciences, and computer science.*

**KEYWORDS:** *Mathematics, Continuity, Method, Mathematical Logic, Combinatorics, Differential Calculus, Geometry, Integral Calculus, Mathematical Symbolism, Sets, Digit Of Numbers, State Standards Of Higher Education.*

### INTRODUCTION

This article, devoted to the problems of teaching methods of mathematics, examines the specifics of teaching interdepartmental mathematics in pedagogical universities. The article describes the features of conducting mathematics lessons in higher education pedagogical institutions and improving the planned and future level of professional training in teaching mathematics, the study of their advanced pedagogical experience and the use of modern educational technologies. aims to improve their skills and abilities. Mathematical Sciences in this regard have great potential. Therefore, the study of mathematics in a coherent, step-by-step and interrelated with other disciplines will help students to grow their independent thinking skills.

The basis of Mathematical Sciences in the Republic is taught within the framework of certain courses in accordance with the psychological and pedagogical characteristics of students in accordance with the educational content of educational institutions operating at different stages.

Ensuring continuity between courses that cover the basics of mathematics in higher education, the selection of teaching materials in accordance with the age characteristics of students of different levels of education, their placement on the basis of a certain logical sequence, interdisciplinary membership and consistency, achieving the leading role of the principle of membership in the learning process and creating a problem of pedagogical justification of this situation and shows the relevance of the chosen topic.

Methods of teaching mathematics in higher education Alikhanov S.[1], M. designing the process of teaching mathematics. Report this website on pedagogical technologies H. Avliyakov, it was studied by Musaeva [2] and others.

The introduction of the topic of elements of mathematical logic in the content of mathematics education in academic lyceums and professional colleges has increased the attention and demand for this science. According to A.A. Stolyar, the course "Theory of Mathematical Logic and Algorithms" is of special importance in the training of mathematics teachers [3]. The study of mathematical logic by future mathematics teachers is two-pronged. On the one hand, it is aimed at in-depth study of the field (construction of mathematical theory, content and structure of mathematical proof, mathematical clarification of the concept of algorithms, logic of computers), and on the other hand, to develop the thinking culture of the future teacher.

It is difficult to achieve the above goal without the development of science, technology and engineering, increasing the effectiveness of scientific research, the effective use of the results in the educational process, the introduction of new pedagogical technologies in teaching practice. Therefore, the teaching of mathematics in pedagogical universities must meet the following requirements:

- The purpose of bachelor's degree in mathematics in pedagogical universities first and foremost, it should be in line with the goals of school, academic lyceum, vocational colleges, as well as master's mathematics education;
- Based on these goals, the content of undergraduate mathematics education in pedagogical universities should be the basis for the scientific substantiation of the content of mathematics education in schools, academic lyceums, professional colleges and the continuation of the winter in the master's degree;

The structure of mathematics education in the bachelor's degree of pedagogical universities should fully cover the structure of mathematics education in schools, academic lyceums, professional colleges, so that you can continue to receive education in a clearly selected specialty at the next stage of education. must consist of the necessary knowledge;

- In order to increase the interest of students in science in the process of teaching mathematics, to instill in them a love for professional activity, it is necessary to effectively use new pedagogical and information technologies of education. [6]

## THE MAIN PART

The fundamentals of higher education are aimed at distinguishing between real-world processes, objects, and events, and have been adopted as the basis for educating highly qualified professionals. State educational standards place high demands on the qualifications and skills of

the trainees. These requirements are directly related to modern conditions, and their goal is to form a national intellectual elite of young people studying.

Among the requirements of the SST for the humanities, the requirements for mathematics have a special place. This is reflected in the curriculum.

Like all sciences, mathematics has its own alphabet. The alphabet is made up of letters, numbers, and special characters, each of which is a single character.

It is well known that the linguistic objects that make up a language are best represented by mathematical structures that are somewhat similar to them. Therefore, in modern times, mathematical methods are effectively used in the construction and analysis of mathematical models that are able to explain and predict the events and facts that occur in linguistics.

Often, the use of mathematical methods in linguistics can replace an intuitive problem with one or more simple and logically correct mathematical problems. Typically, such problems have an algorithmic solution, so such an approach is necessary for the automatic analysis and synthesis of oral communication using modern computer tools, information processing, the creation of automatic translation systems. At the same time, it is advisable for each bachelor to use a certain degree of mathematical thinking in the linguistic analysis of texts, finding lexico-grammatical phenomena, understanding the structural-semantic and stylistic features of the text functionally and pragmatically.

If we look at the specific disciplines in the example of 5110700 - Methods of teaching computer science, the program requires algebra and geometry, differential and integral calculus of functions of one and many variables, numerical and functional series, differential equations, elementary theory of functions of complex variables. and mathematical statistics, the equations of mathematical physics, their applications, and the history and development trends of this science.

Mathematics is a course included in the block of general professional subjects and should be taught in the 1st year. Mathematics is a major part of mathematics education in schools and secondary special education institutions. Therefore, there are special requirements for mastering this science. This subject is an integral part of the computer science teacher training system. The curriculum includes 126 hours of classroom hours and 226 hours of general study hours.

The purpose of teaching science is to acquaint students with the basics of modern mathematics, to consciously study the issues of professional activity, to explain the essence of the possibilities of mathematics in solving problems and to teach them to apply them.

The task of teaching mathematics is to acquire a culture of thinking through the conscious mastery of the content, rules and methods of mathematical concepts, to understand, generalize and analyze information, to set goals and choose ways to achieve them;

- express their ideas logically, accurately and rationally based on oral and written speech;
- Achieve competencies in the application of basic methods of mathematics, including mathematical analysis and modeling, theoretical and experimental research methods in professional activities.

The following requirements are set for the knowledge, skills and abilities of students in science.

For example, in the course of mathematics at the Faculty of Natural Sciences, special courses are needed, such as statistical analysis of experimental results, multivariate analysis, the application of mathematical statistics in medicine. For specialists in radio engineering and electronics, small courses, such as the correlation function and its statistical evaluation, the introduction to random processes, are important for future activities of students.

It also needs to bring future math teachers closer together with the school, high school and college community, as well as parent organizations, in order to guide them in their careers. In high schools and colleges, it is desirable to have a "hour" of a great scientist, academician, well-known specialist once every 15-20 days. It is good for a scientist to talk about his science, his results and their applications. Such scientific dialogues are extremely useful in ensuring continuity between education systems and types.

Topics such as "Probability Theory and Elements of Mathematical Statistics" and "Elements of Combinatory" in interdepartmental mathematics programs are extremely relevant in the context of a broad aspiration to acquire economic knowledge. These issues also need special attention.

One such method is to present the material in the form of a logically complete, coherent whole - didactic units.

We will focus below on the normalization of returns and iterations on the topics of differential and integral calculus of one-variable functions in existing programs of secondary, secondary special, vocational and higher education.

A total of 472 hours are devoted to the subject "Fundamentals of Algebra and Analysis" in the curriculum of mathematics for academic lyceums, including homework:

210 hours are devoted to the topics of functions, function limit, product and their applications, integrals and their properties.

The Faculty of Physics and Mathematics of pedagogical institutes allocates a total of 300 hours for the program of mathematics in the field of physics and astronomy, which is taught in the I-II courses. However, 96 out of 156 hours in the first year are devoted to the elements of mathematical analysis, product of functions, indefinite integrals, exact integrals, its geometric meaning, numerical series, polynomial function, product of polynomial function. The content of the subjects in these programs exceeds the norm of repetition of the intermediate-special algebra course. So, they would only resort to this as a last resort.

In addition, a total of 196 hours are allocated for the program of mathematics in the field of computer science teaching methods, which is taught in the first year. Of the 120 hours, 108 hours are devoted to the topics of the module of elements of mathematical analysis. These are the following topics:

- Numerical sequence and its limit. The concept of function and its limit
- Definition of product, geometric and physical meanings.
- Differential of a function, its geometric meaning. Derivatives of parametric and implicit functions. Higher order derivatives and differentials.
- Basic theorems of differential calculus. Taylor formula. Increase and decrease of function, extremums



- Unclear integral, properties. Substitution of variables, partial integration
- Integration of rational functions Integration of irrational expressions. Euler exchanges.
- Integration of trigonometric expressions.
- Exact integral. Newton-Leibniz formula. Applications of exact integrals.
- Positive boundary lines. Numerical rows, private sets Necessary condition for convergence. D'alambert and Koshi sign.
- Rows of interchangeable signs. Absolute and conditional convergent series, properties. Leibniz's theorem.
- Functional rows. Areas of detection and convergence.
- Differentiation and integration of functional series. Taylor and McLaren pumps.
- Multi-variable functions. Graph of a function of two variables. Limit and continuity of multivariate functions. Private and full discounts. Private crops. Full differential.
- Specific derivatives and complete differentials of implicit and complex functions. Taylor's formula for a function of two variables.
- Extremes of functions of many variables. Extremum condition for functions of two variables Maximum and minimum values. Conditional extremums.
- Two- and three-dimensional integrals and their properties and their calculation.
- Change variables. Two-dimensional integral in polar coordinates.
- Three-dimensional integral in cylindrical and spherical coordinates. Applications of two- and three-dimensional integrals.
- Problems leading to differential equations. First-order differential equations solved with respect to the product.
- Linear differential equation. Bernoulli's equation.
- Full differential equation. Integrating multiplier.
- Clero and Logrange equation.
- High-order differential equations of decreasing order
- Differential equations with homogeneous coefficients of the second order.
- Differential equations with non-homogeneous coefficients of the second order.

However, 12 hours are devoted to topics related to the elements of probability theory and mathematical statistics that have been removed from the high school and college curriculum.

However, in the 11th grade of the existing secondary schools, 56 hours are allocated in the department of functions of differential and integral calculus.

Analysis of the State Education Standards and Curricula in Mathematics of Secondary, Secondary Special, Vocational and Higher Education in Mathematics, in particular, shows that they have a lot of repetitions and iterations. At the same time, the repetition of topics completely

undermines the interest of students in mathematics, the effectiveness of teaching, as well as the developmental impact of education, as cybernetics argues, that repetition alone does not give the student any new information. Because in this case the information coefficient is zero.

In order to prevent this, methods that allow subjects to be described with special emphasis on their internal connections play an important role.

In order to minimize the negative effects of repetition of the content of the topics, it is better to rely on the previous study of the study material, which should be studied in the process of enlarging the didactic units of knowledge acquisition.

The following experiment was conducted in the teaching of differential and integral calculus of one-variable functions of the course "Mathematical Analysis" in the field of methods of teaching mathematics.

Given that students are familiar with the study material that needs to be studied, several similar sections are described simultaneously. This provided an opportunity to draw conclusions from the analogy. Also, in a sense, the opposite concepts are expressed simultaneously (in parallel).

For example, it is very convenient to study the properties of infinitesimal and infinitely large quantities at the same time. It is also of great importance to choose icons for the designation of quantities:

$a(x)$ - unlimited small quantity;

$A(x)$ - unlimited large quantity.

While the concepts of function limit and function continuity are interrelated, they are usually described separately in different sections of the course. However, their similarities and differences appear faster and clearer than usual when they are described at the same time.

It is useful to place similar definitions and assertions in parallel columns.

#### **Function limit**

If  $0 < |x - x_0| < \delta$ , then  $|f(x) - b| < \varepsilon$

in this formula  $b$  is the limit of the function

#### **Function continuity**

If  $|x - x_0| < S$ , then  $|f(x) - f(x_0)| < \varepsilon$

Definitions and confirmations the inscription placed in parallel columns also serves as an additional source of information. Analyzing the records from the first line presented above, the student draws attention to the peculiarity of the concepts being compared: argument when calculating the function limit, and  $x_0$  when calculating the function limit is not considered in the point itself (it is also possible that the function is not defined at this point, but there is a limit).

In the traditional system, first all the elements are derivatives of the functions, then the differential formulas of these functions are given, and they are used in the next chapter to study the inverse problem, that is, the indefinite integrals.

Because students are already familiar with these concepts, we introduced them at the same time. This approach was interrelated.

$$(u + v)' = u' + v', \quad d(u + v) = du + dv$$

$$(u+v)' = u' + v', \quad d(u+v) = du + dv$$

$$\int (u+v) dx = \int u dx + \int v dx \text{ and the relationships between them.}$$

It also provided an opportunity to look at reciprocal issues of integration and differentiation in one session.

$d(\sin x) = \cos x dx$ ; check:

$$\int \cos x dx = \sin x + C;$$

$$\int x^2 dx = \left( \frac{x^3}{3} \right) + C$$

; check:

$$\left( \frac{x^3}{3} + c \right)' = x^2 + 0,$$

such an approach allowed students to develop the ability to draw conclusions by analogy, as well as to see inverse assertions. This results in significant time savings.

**Results.** As a result, it is possible to look at non-standard exercises that help to determine the level of mastery of the mathematical operations in question. In this case, exercises to restore the lost expressions are effective, for example:

$$\lim_{x \rightarrow 0} \frac{tg(?)}{5x} = 3$$

$$(?)' = 3x^2(?) - (?)\sin x, \quad \int (?)\cos(?) dx = 5\sin 4x \text{ and so on}$$

Textbooks and manuals used in the learning process provide a wide range of standard exercises for finding the derivative, differential, or initial function of a given function, and non-standard exercises like the above are almost non-existent. However, they can be created by the teacher and included in the text of lectures, electronic manuals and other teaching aids.

## CONCLUSION

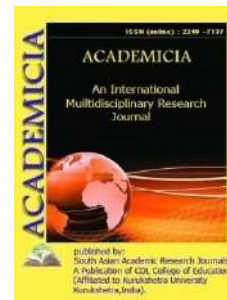
In short, in enlarging the didactic units of knowledge acquisition, it is necessary to take into account the repetitions in the transition from one type of education to another, that is, the fact that the learning material to be studied was studied in the previous type of education. It serves as a factor in ensuring membership.

The radical changes taking place in the life of our society today pose a challenge to continuing education institutions, including secondary special, vocational education institutions, to train creatively active professionals who can think logically and independently. The science of mathematics has infinite possibilities for the formation and development of such qualities in future professionals. This, in turn, requires the use of the most effective forms, methods, tools

and technologies of teaching mathematics in the stages of education, ensuring the continuity between the stages of education.[7]

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## DEVELOPING THE SPEECH OF HEARING-IMPAIRED PUPILS IN PRIMARY SCHOOL BASED ON GAME TECHNOLOGY

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### ABSTRACT

*The use of games in the development of speech in children with hearing impairments is important in the organization of educational activities. It stimulates thinking, critical observation, speech development, and learning. Play is a powerful motivating factor in activating the interests and abilities of children with hearing impairments as educational methods that help them achieve their goals in learning new material. An analysis of play techniques aimed at developing the speech of pupils with hearing impairments in primary school based on game technology is presented.*

**KEYWORDS:** *Play, Children With Hearing Impairments, Teacher, Speaking Skills, Activation, Methods, Learning Activities.*

### INTRODUCTION

In recent years, the country has improved the living standards of people in need, expanding the range of services provided to them, ensuring continuity of education, improving the quality of the education system, early detection of children with disabilities and their rehabilitation. In particular, the "Strategy of actions on the five priority areas of development of the Republic of Uzbekistan for 2017-2021" includes the development of the social sphere. Presidential Decree No. 5270 of December 1, 2017 "On measures to radically improve the system of state support of persons with disabilities" to improve the living standards and quality of life of persons with disabilities, medical care for this category of persons - to expand the effectiveness of social rehabilitation, inclusive education, to implement a wide range of tasks aimed at improving their education. These works prove that the humanitarian policy is being implemented in our country [1,2].

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## THE MAIN RESULTS AND FINDINGS

The inability of hearing-impaired children to fully master speech like their normally developing peers, as a result of hearing loss, creates a number of problems in the formation of their personalities as they find their rightful place in social life. The inability of a person to speak due to a hearing impairment, and therefore isolation from members of society, creates a number of problems in finding their place in social life. These are due to various interrelated reasons, including L.S Vygotsky states: "Social upbringing leads to the underdevelopment of speech, the underdevelopment of speech leads to isolation from the community, separation from the community. This slows down the development of social upbringing and speech". L.S Vygotsky's method of developing oral speech focuses on the fact that a child's meaningful life is carried out in conditions that are not related to his interests. He compared the acquisition of speech without taking part in social life to the learning to swim on the beach. He emphasizes that the social environment and its structure are the ultimate and decisive factor in any educational system: "A child's life should be organized in such a way that it is necessary and interesting for him to speak. Education should be directed towards the interests of the child, not against them. It is necessary to create a need for universal speech, and only then will speech emerge. Speech occurs on the basis of communication and thinking, as a result of adaptation to complex life conditions "[8, p. 65]. "In the special education system, game technology is an important factor in the development of children's creative thinking, independent learning skills and the acquisition of new knowledge through the application of accumulated knowledge, skills and abilities in new situations. It is important to cover the social relations in everyday life, the relationship between nature and the objects of natural phenomena in an artistic way. the use of games in the process of special education, aimed at the acquisition of new knowledge in the process of step-by-step solution of the problems created on this basis, based on the knowledge resources of children themselves, has a positive effect. The use of games in the development of speech in children with hearing impairments is an important part of the learning process. It stimulates interest in thinking, critical observation, speech development, and the performance of certain tasks "[6, p. 34]. Play is a powerful motivating factor in activating the interests and abilities of children with hearing impairments as educational methods that help them achieve their goals in learning new material.

Currently, children with hearing impairments need to work with a deaf educator and a group of pupils (deaf educator - pupil, pupil - pupil) in the development of speech through interaction, taking into account personal relationships. Because group activities have a positive effect on the pupil's personality. Interaction allows children with hearing impairments to develop communication and speaking skills "[8, p. 34]. The need to use didactic games in the formation of oral speech as a means of communication and the development of auditory perception in children with hearing impairments demonstrates the effectiveness of these methods and the importance of acquiring the necessary knowledge and skills. Didactic games play an important role in the formation of personal qualities of children with hearing impairments, the implementation and development of speech development and speech communication. It is well known that role-playing games play an important role in the conditional reflection of human activity in the objective world, in improving the effectiveness of education. Role-based games activate and motivate speech in children with hearing impairments. Play is a natural and favorite activity of school-age children. Therefore, in order to develop the skills of teaching and applying them in practice, the emphasis is on organizing the lessons as a game, depending on the characteristics of



the age. Indeed, the child is more motivated and interested in the game than in any other activity. Role-based play, as a method of education, organizes children and expands their cognitive opportunities and shapes them as individuals. Role-playing games allow the child to think freely, to say, ask, prove, and explain something to the other person. Unlike dialogue, role-playing games answer questions such as motive and goal, reason. In this way, the children in the game focus on the content of the conversation. During the game, children acquire skills such as starting a conversation, asking questions to the interlocutor, answering questions. Children can achieve the expected result if they play the game with a clear goal. Should be familiar to them. Each image must be interpreted in advance. The child may play secondary roles in the play, but not in the lead role. Because in this case, role-playing becomes one of the traditional methods of education. It is better to discuss the shortcomings of communication not during the game, but later. As children develop their speech, it is important to use methods that encourage independent thinking, inquisitiveness, and generalization. Didactic games can be used to introduce pupils to new material, reinforce previously acquired knowledge, increase their vocabulary and develop their thinking. It should be noted that simplicity, uniformity, and involuntary repetition make children tired and indifferent. During the game, "Who's Faster?" can interest in increasing their activity. They also try to win tasks, not to lag behind others, to show that they are capable of doing them. Playing games plays an important role in the mental and physical development of children. Because it is inextricably linked with a wide range of educational issues. Games are not only a didactic tool, but also a key form of children's activities. Therefore, we cannot solve the responsible tasks before us without taking into account the subtleties of the game and learning to manage the activities of the game. There are different types of didactic games: role-playing, rules-based, creative. The goal is to increase children's vocabulary, broaden their horizons, and foster community relationships.

Play is a means of learning, working and educating children [9, pp. 122]. However, the educator should not turn the main part of the lesson into a game, but should not use the game to fill the free time in the lesson, and should understand the main purpose of the lesson before the game. Elements of the game and tasks of a play nature are determined by the children's mastery of the training materials. It is well known that when we approach speech activity from a psychological point of view, we see that the process of expressing an idea consists of several stages: motive, purpose and intention.

They are expressed in words and sentences in the form of pleading, giving orders, agreeing with or disagreeing with a person, persuading him, or denying a statement. In the present life situation, motive, purpose and intention are realized in the form of natural communication. However, in order to increase the vocabulary of hearing-impaired children, it is necessary to create special situations to express their thoughts and desires and encourage them to receive information. These situations must come from their need. Games are the best way to approach these situations. That's why it's important to use games. Enhancing vocabulary through role-playing games is also based on the child's ability to speak and act on imaginary situations. If the game has good conditions for understanding the meaning of each sound, word and speech pattern, the child will master them thoroughly. Special games can help a hearing-impaired child to hear and understand speech, to pronounce it correctly, and to master the tone of everyday speech. But it helps to better understand the meaning of the words included in the dictionary of games, to strengthen and activate them [3, p.33]. When children play, their vocabulary increases

and they learn to connect newly introduced words with the words they learn and use them in speech. Here are some ways in which you can do that.

In the process of primary education, R. Johnson, D. Johnson's method is used to teach pupils to form oral speech, to develop the ability to compose text from interrelated sentences, to think freely, to express their attitude easily. A method based on a pupil completing a task is extremely effective. For example, a pupil in a class is selected by drawing lots. The class is divided into two groups according to a certain rule (number, optional), with each pupil writing a sentence based on the description on a piece of paper. One group of pupils give a positive grade and the other group give a negative grade. For example, Nafisa is an excellent pupil. Nodira is an angry pupil and so on. One pupil will be selected from each group. Pupils in both groups try to prove their point. The following method has a positive effect on the development of conversational speech in primary education: pieces of paper with the number "1" to "10" are placed on the teacher's desk or in his hand. The teacher asks the pupils to "try their luck. It is important to keep the number simple for each pupil. It is important that if there are two or more numbers, you need to create a text that is related to the content. The subject is free. The semantic features of the sentences composed by the pupils should also be identified. It is necessary to make a sentence according to the number.

The following tasks are given to develop written speech, engage pupils, and draw attention to a point. The pupil should express his wishes to his partner sitting next to him. This assignment format may change slightly. The pupil is asked to write a letter to a parent or friend in another country. In doing so, it is important to determine the context in which the text is used. The cluster method allows the creation of an idea by combining different concepts related to a single concept in general. For example, pupils may be asked to give a specific concept and identify its adjectives. "What kind of country is Uzbekistan?" The question combines such qualities as "independent", "rich", "legal", "great", "advanced", "leading", "democratic", "prosperous". These words can also be grouped by structure. Or pupils will be asked to describe movie and cartoon characters.

For example, the main character of the fairy tale "ZumradvaQimmat" Zumradcan be described as follows; "Victim", "tolerant", "resilient", "strong", "trustworthy", "kind", "beautiful", "caring". The validity or invalidity of these definitions will be determined in the course of the lesson through discussion. It is suggested to find a separate word for each sound of a word. For example, "manners", "moon", "friend", "mirror", "head". The teacher uses verbal-tactile and sign language to explain the task to the pupils. If a pupil with a hearing impairment finds it difficult to articulate the task orally, using a gesture or tactile speech, the teacher then encourages the pupil to complete the task orally.

The use of the Sinkwain method in the formation of speech in children with hearing impairments is effective. To do this, the following scheme is provided and asked to complete:

\_\_\_\_\_ Subject (noun)  
 \_\_\_\_\_ Symbol (adjective)  
 \_\_\_\_\_ Action (verb)  
 \_\_\_\_\_ Sentence related to the topic

***The scheme must be completed in the following order:***

- a specific topic is given by the teacher or chosen by the pupils;
- choose a word from two adjectives that characterize the topic;
- find three verbs that express the essence of the topic;
- a sentence on the topic is made;

Example:

Teacher smart, kind, to teach, teach, educate Respect your teachers

This method encourages pupils in special schools to work independently, express themselves freely, and develop oral and written communication.

At the teacher's request, one pupil places a picture of an apple on the canvas, the other children place a picture of an apple on the left side of the table, and a picture of a tomato or fruit on the right side. They pronounce the adjectives related to these things verbally using tactile letters. For example, "apple" - "sweet", "sour", "elongated", "red", "yellow", "round". Tomatoes are "sour", "red", "round", "elongated". Then they compare the characteristics of fruits and vegetables and find similarities and differences.

When the teacher says, "Night," the pupils close their eyes. When she says, "Day," they open their eyes and answer. She gives the task of determining the sign, the property of something. For example, "fragrant flower", "white flower", "beautiful flower", "red flower", "artificial flower" and so on.

The teacher puts pictures of three animals (for example, a rabbit, a fox, a wolf) on the canvas. Places certain numbers next to the pictures ( the rabbit - 4; the fox - 5, the wolf - 6 ) It is necessary to list the characteristics of the animal according to the number indicated in these numbers. For example, the rabbit is white, agile, cowardly, beautiful.

The teacher shows two or three pictures (apple, tree, girl) and suggests choosing one of them. Once pupils have selected one of the pictures, the teacher will give a brief description of it. The children ask questions based on the sign of the object and find out what it is. For example, "Big", "Sweet?", "Round?", "Red?", "Is it edible?" "Is it worn?" and so on. The pupil answers these questions only by saying "Yes" or "No".

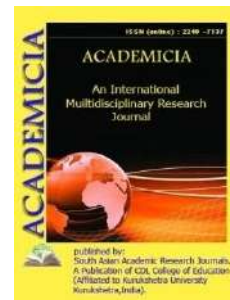
**CONCLUSION**

The teacher should organize the game according to the plan and the goal. She should prepare for the lesson, prepare the necessary didactic materials in advance, monitor the organization of the game, complete all the activities, such as completion, evaluation and motivation. The implementation of comprehensive structural reforms in the education system is determined by the use of game technology in the educational process. Because today, gaming technology is becoming a key component of the educational process. The use of game technology in the educational process stimulates the lessons, organizes them interestingly, broadens the horizons of pupils, allows them to master the material.

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## APPLICATION TEMPLATES OF PEOPLE RELATED TO THEIR PROFESSION AND POSITION IN KOREAN AND THEIR TRANSLATION

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### ABSTRACT

*This article analyzes several patterns of application forms for positions and professions in Korean society, highlighting the similarities and differences in their translation. The fact that there is no similar equivalent in the translation of some Korean appeals into Uzbek may indicate the difficulties encountered in the translation process. At the same time, it was noted that the category of respect should be emphasized in the application process and this category should be used with caution in relation to the "boss and employee" and the rules of ethics in the work process.*

**KEYWORDS:** *Profession, Position, Application, Category, Mr., Mrs., Director, Teacher, Employee, Chairman, Manager.*

### INTRODUCTION

At the heart of modern methods of teaching foreign languages is the task of forming language, culture and interpersonal communication, as this integrative approach allows foreign students to communicate in a foreign language as if it were their mother tongue. This anthropocentric direction of modern linguometrical research appears at the intersection of linguistics and cultural studies, and this phenomenon can be considered as a linguocultural science that studies the representatives of folk culture reflected in language<sup>1</sup>.

The study and consideration of the results of the interaction between language and culture is necessary in the teaching of foreign languages at any level. It allows to anticipate the successes and challenges in the interaction of different cultures and analyze the problems that may arise in the process of teaching foreign languages [Vereshchagin, Kostomarov 1990, Kharkov 1997, Mitrofanova 1999, Zinovieva M.D. 2003, Schukin 2003, Elizarova 2005, Sadokhin 2005<sup>2</sup>].

## THE MAIN RESULTS AND FINDINGS

Speech culture units, which are one of the important conditions for the formation and improvement of linguistic and cultural competence of foreign students, including communication units used by representatives of foreign languages, are also an important part of linguocultural units. N. I. As Formanovskaya points out, "speech etiquette enters culture in two ways: a) speech etiquette is an element of communication culture; b) speech etiquette is an element of language and a product of culture."<sup>3</sup>

In expressing different communicative-pragmatic types of ideas, addressing as one of the most important means of attracting attention is an important means of speech communication. Dialogic speech is the main area of use of references. The use of contact forms depends on people's level of mutual acquaintance, social status, age, "boss-employee" relationship<sup>4</sup>. There are two situations of speech communication, the first is to address an acquaintance and the second is to address a stranger. The largest and most diverse group of references are nouns. This includes first names, last names, nicknames, first and last names, and titles<sup>5</sup>.

During the exchange of ideas, the speaker's address to the listener with his profession, position, title, etc., in general, the units of reference referring to a person's profession, position, position, are called identifiable (equivalent, equalization) nomination in linguistics<sup>6</sup>.

In Uzbek, the words profession and title are often used together with surnames and first names (surname + title).

In Korean, the phrase 성+직함+님 "surname + title + nim" indicates a high level of respect.

Applications in the "boss-employee" relationship include the title of position, title, academic title or academic degree. In communication, they are rarely used independently, in Uzbek they are often expressed by onomastic means such as "surname + first name, first name + patronymic" and so on. In Korean, when referring to a person with a high social status, the form «성+직함+님» is used in the form "surname + position name, title + nim".<sup>7</sup> While forms of communication play an important role in the culture of human behavior, it also reflects the position of communicators.

Job-related appeals in Korean can be formed on the basis of the following templates, depending on the relationship between the speaker and the listener, as well as the position held<sup>8</sup>:

### (1) 직함+님 + position / title + 님 template references:

교수님(kyosunim) – dear professor;

선생님(sonsengnim) – dear teacher;

과장님(gwajangnim) – dear head of department

사장님(sajangnim) – dear boss

부장님(pujangnim) – dear deputy director



Based on this pattern, it is mainly applied to people who have held a position. The suffix 님 in Uzbek is translated as dear in Uzbek. But when we translate an appeal, it is preferable that it be translated without this word.

-학교에서 (선생(님)) - At school ((dear) teachers)

“홍선생, 요즘 교무실 분위기가 어떤 것 같습니까?”

"Master Hong, what is the work environment like these days?"

(<녹천에는 똥이 많다>, 교장 → 준식)

("There is a lot of garbage in Nokchon", school director → Junshik)

-“잘알겠습니다. 교장님.” (준식 → 교장)

"I know, I know. Mr. Director." (Junshik (teacher) → to the director)

In this example, the school principal referred to the teacher as 홍선생(Hon sonseng) without the suffix 님, and the school teacher responded to the principal with the suffix nim 교장님(kyojangnim) as dear director. In this example from the story “There is a lot of garbage in Nokchon,” the interaction between the school principal and the teacher shows that Korean society is based on a hierarchical relationship.

Since the principal and Junshik are individuals working in the field of education, the ‘선생님’ (sonsengnim) teacher’s reference was used in the original sense. But in Korean, this address is used in many cases in daily life. For example, drivers, police officers, doctors, and strangers in general are often referred to as ‘선생님’ (sonsengnim). But not all people were referred to as ‘선생님’ (sonsengnim) during the Chosun period. The reason is that it was applied only to the highly educated representatives of the upper class.

It should be noted that in Uzbek speech, the meaning of respect is understood even when addressing professors and teachers as a teacher without the participation of the word “dear”.

*No problem, domla? - Sirojiddin quickly brought water again and filled the well.*

*I'm sorry, domlajon, 'he said sarcastically. "I didn't know she was your man."*

In both of the above examples, “domla, domlajon” appeal can be observed. The Uzbek language is widely used as “ustoz” for those working in the field of public education, and as “domla” for those working in higher education.

"Position + 님" is applied to adults as an appeal to respect the listener. In the Uzbek language, it is observed that such appeals are addressed to people mainly in meetings with respectful words.

(2)

성+직함+(님) last name + position / title + (님)

김교수(님)(*Kim kyosunim*) (dear) professor Kim;

이부장(님)(*Li pujangnim*)(dear) head of department Li;

박대리(님)(*Pak terinim*) (dear) employee Pak.

In Korean, it is common to apply in the form of "surname position / title" or only in the form of a position. It is always obligatory to apply to a high-ranking official in the form of "position 님". The lower position can be addressed in the form of "first and last name". This will be analyzed in the following examples.

“김부장님,-----그만 진정하시고....,,

김부장님 (*Kim pujangnim*) deputy director Kim This address in the form of "surname and position" is often used in the workplace and is used by colleagues with the suffix "님" or "님" after the name and surname. Although it sounds a bit confusing when translated into Uzbek, it is normal for Korean communication.

When a position or profession is written separately, a suffix 님 denoting respect is added to a position or word denoting a profession to form an appeal. Units representing a profession such as 교수(kyosu) professor are not used as a reference in individual cases. Units denoting a profession, such as 간호사(kanhosa) or 판장(panchang), are often used as a unit of reference<sup>9</sup>. At the same time, 대통령(tetongnyong) president is not used in conjunction with the suffix 님 denoting semi-respect, and 국무총리(kungmuchongni) prime minister. Although the "name" cannot form an application with the position, the "surname" or "surname + first" template can be used together with the position. In this case, a representative of respect can join the post. It is like 김용집부장님 the head of the department Mr. Kim Yong Jeep.

(3) 성+이름+직함+(님): last name + first name + position / title+(님)

김영수교수(님)(*Kim Yong Su kyosunim*) (Dear) Professor Kim Yong Su;

이영호과장(님)(*Li Yong Ho gwajangnim*) (Dear) Head of Department Li Yong Ho;

김부장님(*Kim pujangnim*) (Head of Department Mr. Kim);

김용집부장님(*Kim Yong Jip pujangnim*) (Head of Department Mr. Kim Yong Jip).

such a form of appeal is mainly used to avoid misunderstandings in the communication of people holding the same position. Such forms can only be used by adults or if the interlocutors are of the same age.

김용집부장님 - Head of department Mr. Kim Yong Jip

It can be used without

김용 집부장 - Head of department Kim Yong Jip

But when translated into Uzbek, there is no difference.

Although both “name+ position+님” (이름+직함+님) and position+ 님 (이름+직함+님) are similar to each other, the latter one is more formal the latter one.

When the position is used without the suffix of respect, it is written together with the name, and this applies to people who are the same age as the interlocutors or who are younger than the speaker. When the addressee and the addressee are of the same age, the “name+ position+님” pattern used indicates that the two interlocutors are more closely related than the form of respect.

If there is a difference in position between the interlocutors, then it is expedient for the superior to use any form of appeal, even if it is obligatory for the superior to use the suffix 님, which is a sign of respect for the superior. Usually, low-ranking people are treated with the suffix 님, which is a form of expression of respect for the interlocutor, and respect for the interlocutor is a form of adherence to the "official etiquette". However, once a professor's student becomes a professor, the professor usually does not call his or her student as a “professor”. This is the norm in the "unwritten rules" of the Korean language.

#### (4) 성+이름+[-님, -씨, -군/양]: last name+first name+ [-님, -씨, -군/양]

김영수(Kim Yong Su) Kim Yong Su;

김영수님(Kim Yong Sunim) Dear Kim Yong Su;

김영수씨(Kim Yong Su shi) Mrs. Kim Yong Su;

김영수군 (Kim Yong Su gun)Mr. Kim Yong Su;

이영미/양 (Li Yong Mi yang) Ms. Li Yong Mi.

*Don't pay attention, Klara Khodjaevna, - said our chairman. "Grandmothers are illiterate."*

*"Don't listen to the grandmothers, comrade Jamoliddinov!", - Said Alisher.*

The Uzbek language uses a template such as "first name + last name" or "first name + father's name" in appeals related to people's profession and position. in the first sentence the chairman addresses the woman with “name and father's name,” while in the second sentence the word *comrade* is used instead of the name.

#### (5) 외래어형(Mr/Mrs+성):

미스터김 Mr.Kim,

미스리 Mrs Li.

“보세요 *미스터리*,

혼자만의시간과공간이필요하다고하시면서도아내의손실을그누구보다도-----

(<사랑의예감>, 신옥→신옥의남편)

"Look, Mr. Lee, even if you say you need your time and space, but your wife's hand is more than anyone else's.

(Sense of Love, Shin Ok → Shin Ok's Spouse)

**경칭** it is an appeal of respect, a method widely used in almost every aspect of Korean culture, from the profession to society. For example, “minister”, “senator”, “director” and so on. In such cases, the use of the phrase "Position + **님**" means respect for the listener.

Since there is no universal form of address for the second person in Korean, the required reference unit can be used depending on the situation. **사장님** (sajangnim) is sometimes referred to as the director, the boss, the chief, and **사모님** (samonim) the chief, or the professor's wife - the lady. Whether or not the person being addressed is a “boss” or a “boss’s wife,” encountering such appeals in a dialogue of Korean culture reflects the uniqueness of the Korean people and the Korean language. Even when they know that they are not actually the “boss” to the store employee in the stores, you can see that the customers who apply sometimes say **사장님** (sajangnim) as boss”.

When introducing himself in new circles, it becomes customary to first introduce the position or career and then say the name. For example:

도지사 000 입니다 – Governor 000.

XXX 회사대리 000 입니다 -I am a representative of XXX Company.

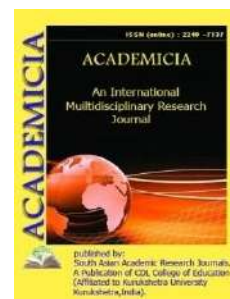
## CONCLUSION

In conclusion, it should be noted that although Korean and Uzbek belong to the same family and are agglutinative languages, there are commonalities and differences in the discourse and applied moral norms of the two languages. As people interact, they will, of course, benefit directly from this or that appeal, depending on the situation. In Korean society, it is clear from the examples given in the article that appeals related to the profession and position of people can or cannot be translated into Uzbek. At the same time, there are universal forms of appeal, and people will be able to use these appeals in order to avoid mistakes. This topic, which is analyzed in this article, has not yet been fully explored and requires in-depth and systematic research in the comparative study and analysis of the two languages.

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**REMOVED DUE TO TECHNICAL REASONS**



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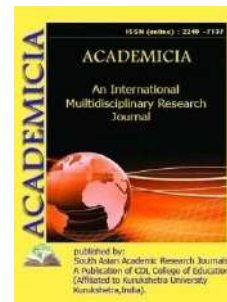
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## CHALLENGES IN TRANSLATING HYPERBOLE IN THE PROCESS OF READING

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### ABSTRACT

*The article deals with the analysis of hyperbole in English, Uzbek and Russian in translation in the process of reading. The study of the use of hyperbole has always been one of the most important, interesting issue of not only Typology or Stylistics, but also of general linguistics and translation. Some examples related to hyperbole and their translation in three languages are mentioned in this article.*

**KEYWORDS:** *Equivalence, Original, Exaggeration, Stylistic Device, National Colorings, To Express.*

### 1. INTRODUCTION

Translation requires a complete understanding of the customs, traditions, manners and lifestyle of a group of people to translate in a manner that communicates to that culture's worldview.

The basic determination of translation is to reproduce different types of texts, comprising literary, religious, scientific, poetic, philosophical texts etc. in another language and thus making them available to wider book readers, to a greater number of target audience and to bring the world closer and closer.

Translation equivalence norms require as nearly as possible a common sense of the source and target text. When the sense in the target text is transgressed, equivalence norms are completely broken, and the translation is considered unsatisfactory. If a translation is made at a low level of

equivalence, the norms are relatively broken, and the translation is regarded as acceptable. [1, p.219]

The translator should be able to choose words that pass the concepts of the phrase correctly and properly. Formal equivalence implies word for word translation or literal translation. It translates not only the exact appearance of vocabulary but also the idioms and grammatical structure used in the original.

## 2. MATERIAL AND METHOD

Hyperbole is a stylistic device based on the interaction between the logical and emotive meanings of the word. It is deliberate overstatement or exaggeration of some quantity, quality, size, etc., the aim of which is to intensify one of the features of the object to such a degree that from the practical point of view the fulfillment of which is impossible. Both the writer and the reader (or the speaker and the listener) are fully aware of the deliberateness of the exaggeration. The use of hyperbole shows the overflow of emotions in the speaker and the listener. We constantly use expressions containing hyperbole in our everyday speech. Such exaggerations are distinguished from a hyperbole as a stylistic device.

For example, I haven't seen you *for ages*, (*Seniko 'rmaganimgayuzylbo 'ldi*), You promised it *one thousand times*, (*Yuzmartava 'daberding*) *A thousand pardons, scared to death*, (*O'lgudekkechirimso 'rayman*). By comparing two languages here, we find out some definitions between two languages. Here, English people exaggerate much more than ours do.

American poet W.H. Auden writes in “**As I Walked Out One Evening**”

*I'll love you, dear, I'll love you*

*Till China and Africa meet,*

*And the river jumps over the mountain*

*And the salmon sing in the street.*

*I'll love you till the ocean*

*Is folded and hung up to dry.”*

The use of hyperbole can be seen in the above lines in the meeting of China and Africa, the jumping of the river over the mountain, the singing of salmon in the street, and the ocean being folded and hung up to dry are exaggerations, not possible in real life.

We also wanted to translate the poem by comparing our Uzbek style of translation with English one, paying attention our Uzbek stylistic devices.

*Meningsevgimumrbod, ishon!*

*Toki, tog' bilan tog' uchrashmaguncha.*

*Sersuvdaryolarsuvitugab,*

*Hamdabaliqkuylamaguncha.*

*Meningsevgimumrbod, abad*

*Toki, ummonsuviqurumaguncha.*

*In Uzbek translation, we tried to give some expressions, which are close to Uzbek people, Uzbek national colourings instead of using "till China and Africa meet" and "the salmon sing in the street". In both languages, we can also notice the usage of exaggerations by giving national colourings and devoting the readers to appreciate the sense of love by the poet.*

We asked our Russian teacher to translate the same poem into Russian. It occurs a bit different from Uzbek and English.

*Поверь, любовь вечная,  
Пока гора гору не встретит,  
И не останется вода у рек.  
Любовь вечна моя, навеки,  
Пока не запоем рыбаки  
Инеобмелеет океан.*

"He cried all night, and dawn found him still there, though his tears had dried and only hard, dry sobs shook his wooden frame. But these were so loud that they could be heard by the faraway hills ..." *The Adventures of Pinocchio* (By C. Colloid).

"The crying of Pinocchio all night until his tears became dry" is an example of Hyperbole.

The translation of this sentence into Uzbek and Russian will be close in both languages. In Uzbek "ko'zyoshlari qurub qolguncha" and "Пока не высохнут слезы" in Russian. And also, "ovo shunchalik baland ediki, hattoki uzoq qoyalardan eshitilib turardi" in Uzbek. Russian version translation is also the same way. "Голос настолько был пронзительным, что отдавалось эхом от скал"

Very often hyperbole is used to create humorous or satirical effect and so to express the author's attitude towards the described." Shunaqaozib – tuzib ketib diki, xuddi ignayutgan itdek bo'lib qolibdi" (Xudoyberdi To'xtaboyev "Shirin qovunlarmamlakati"). The translation of the sentence is "He was so thin like a dog that swallowed a needle" or "He is all skin and bone"

By watching the films, we can also hear some exaggerations.

Царь Иван Васильевич Грозный: «— Так, это, стало быть, ты тут живёшь? Даа, **хоромы-то тесные**». (Говорит Шурику про его квартиру)

-So, you live here? Well, **very cramped quarters**. (addressing to Shurik)

-Ha, shunday qilib senshuyerdashaysanmi? **Koshonang juda tor ekan**. (Shurik gamurojat etib) (L. Gayday rejissiyorligida ishlangan komediya «Ivan Vasilovich o'z kasbinio'zgartirdi» Kinostudio "Mosfilm", 1973.) Modern people do not live in palaces nowadays.

Hyperbole may be used in combination with other stylistic devices - hyperbolic similes. "His mind began to move **like lightning**." *Uning fikri, xotirasicha qoqkabite zishlaydi*.

Иван Евсеевич медленно вышел, а генерал схватил себя за щеку и заходил по комнатам.

- Ой, батюшки! – вопил он. – Ой, матушки! **Ох, света белого не вижу!**

Ivan went slowly out, and the general clutched his cheek, and went rushing through the house.



- "Ouch! Oh Lord!" he howled. - "Oh, mother! Ouch! *I'm as blind as a bat!*"

Ivan sekinginauydanchiqdiyu, ammo general uniyonog'idanushlab, xonabo'ylabyurdi.

-“Voh!Voh! Xujayin!” uvilladi u. –“Voh, onajon! Voh!  
*Ko'rshapalakdekhechnarsaniko'rmayapman!*”[2, p3]

Я помню, *в двух шагах от нашего дома*, под горой, было озеро. Это озеро, - я как будто вижу его теперь, — это озеро было такое широкое, светлое, *чистое, как хрусталь!*[3, p79]

I remember how beside our house, at the foot of a hill, there lay a large pond, and how the pond – I can see it even now! – shone with a broad, level surface that was *as clear as crystal*.

Bizninguyimizdanuzoqbo'lmagan, tog' etagida,xuddi-ki, hozirko'ribturganimdek, birko'lborlinieslayman. – ko'ljudakeng, ko'rimlivaxuddi*billurdektozaedi*.

Hyperbole may be found in repetition:"I'd have been out there *days ago, days ago*". (S. Leacock) "Men u yerdabirnechavabirnechakunoldinbo'lganman"

-Men senga qayta qayta aytdima, bormagin deb. Ana senga yanavayanatashvishbo'ldi.

- I told you again and again not to go there. Now, you have more and more problems.

A translator is to convey not only the ideas and themes of the source text (meaning, sense); s/he should also pay attention to the adequate form to express these ideas. S/he should not become carried away with a free (loose) form of translation, nor force the target language by following the source text word for word. [1, p11]

While reading both Uzbek and English literary works, we often face to face many stylistic devices in which somehow difficult to compare and translate. It is also very interesting job to compare two languages while translating a stylistic device, Hyperbole. We can differentiate between the traditional and the genuine hyperboles in the Uzbek, Russian and English literary works. "Dadanglar bilan borganimizda hurmat utavozesiga og'zimizni ochib qoldik". (Mirmuhsin. "Ildizlar vayaproqlar", Toshkent 1989 yil, 162 bet) "Когда мы пошли твоимотцом, мы рот раскрыли от такого уважения". When we went to there with your father, we *kept opening our mouths* for their respect addressing to us.

"Bu holnieszlarkan, uningko'zlaridan olovcha qnabketardi". (Mirmuhsin. "Ildizlar vayaproqlar", Toshkent 1989 yil, 162 bet) "Её глаза вспыхнули огнём, когда вспомнила случившееся. Remembering the situation, we saw *the fire in his eyes*. Given above three examples in three languages are very close to each other's translation.

1. -Men senga *uzmarta* aytdim. -Я говорил тебе сто раз. -I have told you hundred times.
2. -Bu narsa *uzmartabo'lgan*. -Этo случилось сто раз. -It occurred 100 times.
3. Uning fikri, xotirasi *avtomatdek* tezishlaydi. (in oral speech) Его мысли, память *работают молниеносно*. He is characterized by *brainy memory and he works lightning fast*.

-I mentioned you *twenty times*.

-Men senga *uzmarta* aytdim.

-Bu narsa *uzmartabo'lgan*.

- That's been *a hundred billion times*. By comparing two languages, the we can see some definitions between the numbers, but meaning is the same.

In our daily conversation, we use hyperbole to create an amusing effect, or to put emphasis on our meaning. Hyperbole is a figurative language technique where exaggeration is used to create a strong effect. With hyperbole, the notion of the speaker is greatly exaggerated to emphasize the point. However, in literature it has very serious implications. By using hyperbole, a writer or a poet makes common human feelings remarkable and intense to such an extent that they do not remain ordinary. In literature, usage of hyperbole develops contrasts. When one thing is described with an over-statement, and the other thing is presented normally, a striking contrast is developed. This technique is employed to catch the reader's attention.

Hyperbole is the use of over-exaggeration to emphasize a point or to be humorous. It is not intended to be taken literally. Any writing tool that adds emphasis is going to lend itself particularly well to literature. If you want to give some life to the point you're trying to make and bring an idea home for your readers, hyperbole can help. With a nod to some of great literary masters, let us look at some examples of hyperbole and theirs translation in literature.

The exaggeration in *Parker's Back* by Flannery O'Connor helps to set up the characterization: "The skin on her face was as thin and drawn as tight as the skin of onion and her eyes were gray and sharp like the points of two picks." "Uningyuzterisishundoq ham noziklashibketganedi-ki, xuddikipiyozpustidekyupqa, ko'zlariesao'tkirtig'libirjismgao'xshabchaqnabturardi".

In Uzbek translation, this sentence is translated not word for word translation. Readers have to pay much more attention to source and target language equivalents very carefully. Hyperbole and literature - the two just go hand in hand. It is also used in everyday life, in advertising, and in speeches, songs and movies.

Hyperbole: How to Use It Well. Here, we also want to add Nathaniel Hawthorne's quotation about words. "Words, so innocent and powerless as they are, standing in a dictionary; how potent for good and evil they become in the hands of one who knows how to choose and combine them."

We would not use hyperbole in formal writing, such as a business memo, a letter to a business, a scientific report, an essay, or an article for publication. It could have its place in fiction or other types of creative writing when used for effect.

Scientist Rubin suggests that there are three major types of strategies used by learners. She identifies six main cognitive strategies contributing directly to language learning. Clarification/verification refers to strategies used by learners to check whether their understanding of a rule language item is correct. Here, learners can clarify their basic knowledge by checking. [4, p 23]

1. Guessing/inductive inferencing refers to various strategies concerned with making hypotheses about how the language works. Here, learners need to be able to select appropriate information, attend to what is important.
2. Deductive reasoning is a strategy where the learner uses knowledge of general rules to produce or understand language. By writing essays, control works, doing some research work learners can appreciate their understanding the language.

3. Practice is concerned with storage and retrieval of language. This includes such strategies as repetition and rehearsal. Learners may check their knowledge by acting and making presentations, explanations before audience.
4. Memorization. This category includes mnemonic strategies and using lexical groupings.
5. Monitoring refers to learners' checking of their own performance, including noticing errors and observing how a message is received.

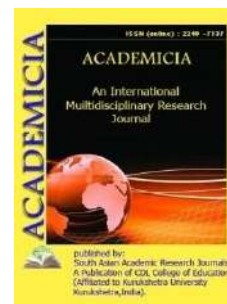
Here, we can also mention communication strategies. They are used by a learner to promote communication with others. These processes are very important to language learners.

#### **CONCLUSION**

As a teacher, we make sure our students get a lot of successful translating experience: through encouraging them to choose their own simplified translators, for example, and giving them time to translate the tasks. We should give interesting tasks before asking learners to translate, so that they have a clear purpose and motivating challenge and use texts that are interesting enough to provide their own motivation. By comparing and contrasting this stylistic device, they can easily enlarge their vocabulary and expand their knowledge.

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## **PSYCHOLOGICAL MECHANISMS OF NATIONAL AWARENESS AND THEIR USE IN THE PROCESS OF EARLY ADOLESCENT EDUCATION**

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### **ABSTRACT**

*The following article deals with the psycho physiological mechanisms and laws of understanding and formation of national identity in young people After the transition of the Republic of Uzbekistan to the path of independence, one of the most actual problems in the field of education became the inculcation and formation of the ideology of independence in the minds of young people.*

**KEYWORDS:** *Inculcation, Mechanisms, Ideology, Concern, Honor, Dignity,*

### **INTRODUCTION**

What is an ideology and what is the basis of its formation?

In our opinion, ideology is a common quality that provides a solid foundation for the political, economic, legal, moral foundations of a particular state or society, unites the citizens of that state or society - national pride, political views, worldview, faith, honesty, it is a set of moral and spiritual values such as compassion, kindness and consequence, conscience and concern, honor, dignity, love for the motherland.

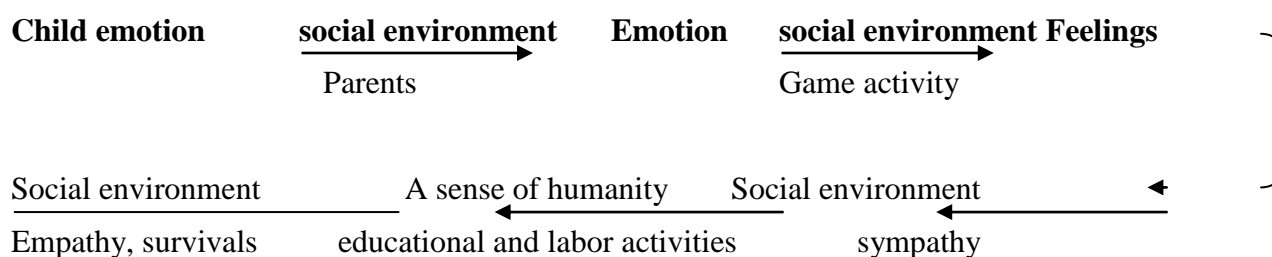
These human qualities must be raised to the level of values that meet the needs of that society in the course of its development, and therefore need constant nurturing.

At the heart of the ideology of independence are our spirituality and values, first of all, humanity, patriotism, diligence, solidarity, compassion, honor, national feeling. The results of our research show that emotional education is based on the psychophysiological mechanism of formation of such values in the younger generation.

In our view, human emotion has a polar significance. Negative emotion is innate and is an emotion designed to inform about the birth of needs (organism, material). Positive emotions, on the other hand, are formed in the process of upbringing after birth, which is associated with the satisfaction of needs. Indeed, a child's spiritual feelings, that is, his attitude towards the environment, are shaped by the influence of positive emotions by the parents.

So, the moral attitude of the younger generation to nature, the motherland, the people around it, its spiritual growth, should be carried out on the basis of positive educational influences by parents, educators, and this is one of the important factors in the child's national and universal moral values. Thus, emotion, empathy, moral feelings underlie the formation of a person's empathic experiences.

The formation of national and universal values in the educational process can be shown using the following scheme.



It is obvious that emotional upbringing is ensured first of all by parents and then by the positive educational influence of educators in the process of various activities of children.

The formation of a sense of national identity in young people can be ensured on the basis of emotional education, through the balanced formation of national spiritual and universal values. It would be expedient if this process was carried out in the form of the formation of conscious beliefs of schoolchildren in parents, the Motherland, the book. Because in the dream of raising a child, a parent forms in him a sense of devotion to work, homeland, people, and on this basis forms in him the buds of qualities such as sophistication, intelligence, intelligence, religion. In the future, it will become the moral qualities of the child and form the basis of the ideology. While the formation of the ideology of independence and understanding of national identity is based on emotional education, not only the family but also preschools, schools, academic lyceums and vocational colleges should play a special role in the formation of national values in the minds of young people. However, it should be noted that the formation of a sense of national identity in high school students and first-year students of vocational colleges is based on a different psychological mechanism. The understanding of national identity is related to the philosophy of ideas, and it is formed under the influence of certain ideas, ideologies.

The perception of national identity in young people is based on the formation and assimilation of social and spiritual national values in their minds on the basis of their self-awareness.

So, in the process of educating young people, as social values are formed in the human mind on the basis of educational influences, on the basis of what mechanisms are they provided? What is the basis of them? - What mental phenomena and processes ensure that a person realizes that he belongs to a certain nation? Is it possible to influence the functioning of this mechanism and accelerate the realization of one's own freedom by belonging to a particular nation?

To find answers to these questions, we turned to the field of psychophysiology, because the above questions are related to the psycho physiological laws of the individual and his spiritual development.

According to subsequent literature, a number of processes in modern man have retained their physiological significance and radically changed the "natural face" psychologically. According to the authors (P.V. Simonov, B.I. Dodonov, A.S. Abdukhadov and others) opinions, emotions and thinking from mental phenomena are primarily in the service of the social needs of the individual and have completely changed their nature. This thought elevates emotions and thinking to the level of social values.

The formation of certain values in the consciousness of the person and its role in the understanding of national identity has not yet been studied completely.

According to E. Clapered, in the phenomenological sense, the following descriptive indicators of emotions can be distinguished:

1. The place of emotions in the human mind in the form of direct internal experiences;
2. The fact that these cases have a dual psycho physiological nature, on the one hand, the affective experience, and on the other hand, its organic expression;
3. Subjectively vivid expression of emotions and their specific "intimacy".

The latter is expressed by words experienced by man, but is not expressed in appearance. Emotions cannot be transmitted to someone through images as an image. The essence of the "intimacy" of emotions is that the subject experiences emotions and retains their significance that is observed in a pleasant or unpleasant form, without resorting to past experience.

In the philosophical and psychological literature, emotion and thinking are very closely related<sup>1</sup>. But they are a completely different process. Sometimes the concept of emotional thinking can also be found in the scientific literature. In this case, the transformation of thinking into emotionality in rationality takes place only by adding its main direction (tendency) to the desire and desire that triggers the emotion in its process and results. Here, contemplation connects subjective moments (moments) to the objective properties of things and events that are material (existing), which do not depend on consciousness at all<sup>2</sup>. When classifying mental phenomena into classes, however, thinking is traditionally drawn to the processes of cognition with perceptions, cognition, memory, and other internal mental activities. Emotions, on the other hand, are associated with a particular situation or volitional qualities.

In our opinion, thinking and feeling, thinking and emotions, thinking and perception, or thinking and perception, have a very complex relationship and reflect the relationship of mind and heart of our great scholars from a philosophical point of view.

"Pure" perceptions or "pure" intelligence are processes of information exchange, which are activities designed to remove the ideal (copy) from existence. When we transfer this idea to the formation of the person, it serves to be copied by the subject, the appearance of the chosen ideal, its individual elements by intuition and perception. But they never trigger or unload certain behaviors in the body. According to the example of the American scientist D. Wooldridge, frontal lobotomy (surgery) does not eliminate pain on its own, pain is preserved as an organic sensation, but it loses the emergence of a general emotional assessment of pain. Another



example: a person who has lost a leg or arm from a war veteran “feels” the “frontal” pain, the unbearable pain of a missing leg or toe, and complains to the medical staff about it. In the first example D. Wooldridge argues that lobotomy makes the patient indifferent to pain, but does not reduce the pain itself. In the second example we give, the system that controls the human body sometimes evaluates it emotionally, despite the fact that the system that receives information about its condition is defective, which is why a person feels pain in an organ that is not real and naturally evaluates it subjectively.

The information itself is of no importance, it may have this importance based on the needs of the subject. Emotions and thinking are first and foremost internal activities. In the process, primary information about being is processed in a certain way. As a result, the organism (individual, person) has arguments to follow.

Here we realize that thinking and feeling are very close, and that they are very close based on the activities they perform. It hides the existing closeness of feeling and thinking with its essence and functions.

The secrecy of emotion is the absoluteness of the epistemological aspect of human thought on the one hand, and the call of emotion on the other, not the traditional mental processes, but their end product is affective excitement and bodily changes, makes them easy to understand for introspective and external observation. This evidence is of particular importance in evaluating and learning about a person's behavior.

Contemplation is a special type of selective activity, planning (orientation activity) at its origin and end point. Its task is to transform the external world into the inner world of man, to ensure the perfect satisfaction of man's needs. It is in any case a process aimed at determining the value of material, spiritual, social things and events. In other words, thinking is the process of determining what a person needs

Ultimately, truth and error, chance and necessity provide the axiological content of the separation of good and evil in man through contemplation. This function of thinking serves not only to ensure the perfection of the individual, but also to accept healthy spiritual ideas, concepts and thoughts at the level of value and to deny social activism and beliefs in this direction.

Thus thinking performs an axiological function, and what is useful and harmful to man is of special importance for the knowledge of phenomena.

When it comes to feelings, it is as wrong to think of them as "affective excitement" or a physiological reaction, just as to understand only letters or individual words in the same writing process.

In fact, emotions are the activity of evaluating the information received by the brain, encoding the information that enters the brain in the external and internal world as a subjective image of perception and perception as a state.

Thus, emotions are a process of specific assessment and identification of being, which is the assessment of information about being in a specific order (P.K.Anokhin, 1969, P.V.Simonov 1986, D.Wooldridge 1965, G.N.Kassil 1960, V.P. .Dodonov 1988, A.S.Abdakhadov 1978-1989). These scientists have shown that they compare images of an entity that reflect the content of emotional activity in the brain with temporary or permanent programs that exist in the brain.

According to P.K. Anokhin, a positive emotional state, such as enjoyment, satisfaction, passion, which arises in the satisfaction of an important need, can appear exactly similar only if the receptor of the action corresponds to the negative affect information from a particular event, and vice versa, inconsistency with acceptors leads to the emergence of negative feelings (emotions).

Many scientists, including B.I. Dodonov (1978) believe that emotions are not just a simple comparison effect with the information the brain receives from being, but provide an "axiological comparison".

In other words, the fact of valuing an asset constitutes its essence in terms of plans of needs that arise individually. This idea raises the question of why emotion arises, why nature is limited only by contemplation, and it is natural. This is because ancient emotions were very vital in animals without thinking, but simple thinking served as the ancient and earliest form of thinking that performed functions. Emotions evaluate a being very perfectly and convey it to the organism in the language of experience, determining how the organism behaves in different environmental situations. This means that emotions (feelings in humans) make it possible for even non-intelligent animals to judge how nature should behave in different situations (Dodonov, 1978). Thus the process of emotional states is of a similar nature to logical thinking.

Emotions, like the process of thinking, rely on the results of their past experiences in their comparisons. If contemplation serves the emergence of understanding, the emotions experienced will surely lead to emotional generalization.

So another question naturally arises: If emotions and thinking rely on comparisons in a similar way, what difference can there be between them? According to B.I. Dodonov, in the process of word-logical thinking, the images of the objective being and the concepts about them are compared, or those images and concepts are compared on the one hand, and "ideas of needs" on the other. These processes are mainly provided by the cortex of the "brain" hemispheres and by the secondary signaling system.

The emotional process, on the other hand, triggers the cortex beneath the cerebral cortex, the lower layers of the brain. This fact was reflected in the previous works of S.R. Rubinstein<sup>3</sup>.

It is impossible to contrast thinking with emotions, in general, with the structure (components) of the perceived and incomprehensible. But this idea has been formed on the basis of a limited notion in the field of psychology that for many years emotions have been involved in the emergence of thinking activity motivations. In fact, the research of O.K. Tikhomirov shows that emotions not only activate the process of thinking, but also participate in its structure and perform a heuristic function<sup>4</sup>. This fact is reflected in the research of A.S. Abduakhadov and even in the formation of social and professional values in the human mind, and its role in absorption is clearly shown<sup>5</sup>.

In particular, the role of heuristic emotions in heuristic activity is clearly shown in the mathematical works of other authors. According to many scholars, emotions, figuratively speaking, play a role similar to the role of 'hot' and 'cold' in the search for a hidden object in children's play in finding the right solution.

Such readings of emotion and contemplation are, figuratively speaking, the two branches of a tree in modern conditions. They have common sources of origin and are firmly connected to each other in their higher processes.

So if emotions arose before thinking, why do they “invalidate” thinking after it has emerged in the evolutionary development of large beings, but allow it to retain its independent significance?

To answer this question, it is worth recalling the dual psycho physiological nature of emotions.

Emotions not only reflect the being, whether or not it meets our needs, instructions and predictions, they not only provide an assessment of information about the reality entering the brain, but also adequately prepare the body for line movement energetically and functionally.

Their integration into the "decisive qualities" of emotions is. They cover almost an entire organism, integrating its total functions (into one whole). Only emotions are stored within vital functions<sup>6</sup>.

In general, "physiological changes in emotions are a very important factor in the organization of human activity." That is why the activity, which is related to human emotions, is very productive. A person's activity without emotion is very cold, i.e., the activity he is forced to perform is very unproductive. According to G.H. Shingarov (1971), physiological changes in emotions provide all "analyzers", as well as intrapsychical control and coordination of other mental processes<sup>7</sup>. Human emotions retain their physiological significance and psychologically radically change their "natural face". Emotions are primarily at the service of a person's social needs, completely changing their subjective nature. Moral emotions and other human experiences begin to occupy a very important place in the life of the subject. The role and expressiveness of subjective components in the architecture of emotions has greatly increased. In particular, a component of emotions such as “affective excitement” has become particularly important to humans.

According to scientists, emotions not only develop it as a form of assessment of the fact of affective excitement, but are also added in new assessments and comparisons.

Every emotional fact is, first of all, a holistic activity. Emotions can be considered mental activity only on the basis that they are filled with an emotional assessment of a person's experiences to the end. Emotions, according to P.V Simonov, mean not only the fact that the objective being corresponds to the probabilities of the subject, but also a mental fact, such as whether the changes taking place in the subject itself are good or bad.

Thus, the evaluative function of emotion is necessary for the development of the organism and the individual. Emotional evaluation is a much-needed value for us. They not only perform an evaluation function but also act as an independent positive value. For example, when a person is engaged in any activity, he does it not only for pleasure, but also for pleasure. In this process, emotions are activated not only as a value, but also as a motive for the activity performed. Natural emotion can act as a motive for action and even as a motive for morality. (B.I.Dodonov, 1978)

This fact is of great importance, and the role of emotions in education, including in young people's understanding of themselves and others, and on this basis in comparing (identifying) their ideal "I" with real "I" or drawing conclusions by comparing themselves with others, It plays a special role in the formation of national and universal values in the minds of young people, serving in the understanding of their belonging, national self-assessment.

A person's ethical guidelines are generally social in nature and naturally they affect a person's assessment of any subjective experience. But the moral moment only independently determines a person's valuable attitude towards his own experiences and feelings.

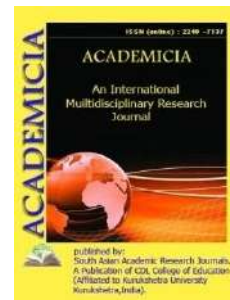
Emotions independently draw a person to reality and therefore even determine a person's emotional direction.

It should be noted that pleasure plays a huge role in human life. People have a need to enjoy and not satisfying it produces very strong negative experiences. For example, any work is hard and it is known to everyone. Intensification of the labor process, depression, emotional stress, and, in general, "creative pain" are not uncommon. But the enjoyment of labor eliminates these situations and increases labor productivity. Here, this emotional state is used as a positive value, and therefore it is important to form this state in different areas of education, and if it is based on the education of young people in any profession, it is easier to ensure the spiritual and professional maturity of young people.

Therefore, it is not on the basis of forcing our youth to form positive social attitudes towards the Motherland, our nation, that is, on the basis of forcing them to form humane and patriotic values in their minds, but on the basis of giving them an emotional thirst for these values. It is necessary to go. Such an opportunity can be provided to schools by classes conducted on the basis of new educational technologies in high school students. The interactive methods used in it activate the cognitive processes of young people by invoking continuous emotional thirst and activating their emotional satiety needs, because there is always a need for emotional satiety in a person, as the harder the work, the higher the situation. On the basis of the need for emotional saturation in the human person are formed programs of experiences, which are characterized by individualized and socialized experiences, that is, in which the emotional direction is formed. This is the basis of any socially positive direction, and is very important in the formation of socially positive values in the mind of the individual, including in ensuring the national self-awareness of the individual.

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## OPTIMIZATION OF PRIMARY EDUCATION

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### ABSTRACT

*This article discusses the issues of optimizing primary education and increasing its effectiveness as a result of current needs. As a result, the integration of secondary special and higher education systems has been formed at the level of demand. Also, the process of reforms in the general secondary education stage requires the interdependent development of pre-school, primary and general secondary education. In our approach, primary education textbooks should be popularized after pedagogical experimentation. At the same time, it would be useful to study the foreign experience gained over the years.*

**KEYWORDS:** *Need, Standard, Primary, Education, Theory, Practice, Knowledge, Skill, Qualification.*

### INTRODUCTION

In 2020 - the "Year of Science, Enlightenment and Digital Economy", the task is to optimize the education system, as well as all areas. In this regard, it is emphasized in the Address of the President of the Republic of Uzbekistan to the Oliy Majlis [1]. The principles of continuity and consistency are important in optimizing the education system. According to him, the stages of education should be complementary and interdependent on the principle of continuity, and the principle of continuity is based on the unity and consistency of program areas. This approach has been implemented during the years of independence of the education system of our country. As a result, the integration of secondary special and higher education systems has been formed at the level of demand. Also, the process of reforms in the general secondary education stage requires

the interdependent development of pre-school, primary and general secondary education. Because from 2019, the preschool education system has become an integral part of general education. This situation requires improvement of the functions of primary and general education. Therefore, over the past three years, the problems of primary education have been discussed by specialists, scientists and teachers of primary education in practical activities at scientific and practical conferences throughout the country. The aim is to improve the function of primary education, increase its efficiency and introduce new technologies into the system. Therefore, at this point we draw our attention to the problem of optimizing primary education.

It should be noted that optimization means the following:

- updating the content of education in accordance with modern requirements;
- strengthening the process of integration of the education system;
- specification of the principles of education and upbringing;
- Achieving financial and economic independence of educational institutions.

All this is expected to be applied to the primary education system. According to him, the following are accepted as the basis for optimizing primary education:

- 1) definition of functions of primary education and its coordination with functions of preschool education;
- 2) development of new generation textbooks;
- 3) updating the methodology of primary education;
- 4) study of foreign experience in primary education.

There are different approaches to defining the functions of primary education, and in our opinion, it is advisable to follow the following:

- the main task of primary education is the formation of the student's ability to acquire knowledge and its orientation to knowledge;
- definition of curricula and programs of primary education as the initial stage of curricula and programs of general education;
- organization of primary education management on the basis of various technologies (for example, it should be noted that the cluster method of teaching is effective in this regard);
- monitoring the process of primary education.

It is expedient that all this be clearly and optimally defined in the forthcoming Education Code.

The fact is that in connection with the adoption of the Law of the Republic of Uzbekistan "On Preschool Education", the functions of primary education, such as literacy, reading, writing and drawing, were transferred to the stage of preschool education.

Therefore, it is necessary to coordinate the function of primary education with the preschool and general education stages, to define and identify its main factors.

Creating a new generation of textbooks for the primary education system is an important factor in optimization. In our opinion, the following approach will yield the expected results:



- correction of primary education subjects and the creation of a system of interdependence between them;
- to place the subjects of primary education on a logical basis and to avoid duplication of subjects;
- provide accurate and up-to-date information in primary education textbooks in a concise and understandable way;
- providing primary education textbooks with additional teaching materials, methods and tools.

With the implementation of these tasks is divided by the possibility of updating the methodology of creating a new generation of textbooks for primary education. Because in recent years there is a need to improve the methodology of creating textbooks in primary education. For example, methods of teaching science are much outdated. According to current educational standards, textbooks should be written based on different teaching methods. The main reason for this is the development of information and communication technologies. In our approach, primary education textbooks should be popularized after pedagogical experimentation. At the same time, it would be useful to study the foreign experience gained over the years.

The methodology of teaching primary education in our country has a two-century history. At the same time, there is a need to optimize the content of this process while maintaining the methods of teaching explanation, teaching and adaptation. For example, Jadid educators recommended the appropriate adoption of methods of coercion and freedom in teaching [2]. The essence of this approach is as follows: in the transfer of basic knowledge, the child's personality is forced, if necessary, based on the method of freedom in shaping the child's worldview and independent thinking. In our opinion, such an approach is not so new. Therefore, the optimization of teaching methods in primary education can be based on:

- to study the approaches of modern educators to primary education and to adopt its most positive aspects;
- mastering world standards and practices of primary education and putting them into practice on the basis of national approaches;
- involvement of primary school teachers with advanced methodological experience in the process of preparing textbooks;
- monitoring of teaching methods in primary education.

Such an approach provides an opportunity to update the teaching methodology and increase its effectiveness. The main goal is to deliver the expected amount of teaching materials to primary school students. The study of advanced foreign experience is important in the optimization of primary education. Our approach in this regard is as follows: to study the achievements of foreign educational experience of Russian, French, German and English countries, to apply their most advanced aspects in practice on the basis of national criteria. For example, the ideas and concepts of the Russian pedagogue A. Ushinsky on primary education have been adopted by many countries around the world [3]. A. According to Ushinsky's approach, in primary education, first of all, the native language, literature and the spirit of the people should be given priority. The implication of this view is that the primary school student must first acquire the basics of

knowledge in his or her mother tongue, and the teaching of foreign languages must be taken as an adjunct to it.

In our opinion, the study of advanced foreign experience in the optimization of primary education should be as follows:

- Primary study of the experience of German, Russian, French and English-speaking peoples in primary education;
- adherence to the principle of acceptance of the best foreign experience;
- first pedagogical testing of foreign experience and then its implementation in practice;
- to pay as much attention as possible to innovative ideas, methods and tools in the study of foreign experience.

All this allows the use of foreign experience in the optimization of primary education. We have studied the Russian, German, French and English primary education systems highlighted in this regard. It should be noted that they have specific methods and approaches that are acceptable. The aforementioned tools for optimizing primary education require a consistent study and approach. To this end, we would like to remind you that the establishment of cooperation between scientific educators and direct practical teachers will bring the expected results.

The modern requirement is that primary education should provide the student with the expected level of knowledge in a short period of time and quickly form his or her learning ability. Because data, information and messages are updated every day. Therefore, there is a need to optimize primary education.

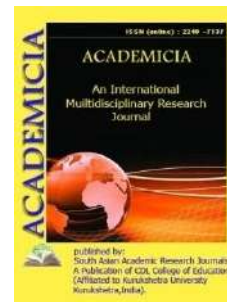
It should be noted that some foreign countries have some experience in optimizing primary education. For example, in the Russian Federation over the past twenty years, consistent scientific and practical work has been done to reform primary education and optimize its content. It turns out that Russian educators are based on two principles:

- preservation of the accumulated national experience in primary education;
- monitor the primary education reforms of the Commonwealth of Independent States and adopt their most advanced achievements. In this regard, each state has its own approach to optimizing primary education. It is important to develop a unique approach of our country in this regard.

In the context of innovative development in Uzbekistan, one of the key issues is a broad discussion of the problems of primary education and finding optimal solutions. It is important to create an integration of scientific and practical approaches in this regard. Addressing this issue as expected will serve the effectiveness of primary education.

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## CLASSIFICATION OF SINGLE-PARENT FAMILIES AND THEIR SOCIAL-PSYCHOLOGICAL-PEDAGOGICAL CHARACTERISTICS

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### ABSTRACT

*This article is single-parent (an incomplete) family, their classification and types of information about the social, psychological and educational characteristics. The least likely is in single-parent families where the child is adopted or unmarried, because the most important thing in these types of children is that women have no motive to get married and have become accustomed to a free way without a husband. In such families, the child acquires sufficient knowledge, skills and abilities from an early age by engaging in foreign languages, music, sports. Her outlook is broader than her peers because she works with the child on a regular basis.*

**KEYWORDS:** *Single-Parent Family, Social, Psychological, Pedagogical, Classification.*

### INTRODUCTION

To stop the abrupt growth of single-parent families, to prevent unjustified divorces, to help women find family, motherhood, femininity and enjoy it for a lifetime, to use the intellectual and spiritual potential of women and their parents in the development of society and the country and, most importantly, the formation of children growing up in a fragile family as a harmoniously mature person, the various social, economic, psychological, pedagogical problems that may arise in their lives, prevention, mitigation, effective use of these problems in the upbringing of children, if necessary, is one of the most pressing scientific problems and important tasks of family pedagogy, the theory of education today.

The origin and factors of this social problem, its growth, complications and other aspects are related to a number of disciplines outside of pedagogy, including sociology, economics, psychology, demography, medicine, genetics, ethnology, gerontology, ecology, suicide and others.

Based on the goals and objectives of our study, the growth of a child in a single-parent family, the study of the various pros and cons of the single-parent family in the process of its formation as a person requires first of all a complete scientific understanding of the existing single-parent family.

Based on this scientific need, we have developed a classification of single-parent families.

Single-parent families consider the proposed classification on the basis of a family of origin, caused by factors, their economic, educational, psychological, cultural and spiritual potentials, existing or potential problems, such as families of children in the near future, the prospect of an incomplete family provides valuable information about the current and future status of the woman. The information shows how to help disadvantaged families by type.

According to the origin (occurrence) of the single-parent family:

- Complete family formed on the basis of divorce;
- complete family due to widowhood (based on the death of a husband or wife);
- an abnormal family as a result of long-term absence of the parent from the family (migration, imprisonment for many years, living with another family in another city, country, etc.);
- unmarried, illegitimate family with children;
- unmarried family living with an adopted child.

Based on the above-mentioned criteria, which serve as the cause and factor of the emergence of a single-parent family, it is impossible to determine their prospects according to family types.

The prospects of family species are largely determined by the performance of psychogenetic, socio-pedagogical, psychological, economic and family functions.

The chances of remarriage are more likely to be in a single-parent family that is based on widowhood.

This is due to the fact that the widow has no contribution to the formation of an illegitimate family, the widow has no negative experience of family life, marital relationships, and the motives of marriage in a woman are sufficiently expressed.

The least likely is in single-parent families where the child is adopted or unmarried, because the most important thing in these types of children is that women have no motive to get married and have become accustomed to a free way without a husband. A certain proportion of such women, according to our research, grew up in 31%<sup>1</sup> of unmarried families, and we believe that the parents modeled the family model.

However, the age of most women is also 35 and older. This further reduces their chances of getting married.

The main obstacle that makes it difficult for families formed on the basis of divorce to remarry is the negative experience they received in the first divorced family life, negative perceptions about family life, family relationships.

Unfortunately, this negative experience can sometimes have a negative impact not only on remarriage, but also on the stability of a remarried second marriage. The reason for this is the

negative psychological establishment formed from the first failed marriage in relation to family life.

Changing this negative attitude and preventing it from having a negative impact on a second marriage will largely depend on the woman's personal qualities and the professional qualifications and life experience of the family psychologist who works with her on a regular basis.

Education, women who do not have a high level of culture, who do not see a strong family as ideal, who start sex before puberty, who do not approach the upbringing of children with sufficient disability, most mothers (fathers) are officially in the full reality. form the child's personality in disadvantaged families who do not provide financial support, do not fulfill their paternity, masculine duty) or lose the prospect of a good family life due to premature births and live with their unmarried children. There are more socio-economic and socio-psychological problems than the above.

Some are children in the family, including the family intellectual, physical, moral, spiritual, and cultural factors have played a significant role in determining their impact on the development prospects of one of the fathers and mothers' level. The level of knowledge, in turn, is one of the indicators of the external expression of the genealogical potential of this dynasty, the seed.

Therefore, the level of education of the mother (father) plays a very important role in the mental and spiritual development of the child in the formation of the child as a person in a single-parent family.

The mother is a member of the intelligentsia, and if she has a higher education, she will pay attention to her child's education, no matter how difficult it may be, to further education, to love knowledge, to a level not inferior to her, and to provide financial support to her child, teaches family management.

From the point of view of scientific justice, it should be noted that the offspring of a father who does not live with a family because of the purpose of divorce, death or life in general, plays an important role in who the child grows up in a family with genes and what he achieves in life.

In a single-parent family, the mother's level of education is often equal to or close to that of her siblings, siblings, and other close relatives.

A child growing up in a single-parent family with a higher education has a sufficient educational impact not only on the level of education, way of life, spiritual world, life values, cultural level, life plans of the older children of his mother, but also aunts and uncles.

For children from single-parent families, some of the mother's close relatives serve as referent circles. Communication with them, adult advice, counseling, various forms of assistance, if necessary, help children to determine their way of life, choose a suitable profession, enter the appropriate higher education institution, study there, get a job after graduation, spiritual enrichment, professional, creative, administrative growth, economic stability, and other issues.

Given that there is a sufficiently pronounced link between the education of a mother in a single-parent family (and in a full-fledged family) and the mental and spiritual development of their children, school leaders, school psychologists should pay more attention to individual work with low-educated mothers (fathers), psychological and pedagogical counseling.

In particular, it is necessary to raise the level of requirements for students in these families, to keep them out of the circle of unknown referees, to pay attention to their upbringing, to identify their innate abilities early and to allow them to engage in relevant arts and sports.

That is, the mother due to the low levels of incomplete information out of the reach of children in the family, their community, neighborhood, schools, non-governmental organizations and others take their order.

Single-parent families a strong influence on the child's personal characteristics of the material rate.

According to this feature, we have divided the following five types of disadvantaged families:

- Rich single family;
- A well-off single-parent family;
- Middle-income single-parent family;
- Low-income single family;
- economically helpless family.

The division of families into types according to their financial means was first published in the journal "Psychology" by M. A. Utepbergenov among them was a conditionally derived criterion. But they were thinking about full families.

In our dissertation, the criteria were taken from the example of an incomplete family.

In our scientific study, rich unmarried families were not studied as respondents. The respondents we studied were mostly (87%) middle-income, low-income single-parent families.

Well-off poor families - 4% and low-income poor families - 5%, economically disadvantaged poor families - 4%.

In wealthy families, if labor education is not given enough, if there is no idea about life and its trials, if every wish is fulfilled immediately, the child will develop excessive egoism, weak will, and inability to cope with life's trials, inability to empathize with others, and so on. Dramatically increases the risk of personality problems.

In rich and well-off single-parent families, the upbringing of the child is sufficiently attended by people close to the mother (nurse, teacher, educator, etc.). This helps the child's personality to form harmoniously and serves to prevent the problems mentioned above.

Wealthy and well-off single-parent families place great emphasis on additional education.

This is their greatest and most important advantage in terms of their impact on the child from another family marriage. In such families, the child acquires sufficient knowledge, skills and abilities from an early age by engaging in foreign languages, music, sports. Her outlook is broader than her peers because she works with the child on a regular basis.

Raising children in low-income and economically disadvantaged families, not looking at the lives of peers in rich and well-off families, looking with a healthy eye, not envy, studying well, finding the right place in society, choosing the right profession, working hard and working hard to respect the species, not to see the difficulties, to overcome the problems that can be



encountered in the life of every person, to be intelligent, reckless, courageous, to be lazy in carrying out complex (powerful) tasks masculinity, life plan, he accelerated, will go towards the mobilization and the current state of their peers in rich, well-creation of her mother and the children should be able to explain that.

It is single-parent families, children with psychological power of beautiful life in a healthy way, hard work and motivation to achieve the activity to start.

Well-income and wealthy single-parent families bring this motivation, the formation of more complex.

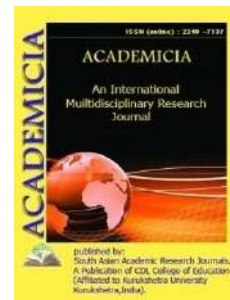
At the same time rich and well single-parent families are dealing with children, to help the needy, they explain the burdens of life, special attention should be paid to the formation of the qualities of generosity.

Wealth in the upbringing of children of a rich and well-off family, well-being is the product of great labor, entrepreneurship, intelligence of his parents, grandparents, if the children in such families are thrifty (not greedy), work hard, constantly mobilize the will, father - The need to use what the mother finds sparingly, to try to provide the conditions created by the parents for their children in a more perfect way, should be instilled in the mind from early childhood. Otherwise, it is necessary to explain that after one generation, a rich and well-off family may fall into the category of low-income, economically helpless families in future generations.

The great wealth of every child is not the level of material security around him, but the intellect, knowledge, spiritual image of the person who creates these material values and their contribution to the welfare of himself, his family, subordinates, the system, fully manifesting them in the relevant profession, labor activity, ability to get. To do this, a child, regardless of the family in which he grows up, must be well aware of the need to work hard, research, creative approach, strengthen the mind with knowledge and follow it.

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## POSSIBILITIES OF USING INNOVATIVE ELECTRONIC TEXTBOOK AND VIRTUAL EDUCATION TECHNOLOGY IN CHEMISTRY LESSONS

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### ABSTRACT

*The following article deals with is the role of virtual learning technologies and an innovative electronic textbook in teaching chemistry in higher education, using V-Academy, distance learning technology and using these tools.*

**KEYWORDS:** *Innovative Electronic Textbook, Crocodile chemistry, Virtual Education, V-Academy, Distance Learning Technology, Three Dimensional Environment, Virtual Reality, Master Class.*

### INTRODUCTION

Today, the use of information and communication technologies in education is widespread globally. At the same time, interactive software tools, including the creation of an interactive learning environment, the improvement of innovative methods and technologies for developing students' thinking and worldview, the development of electronic textbooks and resources, educational programs, automated control systems for learners and simulators are improving access to education and that is being recognized as a pressing issue.

Introduction of modern information technologies and software into the educational process in the framework of systemic reforms to develop the base of electronic educational and methodological resources of educational institutions on the basis of comprehensive innovative approaches, strengthen the material and technical base, radically modernize the system of teacher training and the level of support has increased.

Facilities and conditions helps to develop the quality of education through the improvement of technologies for the effective use of innovative software tools in chemistry education and to prepare students for professional activities on the basis of a competency-based approach.

The Strategy of Actions for the Further Development of the Republic of Uzbekistan identifies the priority task as "Improving the quality and efficiency of Higher education institutions based on the introduction of international standards for assessing the quality of education and training."<sup>1</sup> For developing the use of technology, methodological support, system of competencies for the organization of the educational process on the basis of electronic software in the system of teacher training, the President of the Republic of Uzbekistan adopted resolution of № PF-4947 on February 7, 2017 "Strategy of Actions for further development of the Republic of Uzbekistan"; Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated July 25, 2012 №PP-2909 "On measures to further develop the system of higher education of the Republic of Uzbekistan"; Resolution of the Cabinet of Ministers of the Republic of Uzbekistan of № 228 "On the establishment of a center for the introduction of e-learning in educational institutions under the Ministry of Secondary Special Education and extensive use of electronic textbooks and virtual technologies to improve quality and efficiency".

As a result of the research work on the theme "Improvement of modular systems and methods of creating innovative electronic textbooks in Chemistry lessons" an innovative electronic textbook was created on the subject "Inorganic Chemistry".

The structure of innovative e-textbooks in teaching of Inorganic Chemistry includes for each topic: interactive lectures, modern presentations, lesson plans, pictures, animations, multimedia products, virtual laboratories in Crocodile Chemistry software, crossword puzzles in Hot Potato, (video) methods of solving chemical problems on the board, world chemists life and works, intellectual games, cartoons on various topics, 11 types of non-standard tests in inspiring Quiz Maker, case bank, interesting questions and answers, Uzbek-English dictionaries, assimilations, glossaries and more.

In order to effectively use innovative e-textbooks in the practice of Chemistry lessons, it is necessary to pay attention to the following:

1. Gradually develop students' skills in preparing innovative electronic textbooks on chemistry.
2. Expansion of the range of didactic tools, first in the preparation of innovative e-textbooks, then in the preparation of presentations, interactive tests, assignments.
3. Develop skills and competencies to work with innovative e-textbooks with complex content.
4. To study the methodology of creating catalogs of lesson plans based on interactive and innovative technologies.
5. Effective use of innovative electronic textbooks based on a creative approach.


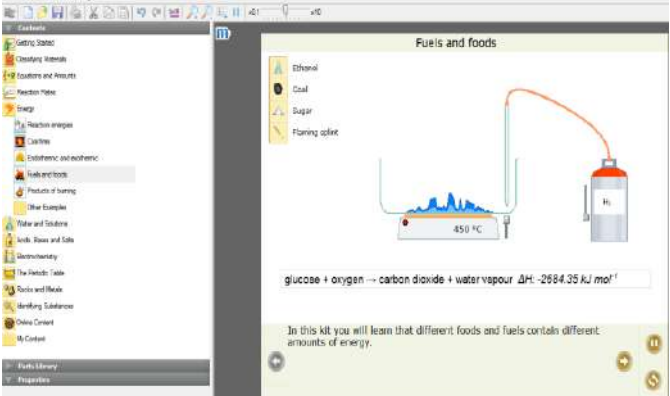
During the experimental work, in teaching the subject of "Inorganic Chemistry", skills and competencies in the design of chemistry lessons and their use in educational practice, skills and competencies in the design of chemistry lessons were formed. The stages of developing students' skills in working with innovative electronic textbooks have been developed. By developing students' skills in working with innovative electronic textbooks students are able:

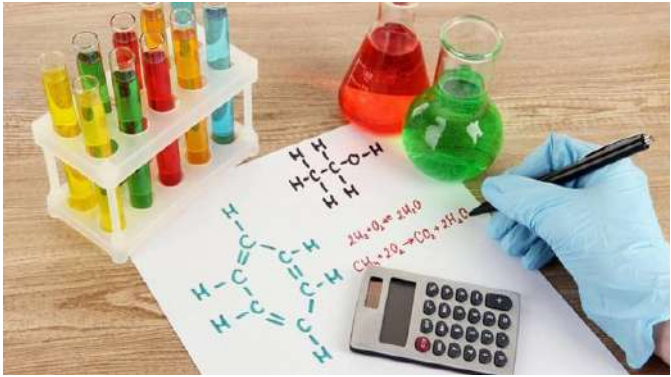

- To study the effective use of ICT in chemistry lessons;

- ☐ enrich the content of chemistry lessons, connect chemistry to everyday life, organize lessons with the help of additional information to the textbooks, revealing aspects of the subject, taking into account the age of the student;
- ☐ Also teachers should be able to take an independent, creative approach to the overall preparation for the lesson, to work on them regularly, and to be able to keep up with the times;
- ☐ To be able to understand the exact chemical properties of the relevant substances, the logical connection of the given situation and events in the problem, and to use convenient methods in mathematical calculations to overcome the difficulties in solving chemical problems;
- ☐ to study the experience of other countries in the field of chemistry education and use them taking into account our national mentality;
- ☐ organize the lesson on the basis of information that always connects with life, connects one topic with another, reveals the purpose of the transition to a new topic;
- ☐ to apply the effective experience of the countries where the language is studied with the localization of international experience in the system of teaching chemistry;
- ☐ Demonstration of educational information from innovative electronic textbooks used in chemistry lessons, supplementing the content of manuals published in the traditional educational method, animation of visual aids, testing of acquired knowledge and skills to achieve the manifestation of pedagogical information and software as an opportunity;
- ☐ Chemistry teacher has the opportunity to model the lesson in a modern way using multimedia, to have additional information to deepen knowledge, and to prepare theoretical and independent work;
- ☐ Virtual demonstration of Crocodile Chemistry laboratory and practical classes in chemistry, which are not available;
- ☐ Innovative e-textbook, educational films, virtual laboratory work, many advantages of using electronic resources, explanation of a new topic, questions and issues to strengthen the topic, visual experiments in the absence of equipment in the classroom, laboratory work Crocodile Chemistry ability to adequately use the opportunity to perform in the program in the form of virtual demonstrations;
- ☐ Audio files have the ability to reinforce the theme by listening. This contributes to the quality and effectiveness of education.



Our main goal to create innovative e-textbooks (IED) is to improve the mechanism, create a database of fundamental research and achieve the effectiveness of education at the level of other Universities around the world.

**IED shortcuts and their functions**

	<b>Label view</b>	<b>Functions</b>
	<b>Interactive lectures</b>	An illustrated lecture text will be provided
	<b>Modern presentations</b>	
	<b>Course developments</b>	The catalogue of the lesson is prepared
	<b>Animations</b>	Using of different kind of gif..
	<b>Multimedia productions</b>	videos about radioactive elements that cannot be seen
	<b>Virtual laboratories in CrocodileChemistry application</b>	
	<b>The life and works of world chemists</b>	The lives and works of chemists who have contributed to the science of inorganic chemistry are presented in the form of photographs.

	Methods for solving chemical problems (video)		
	Uzbek-English dictionaries	Glossary of terms and inorganic chemistry will be given	
0	Glossary	Terms and their definition on the theme will be given in three languages	
1	cartoons on a variety of topics		
2	Assesment	<b>Test</b> How many items are there in the periodic table? A) 118 B) 127 C) 109	<b>Problematic situation</b> Why is water chlorinated?
		<b>Symptom</b> The periodic table was discovered in .....The periodic table was discovered in .....	<b>Practical skills</b> Compare metals and non-metals?
3	Bank of Cases	<b>CASE:</b> Today we see a lot of spruce trees in our cities and especially around hospitals. A gas collects in the air of spruces and forests. If the gas is inhaled, TB patients will be able to recover faster. When 4.48 liters of this gas reacts with a silver earring, does the earring turn into a black compound? <b>Assignments:</b>	



		1. Which gas is released? 2. Why do patients recover when they inhale this gas? 3. What is a black compound? 4. How many black compounds are formed?
4	<b>Crosswords in HotPotato program</b>	
5	<b>Non-standard kind of tests in iSpringQuizMaker program</b>	

In order to test the IED on the subject of "Inorganic Chemistry" and determine the level of quality of the experiment, the Navoi State Pedagogical Institute, Faculty of Natural Sciences, Chemistry Teaching Methodology was destined to conduct observations. The observations were made in collaboration with Computer science and Chemistry teachers and researchers.

First of all we have defined an experimental field, then the experimental teachers tested the IED in Inorganic Chemistry to ensure that it meets modern requirements for content, design, and form compatibility.

**(TABLE 1) ANALYSIS OF THE MAIN CRITERIA FOR CREATING AN INNOVATIVE E-TEXTBOOK**

	<b>The main criteria for creating IED</b>	<b>Availability</b>	<b>Quality degreeS (%)</b>
	Possibility of working individually	+	100 %
	Possibility of working in Local network	+	100 %
	Theoretical knowledge module	+	96 %
	Module of practical knowledge	+	95 %
	Non-standard testing tasks	+	92 %
	Video lectures and videos	+	65 %

	Electronic library	+	70 %
	Didactic additional materials	+	96 %
	Information about author	+	100 %
0	Manual about working with IED	+	90 %
1	Ability to solve chemical problems	+	90 %
2	Possibilities to listen audio files	+	90 %
	<b>Average quality level:</b>		90,3 %
	<b>Criteria for the compatibility of IED content, design and form</b>		
	Lecture notes	+	99 %
	Course developments	+	86 %
	Modern presentations	+	76 %
	Photo illustrations	+	86 %
	Animation and gif.s	+	75 %
	Auadio files	+	88 %
	Issues Video links	+	98 %
	English-Uzbek dictionaries	+	85 %
	Glossary	+	70 %
0	Interesting information	+	100 %
1	About chemists	+	80 %
2	Assessment	+	90 %
	<b>Average level of quality:</b>		86 %

The analysis showed that an average of 90.3% of the criteria for IED software development were 86% of the criteria for compliance with the content, design and form of IED.

The following activities have been planned and implemented to organize and conduct tests with students:

Control and experimental groups on the subject of "Inorganic Chemistry" are selected for students of the II stage of the direction of teaching chemistry;

E-learning resources for teaching the subject of "Inorganic Chemistry" have been developed for experimental work;

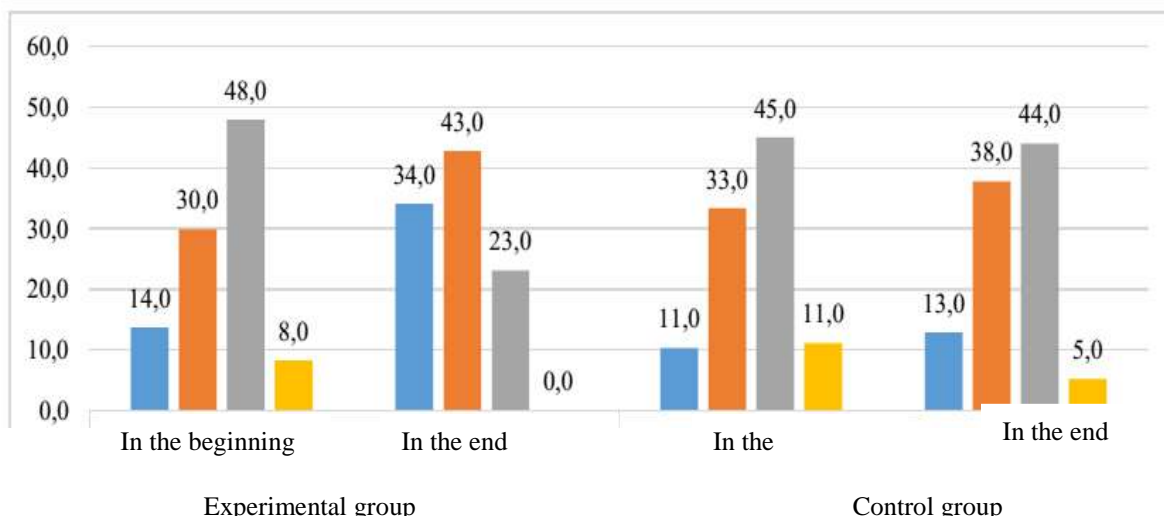
Innovative e-textbook teaching of Inorganic Chemistry has been introduced in selected experimental groups;

Methodological recommendations, guidelines for teaching science were developed and implemented in the control and experimental groups involved in the experimental work;

Students' knowledge, skills, abilities and competencies in the teaching of "Inorganic Chemistry" were assessed and the results were mathematically and statistically processed; (Table 2)

**TABLE 2 STUDENT MASTERY RATES BASED ON THE IED DEVELOPED ABOVE:**

Education al direction	Assessmen t	Experimental group				Gontrol groups			
		The number of students in the begining of experime nt		The number of students in the end of experime nt		The number of students in the begining of experime nt		The number of students in the end of experime nt	
Chemistry teaching methods educational direction I- II courses	Exce llent	14	4,0	34	4,0	11	1,0	13	3,0
	Goo d	30	0,0	43	3,0	33	3,0	38	8,0
	Satis fied	48	8,0	23	3,0	45	5,0	44	4,9
	Diss atisfied	8	,0	0	,0	11	1,0	5	,0



● excellent ● good ● satisfied ● dissatisfied

Today, along with e-textbooks, the importance of virtual learning technologies in the Higher education system is growing. Virtual education gives us the opportunity to experience knowledge and experience it. Virtual reality is the opposite of reality, and it means the perception of the imaginary (virtual) world.

Today, educational resources based on virtual reality can be classified as follows:

- First level - access to virtualization through special equipment (helmet-display, special gloves, etc.);
- Second level - three-dimensional (or hysteroscopic) monitors with the help of a projector and special glasses;
- The third level is the demonstration of virtual reality based on the computer's standard control and projection.

**Advantages:**

- Virtual reality can create different virtual environments;
- Allows us to explore places;
- In virtual reality, the user has the opportunity to experiment with artificial devices;
- Simplifies and facilitates virtual reality education.

**Disadvantages:**

- The most expensive devices currently used in virtual reality;
- Consists of a set of technologies;
- We cannot move to real life in virtual reality;
- Negative sides are not fully investigated.

Today, a three-dimensional V-Academia education that is close to real life is widespread.

V-Academia is one of the three points of view in the world that are closest to real life environment. 3D tutorials are no different. The V-academy virtual environment provides a high level of opportunity for any teacher to be computer literated.

Through V Academia, we will be able to enrich the educational institution virtual environment with high-quality new electronic resources. The VAcademia virtual environment allows students to learn new, high-quality alternatives to classroom lessons.

V Academia provides high-quality education through virtual environments, games, simulators, master classes.

Here are some suggestions on how to implement virtual education:

- First, to evaluate the positive and negative consequences of the use of virtual learning technologies in our educational environment, based on world experience;
- Second, to pay special attention to the development of manuals on the effective use of virtual educational technologies in Uzbek;
- Third, conduct research and promote software and hardware to create national virtual learning environments and devices;
- Fourth, conclusions and recommendations can be made on the implementation of government incentives for developers of virtual learning resources.

Suggestions and recommendations on development of distance learning technology in education are followings:

1. We can improve the quality of education through the widespread use of interactive teaching methods.
2. There gain an opportunity to use specially developed teaching aids (innovative e-textbooks, training courses, videos, audio-video lectures, etc.).
3. Integration between the listener and the teacher is ensured in the assessment of students' mastery through a developed test bank.
4. The development of skills enables us to become a world leader in ARM.
5. Distance education system helps to improve the skills of professors and teachers.
6. During the implementation of the development, applicants will be trained on the basis of a payment contract, in addition, the educational institution will not require additional buildings, inventory, electricity, faculty and others.
7. Implementation of this project allows listeners to retrain innovative e-textbooks, training courses, video films, audio-video lectures.
8. We have the opportunity to play the role of a dean (tutor) among the audience.
9. The interaction between the teacher and the learner is kept.
10. Additional opportunities will arise through the implementation of the practice (loss of "workbook", "seminar book", "journal grades", etc.).
11. Commercialization increases the economic potential of Higher education.

In short; the use of IEDs and virtual learning technologies in the teaching of Chemistry in Higher education institutions creates a wide range of opportunities for both, traditional and distance learning.

Virtual learning technologies and distance learning technologies in education solves the problems such as the development of individualized teaching methods, the formation and improvement of student knowledge and the level of acquired knowledge. The use of distance learning technologies in the educational process has a strong impact on the positive change in the content, forms and methods of education.

It should be noted that teaching in an information and communication environment requires teachers to master new interactive pedagogical technologies. In addition: in the educational process it is necessary to use computer technology, video projector, plasma panels, electronic whiteboard and its compact analogues, software products, Internet resources, e-mail, IED and multimedia teaching aids in a virtual learning environment will be.

At the same time, it is an important tool for the formation and development of skills and competencies of future chemistry teachers to become competitive professionals, which is the basis of the original goals of our country for future generations.

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## THE ROLE OF SOLVING PROBLEMS WITH VARIOUS METHODS IN THE INTEGRATION OF THE GEOMETRIC AND NON-GEOMETRIC METRODS

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### ABSTRACT

*The article is a two tasks allow different solutions. Shows the role of integration of the study of theorems decision problems different methods for solving problems. Considered different approaches to tasks as well as in this article shown approaches integration non-geometric and geometric methods in mathematics education and methods in mathematics education and methods challenges in line with the system analyses with involvement of data various research areas of mathematics.*

**KEYWORDS:** *Integration, Various, Equation, Education, Expression, Inequality, Smallest Value, Considerations.*

### INTRODUCTION

The integration of geometric and non-geometric methods involves solving problems in various methods and ways, which gives students the opportunity to subsequently choose the method of solving the proposed problem.

When solving problems with only one method, their only goal is to find the right answer. If there are several methods for solving the problem, student try to choose the most rational of them. The situation of choice is an informal procedure, it requires knowledge of many theoretical facts, the ability to analyze them in terms of applicability to a given situation in a problem, etc. All this

activates the educational activities of students, gives it a search, creative character, while developing their creative abilities, alternative thinking.

An important feature of creative activity is the independent transfer of knowledge and skills to a new situation. The integration of non-geometric and geometric methods in teaching mathematics allows students to transfer geometric knowledge and skills into non-geometric and geometric – info geometry and based in this, combine new ways of solving problems, proving theorems. It is advisable to demonstrate to students different approaches to the tasks. Tasks that allow various solutions are usually interesting and instructive. Each of them demonstrates the capabilities of any one method, and a comparison of solutions allows students to develop their own system of approaches to tasks, develops their intuition, and provides the necessary experience.

### We present problems admitting various solutions.

Task 1. If equation  $x^4 + ax^3 + bx^2 + ax + 1 = 0$  has at least one real root, then find the smallest value of the expression  $a^2 + b^2$  ?

Solution 1. **Algebraic method:** Let the original equation have root  $x > 0$ . But then for this value  $x$

$$x^4 - |a|x^3 - |b|x^2 + |a|x + 1 \leq x^4 + ax^3 + bx^2 + ax + 1 = 0$$

or

$$|a|x^3 + |b|x^2 + |a|x \geq x^4 + 1. \text{ Inequalities are easily verified}$$

$$x^4 + 1 \geq 2x^2 \text{ and } x^4 + 1 \geq x^3 + x.$$

Using them, we get

$$x^4 + 1 \leq |a|x^3 + |b|x^2 + |a|x \leq |a|(x^4 + 1) + |b| \cdot \frac{x^4 + 1}{2} = \left(|a| + \frac{|b|}{2}\right)(x^4 + 1), \quad \text{where from}$$

$$\left|a\right| + \frac{|b|}{2} \geq 1, \text{ or } |b| \geq 2 + 2|a|$$

Then

$$a^2 + b^2 \geq |a|^2 + (2 - |a|)^2 = 5|a|^2 - 8|a| + 4 = 5\left(|a| - \frac{4}{5}\right)^2 + \frac{4}{5} \geq \frac{4}{5}$$

If the original equation has a negative root  $x$ , then it is easy to see that  $(-x)$  is a positive root of the equation

$$x^4 - ax^3 + bx^2 - ax + 1 = 0$$

We apply what was proved above to it and we obtain that  $a^2 + b^2 \geq \frac{4}{5}$ . Case  $x = 0$  is impossible.

So, in all cases, expression  $a^2 + b^2$  is not less than  $\frac{4}{5}$ .

Solution 2. Lemma. For any real  $x(x \neq 0)$ , the inequality

$$\left|x + \frac{1}{x}\right| \geq 2$$

Since expression  $x + \frac{1}{x}$  is odd, it suffices to verify the inequality for positive  $x$ . But in this case it is a consequence of inequality  $x^2 + 1 - 2x = (x-1)^2 \geq 0$ . The lemma is proved.

We now consider the equation given in the condition of the problem. Since  $x = 0$  is not the root of this equation, we can transform the equation to the form

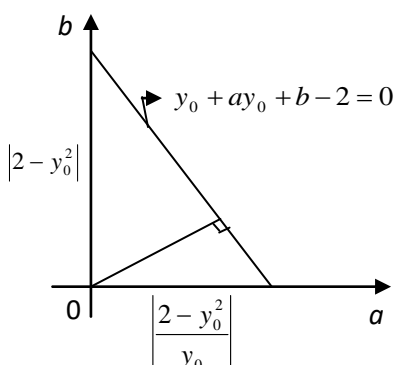
$$x^2 + ax + b + \frac{a}{x} + \frac{1}{x^2} = 0 \text{ or } \left(x + \frac{1}{x}\right)^2 + a\left(x + \frac{1}{x}\right) + b - 2 = 0.$$

For fixed  $x_0 (x_0 \neq 0)$ , the set of pairs of real numbers  $(a, b)$  for which the original equation has a root equal to  $x_0$  is determined by the linear equation

$$y_0^2 + ay_0 + b - 2 = 0,$$

$$\text{where } y_0 = x_0 + \frac{1}{x_0}.$$

The set of pairs of numbers  $(a, b)$  satisfying this equation is represented by a straight line in the coordinate plane  $(a, b)$ . In this plane, the expression  $a^2 + b^2$  can be geometrically interpreted as the square of the distance from the origin to the point  $(a, b)$ . Therefore, from geometric considerations, it is clear that for points  $(a, b)$  on our line, the minimum value of the expression  $a^2 + b^2$  will be equal to the square of the length of the perpendicular drawn from the origin to the line in question (fig.1). To calculate the length of this perpendicular, note that the line cuts off a segment of length  $\left|\frac{2 - y_0^2}{y_0}\right|$  from axis "a", and segment  $|2 - y_0^2|$  from axis "b".



Considering the corresponding similar triangles (fig.1), we calculate that the square of the length of the perpendiculars is

$$\frac{(y_0^2 - 2)^2}{1 + y_0^2}$$

so, we found the minimum of the expression  $a^2 + b^2$  for a fixed value of the root  $x$ . Considering

now all sorts of real  $x_0$  and taking into account that

fig. 1. in this case  $\left(x_0 + \frac{1}{x_0}\right)^2 = y_0^2 \geq 4$ , we find that the corresponding

values  $a^2 + b^2$  are not less than the minimum of expression  $\frac{(y^2 - 2)^2}{1 + y^2}$  at  $y^2 \geq 4$ .

**Mathematical analysis method** Show now that the function.

$$f(t) = \frac{(t-2)^2}{1+t} \text{ increases at } t \geq 4.$$

$$f(t) = \frac{(t-2)^2}{1+t} = \frac{t^2 - 4t + 4}{1+t} = t - 5 + \frac{9}{1+t}$$

$$f'(t) = 1 - \frac{9}{(1+t)^2} > 0 \quad \text{at } t \geq 4$$

Therefore, the function  $\frac{(t-2)^2}{1+t}$  considered for  $t \geq 4$ , takes the smallest value at point  $t = 4$ .

Thus, the value are  $a^2 + b^2$  for all possible real roots  $x_0$  is not less than.  $4/5$ . But it can equal  $4/5$ , since  $x_0 = 1$  is the root the original equation at  $a = -4/5$ ,  $b = \frac{2}{5}$ . So,  $4/5$  is the required

smallest value of expression  $a^2 + b^2$ .

**Task 2.** Real numbers  $x_1, x_2, \dots, x_n$  belong to the interval  $[-1, 1]$  and the sum of the cubes of these numbers is 0. Prove that the sum  $x_1, x_2, \dots, x_n$  does not exceed  $n/3$ .

**Solution 3. Geometrical considerations.** Let us place on the graph functions  $y = f(x) = x^2$ ,  $-1 \leq x \leq 1$  (see fig.2)  $n$  of equal masses at points with abscises  $x_1, x_2, \dots, x_n$ .

Let

$$X = \frac{x_1 + x_2 + \dots + x_n}{n}, \quad Y = \frac{y_1 + y_2 + \dots + y_n}{n} \quad - \text{ be the coordinates of the center } C$$

of these masses. It is clear that point  $C$  lies within the "convex hull" of our graph, in particular, above the tangent to the graph drawn from the point  $(-1, -1)$ , the red line in the figure. We find

the equation of this tangent.

This is a straight line  $y = g(x) = t(x+1) - 1$ , where  $t$  is chosen so that the difference of function

$$\begin{aligned} f(x) - g(x) &= x^2 - (t(x+1) - 1) = \\ &= (x+1)(x^2 - x + 1 - t) \end{aligned} \quad (*)$$

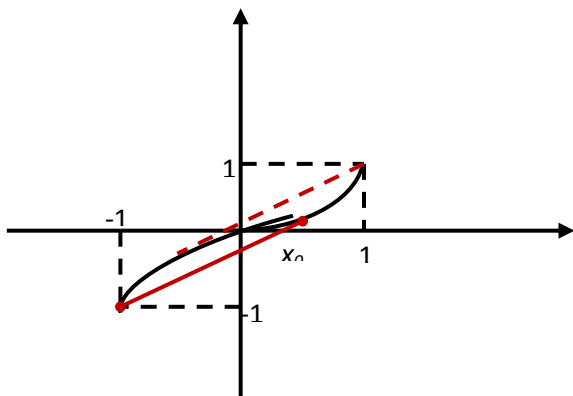
has, apart from  $x = -1$ , a multiple of the root  $x = x_0$ .

For this, the discriminant of the square trinomial  $x^2 - x + 1 - t$  must turn into 0:  $1 - 4(1 - t) = 0$ , whence

$t = 3/4$ , and the

fig. 2

corresponding root



$x_0 = \frac{1}{2}$ . Since point  $C$  lies no lower than the red line  $y = g(x)$ , i.e.

$$Y \geq \frac{3}{4}X - \frac{1}{4},$$

at  $Y = 0$  we get the estimate.  $X \leq \frac{1}{3}$ . Where from

$$\frac{x_1 + x_2 + \dots + x_n}{n} \leq \frac{1}{3} \quad \text{or} \quad x_1 + x_2 + \dots + x_n \leq \frac{n}{3}.$$

**Algebraic method.** From (\*) we get for  $t = \frac{3}{4}$  the polynomial

$$p(x) = f(x) - g(x) = (x+1)\left(x^2 - x + 1 - \frac{3}{4}\right) = \frac{1}{4}(x+1)(4x^2 - 4x + 1) = \frac{(x+1)(2x-1)^2}{4} \geq 0 \Leftrightarrow$$

$$\Leftrightarrow 4x^3 - 3x + 1 \geq 0$$

$$4x_1^3 - 3x_1 + 1 \geq 0$$

$$4x_2^3 - 3x_2 + 1 \geq 0$$

$$4x_n^3 - 3x_n + 1 \geq 0$$

Adding  $n$  obvious inequalities, we obtain the following inequalities

$$4(x_1^3 + \dots + x_n^3) - 3(x_1 + \dots + x_n) + n \geq 0,$$

by condition of the problem

$$x_1^3 + \dots + x_n^3 = 0$$

where from

$$x_1 + x_2 + \dots + x_n \leq \frac{n}{3}$$

**Solution 2.** Let  $x_1, x_2, \dots, x_n$  – be a set of numbers satisfying the conditions of the problem. Let among them “ $k$ ” non-negative:  $y_1, y_2, \dots, y_k$  and  $l = n - k$  negative:  $-z_1, \dots, -z_l$ .

Then

$$S = x_1, x_2, \dots, x_n = y_1 + y_2 + \dots + y_k - z_1 - z_2 - \dots - z_l$$

by condition

$$y_1^3 + y_2^3 + \dots + y_k^3 = z_1^3 + z_2^3 + \dots + z_l^3$$

We denote this sum by  $x$ . Since the positive numbers  $z_i$  ( $i = 1, 2, \dots, l$ ) do not exceed unity, we have  $l \geq x$ , i.e.  $k \leq n - x$

Let us estimate the number “s” from above since  $s_j^3 \leq z_j$  is at  $i \leq j \leq l$ , then  $z_1 + z_2 + \dots + z_l \geq x$ . On the other hand, since

$$\left( \frac{y_1 + y_2 + \dots + y_k}{k} \right)^3 \leq \frac{y_1^3 + y_2^3 + \dots + y_k^3}{k}$$

then

$$y_1 + \dots + y_k \leq k^{2/3} x^{1/3} - x$$

Let us prove that

$$(n-x)^{2/3} \cdot x^{1/3} - x \leq \frac{n}{3}.$$

After transformations of this inequality, we obtain the equivalent inequality

$$(n-x)^2 x \leq \left( x + \frac{n}{3} \right)^3$$

or

$$3x^2 - \frac{2}{3}nx + \frac{n^2}{27} \geq 0, \text{ i.e. } \left( 3x - \frac{n}{3} \right)^2 \geq 0,$$

The statement of the problem is proved.

### Solution 3. Trigonometric method

Denote

$$x_1 = \cos \alpha_1, x_2 = \cos \alpha_2, \dots, x_n = \cos \alpha_n$$

According to the well-known formula

$$\cos 3\alpha = 4 \cos^3 \alpha - \cos \alpha$$

we obtain the following system of inequalities

$$4 \cos^3 \alpha_1 - 3 \cos \alpha_1 \geq -1$$

.....

$$4 \cos^3 \alpha_n - 3 \cos \alpha_n \geq -1$$

Adding these inequalities we get

$$4(\cos^3 \alpha_1 + \dots + \cos^3 \alpha_n) - 3(\cos \alpha_1 + \dots + \cos \alpha_n) \geq -n$$

where from



$$4(x_1^3 + \dots + x_n^3) - 3(x_1 + \dots + x_n) \geq -n$$

by condition of the problem

$$x_1^3 + \dots + x_n^3 = 0,$$

where from

$$-3(x_1 + \dots + x_n) \geq -n, \text{ or } x_1 + x_2 + \dots + x_n \leq \frac{n}{3}.$$

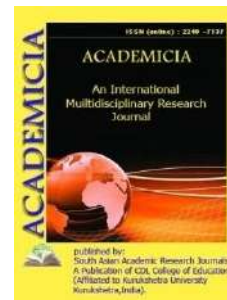
## CONCLUSION

The role of integration in the study of theorems and problem solving, which involves carrying out different proofs of the theorem and different methods of solving problems (analytical, geometric and integrated) in one lesson, leads to the fact that one and the same object is interpreted in different interpretations, relationships, therefore, students a holistic view of it is created. In addition, they are included in the active cognitive activity a creative nature.

The conducted pedagogical experiment confirmed the effectiveness of the developed methodology for teaching mathematics based on the integration of geometric and non-geometric methods, which leads to the intensification of cognitive activity of students, the development of their creative abilities, and the improvement of holistic ideas about mathematical methods.

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## **CRISIS IN THE PADDY CULTIVATORS IN ANDHRA PRADESH-A STUDY OF GUNTUR DISTRICT**

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### **ABSTRACT**

*Andhra Pradesh is historically known as the "Rice Bowl of India", Andhra Pradesh stands 6th in area, 3rd in production, and 2nd in productivity and contributes nearly 12% of the national rice production. Andhra farmers grow rice annually in an area of 3.98 M Ha in 22 districts. Rice is grown under a wide variety of conditions in India as well as in Andhra Pradesh. During the year 2011-12 in Andhra Pradesh, Paddy production in the Kharif season was 112.64 Lakh MT and in the Rabi season was 103.64 Lakh MT, totaling to 216.28 Lakh MT. East & West Godavari districts alone contributed 61.05 Lakh MT. The Fig-1 shows Area, production and yield of rice in Andhra Pradesh year-wise for the last 10 years. This paper is to analyze the cost and return of the paddy cultivation in coastal Andhra Pradesh. This paper is based on the primary data of 100 sample respondents are selected on simple random sampling method. The sample households are selected from Krapa village of Kollure mandal in Guntur district of Andhra Pradesh. This paper collected the information about the cost of cultivation, income from the paddy cultivation. The cost of cultivation of paddy in coastal Andhra region is 1783/- per quintal because of increasing the price of all inputs. Basically paddy is a labour intensive crop, now a days the wages are hiked and labours are not available at the time of harvesting stage due to MGNREGA works and migration of labours from other districts. Shortage of labour has a reason to introduce the mechanization in transplantation and harvesting of paddy. Today the price of all fertilizers like urea, 20-20, DAP, and other complex fertilizers prices are increased 120 per cent. The cost of fertilizers is 30 per cent of the total cost. Majority of suicides farmers are tenant or marginalized farmers in Andhra Pradesh. It's covered 50 to 60 per cent of the sown area. The rental value of lease in land is in bag and cash is 30 bags and Rs 20000/-*

*per annum. The tenant farmer are face high rent of land and he is insecure the owners to continue his tenancy in future. All the inputs prices are increased and the same way the prices of the entire consumer good also increased like vegetables, cereals, pulses, oil, and onions. Today the price of rice increased Rs15/- to 45/- rupees and it leads to increasing the consumption expenditure. This is a mistory the farmers sold their output with less price in the same he purchased with can paid high price in the market .All these thinks are pushed the farmers in to debt crisis and majority of farmers are depended on the money lenders, traders and commission agent for credit and this is leads to increasing the indebtedness then its leads to suicides. Many states including Punjab, Andhra Pradesh, Karnataka, Maharashtra and Kerala have recorded a spurt in distress driven suicides among the farmers. The status of suicides victims was poor and which belongs to tenants, marginal and small farmers who could not sustain frequently price stock.*

**KEYWORDS:** *Andhra Pradesh, Crop Holiday, Cost of Cultivation, Paddy and Crisis*

## **INTRODUCTION:**

India has the largest paddy output in the world and is also the second largest exporter of rice in the world. Paddy fields are a common sight throughout India, be they be northern Gangetic plains or southern peninsular plateaus. Paddy is cultivated at least twice a year in most parts of India, the two seasons being known as „Rabi“ and Kharif“respectively. The paddy cultivation plays a major role in socio-cultural life of rural India. Festivals such as”Sankranthi” in Andhra Pradesh celebrates harvest of Paddy. Andhra Pradesh is historically known as the "Rice Bowl of India", Andhra Pradesh stands 6th in area, 3rd in production, and 2nd in productivity and contributes nearly 12% of the national rice production. Andhra farmers grow rice annually in an area of 3.98 M Ha in 22 districts Rice is grown under a wide variety of conditions in India as well as in Andhra Pradesh. Rice is the only cereal that can stand water submergence. For hundreds of years, natural selection pressures such as drought, submergence, flooding, and nutrient and biotic stresses led to a great diversity in rice ecosystems. With construction of dams and after the Green Revolution, rice became predominantly a canal-irrigated crop. Traditional Tank systems were totally neglected.

Gradually farmers even in rain fed areas started cultivating rice under tube well irrigation. This has led to exhaustion of the ground water and several cascading ecological and economic problems. An acre of rice production in ponding conditions requires about 6 million liters of water which translates to 5000 liters of water for each kilogram of rice production. This shows the burden on the scarce natural resource „water”. Though paddy is a self pollinated crop and has wide variation, research scientists focused on developing hybrids - as a highend technology by public sector research and to retain control over the seed by the private companies forcing the farmers to buy seed every year.

During the year 2011-12 in Andhra Pradesh, Paddy production in the Kharif season was 112.64 Lakh MT and in the Rabi season was 103.64 Lakh MT, totaling to 216.28 Lakh MT. East & West Godavari districts alone contributed 61.05 Lakh MT. The Fig-1 shows Area, production and yield of rice in Andhra Pradesh year-wise for the last 10 years

The reasons cited by farmers for declaring a Crop Holiday include Reason:

- Late release of canal water.
- MSP not covering the actual cost of production.
- Non-enforcement of existing MSP.
- High cost of cultivation on account of high cost of labour and inputs.
- Non-availability of labour in peak season of agricultural operation on account of NREGS.
- Non availability of the Credit and quality inputs in time.
- Ineffective procurement.
- Insufficient storage space
- Poor drainage maintenance.
- Apprehensions about AP Land licensed cultivators or finance.
- Delayed settlements of crop insurance.

### **Objectives and Methodology**

This paper is to analyze the cost and return of the paddy cultivation in costal Andhra Pradesh. This paper is base on the primary data of 100 sample respondents are selected on simple random sampling method. The sample households are selected from Krupa village of Kollure mandal in Guntur district of Andhra Pradesh. This paper collected the information about the cost of cultivation, income from the paddy cultivation

### **Results and Discussions:**

This paper mainly focus on the why the farmers have to decided to take a crop holiday and analyze the cost and returns of the paddy peasants in the study area

### **Cost of Cultivation:**

The cost of cultivation of paddy in study area is 1783/- (Table-1) per quintal because of increasing the price of all inputs .Basically paddy is a labour intensive crop, now a days the wages are hiked and labours are not available at the time of harvesting stage due to MGNREGA works and migration of labours from other districts .Shortage of labour has a reason to introduce the mechanization in transplantation and harvesting of paddy. These are very popular in other than Andhra Pradesh and also some part of Andhra Pradesh. Another important input is fertilizers in the cultivation. Today the price of all fertilizers like urea,20-20, DAP, and other complex fertilizers prices are increased 120 per cent .The cost fertilizers is 30 per cent of the total cost. Another input is pesticides in the markets most of the pesticides are duplicate in this circumstance the farmers are not identified whether it is quality or not he purchase and applied but the crops are not saved from the insects. In this reason the yield was decreased, its genuine problem every farmer are faced in all the regions of Andhra Pradesh. The traders are miss guidance by the farmers because he doesn't know which the quality of goods is, his decision is depended on traders in the market and co-farmers, because majority of cultivators are illiterates. The farmers are not followed the government extension services.

Another constrain of the cultivation is tenancy rate. It is common not only Andhra Pradesh and also in India. Majority of suicides farmers are tenant or marginalized farmers in Andhra Pradesh. It's covered 50 to 60 per cent of the sown area. The payment of rent for leased in land is a choice of the farmer, the number of bags of paddy gives as rent to the owner and rent paid to cash. In this study observed the prevailing rates in bag and cash is 30 bags and Rs 20000/- per annum. The tenant farmer are face high rent of land and he is insecure the owners to continue his tenancy in future.

Another important constrain is formal credit facility, there is need credit to meet both consumption as well as production purpose. Now a day All the inputs prices are increased and the same way the prices of all the consumer good also increased like vegetables, cereals, pulses, oil, onions. Today the price of rice increased Rs15/- to 45/- rupees and it leads to increasing the consumption expenditure. This is a mistory the farmers sold their output with less price in the same he purchased with can paid high price in the market .All these thinks are pushed the farmers in to debt crisis and majority of farmers are depended on the money lenders, traders and commission agent for credit and this is leads to increasing the indebtedness then its leads to suicides. Many states including Punjab, Andhra Pradesh, Karnataka, Maharashtra and kerala have recorded a spurt in distress driven suicides among the farmers. The status of suicides victims was poor and which belongs to tenants, marginal and small farmers who could not sustain frequently price stock. With mountain debt burden along with the rising risk in production and price fluctuation leading to low remuneration. It is no wonder that a lot of distress in generated among the farmers .The incidence of indebtedness among the farm households was highest in Andhra Pradesh (82 per cent)

**TABLE-1 INPUT WISE COST OF CULTIVATION IN PADDY (VALUES IN RUPEES)**

Farming Category	Marginal	Small	Semi-Medium	Medium& Large	Total
land preparation	415	494	500	600	500
Machined labour	1938	2155	1800	1628	1845
Bullock labour hired	1200	1250	1200	1000	1195
Seeds	2500	2200	2000	1900	2200
Fertilizers	5395	5524	4500	4700	5358
Manure hired	923	1022	750	900	920
Pesticides	2643	2703	2200	2443	2473
Hired labour	7688	7981	7782	7588	7832
Owened labour	2687	2454	2120	2589	2473
Irrigation	998	938	850	978	950
Transport cost	597	678	450	350	480
Interest on working capital	1415	1550	1225	1125	1250
Rent value of lease in land	10091	9632	11292	10000	9500
Rental value of owened land	8016	8440	7526	8026	8119
Interest on fixed capital	1202	1266	1102	1315	1133
Depreciation	355	364	300	400	360
Marketing charges	200	100	150	200	180
Miscellaneous charges	641	623	450	300	632
Total	48904	49375	46197	46042	47400

Source: Sample survey

### Income from the cultivation of Paddy

The data in the table -2, shows the gross income, cost of cultivation, net income and per cent of change of the sample respondents. It's observed that the gross income from the paddy cultivation is Rs 43700 per acre. The intra size group reveals that the gross income is increasing with increasing the firm size. The gross income is found to be high in medium and large farmer. The income from the paddy cultivation is found to be negative which is accounting for – 8.47 per cent, only the semi medium, medium and large farmers are found a positive return to scale. But the net income is very low among the two farming category. This table clearly concluded that the cost of cultivation found to be increased with increasing the farm size. The net income from the cultivation among the marginal and small farm is found to be negative,

**TABLE- 2 GROSS AND NET INCOME FROM THE PADDY CULTIVATION (VALUES IN RUPEES)**

Farming. Category	Gross income of Paddy	Cost of Cultivation	Net Income	% of Change
Marginal	39012	48904	-9892	-25.36
Small	42475	49375	-6900	-16.24
Semi-Medium	47250	46197	1053	2.23
Medium and Large	48590	46042	2548	5.24
Total	43700	47400	-3700	-8.47

Source: Sample Survey

### Suggestions:

1. As, NREGS is affecting the agricultural operations as the labour are engaged by this programme. NREGS
2. Programme should be linked up with agricultural operations like transplantation, weeding, harvesting etc., will solve the problems of farmers.
3. FCI/State procurement agencies to procure Paddy produce on the lines of States of Chattisgarh and Punjab and export policy to be announced early i.e., before March.
4. Supply of subsidized (at 70%) subsidy suitable machines for cultivation to all categories of farmers.
5. Additional bonus per quintal Paddy is to be announced by the State Government.
6. Ensuring availability of quality inputs like fertilizer/pesticides/seed

### CONCLUSION:

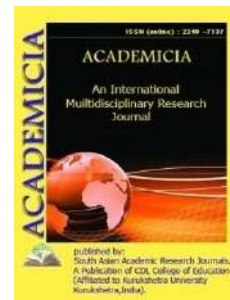
Andhra Pradesh is historically known as the "Rice Bowl of India", Andhra Pradesh stands 6th in area, 3rd in production, and 2nd in productivity and contributes nearly 12% of the national rice production. Andhra farmers grow rice annually in an area of 3.98 M Ha in 22 districts Rice is grown under a wide variety of conditions in India as well as in Andhra Pradesh. During the year 2011-12 in Andhra Pradesh, Paddy production in the Kharif season was 112.64 Lakh MT and in the Rabi season was 103.64 Lakh MT, totaling to 216.28 Lakh MT. East & West Godavari districts alone contributed 61.05 Lakh MT. The Fig-1 shows Area, production and yield of rice in Andhra Pradesh year-wise for the last 10 years, this paper is concluded that



The cost of cultivation of paddy in costal Andhra region is 1783/- per quintal because of increasing the price of all inputs .Basically paddy is a labour intensive crop, now a days the wages are hiked and labours are not available at the time of harvesting stage due to MGNREGA works and migration of labours from other districts .Shortage of labour has a reason to introduce the mechanization in transplantation and harvesting of paddy. Today the price of all fertilizers like urea,20-20, DAP, and other complex fertilizers prices are increased 120 per cent .The cost fertilizers is 30 per cent of the total cost. Majority of suicides farmers are tenant or marginalized farmers in Andhra Pradesh. It's covered 50 to 60 per cent of the sown area. The rental value of lease in land is in bag and cash is 30 bags and Rs 20000/- per annum. The tenant farmer are face high rent of land and he is insecure the owners to continue his tenancy in future. All the inputs prices are increased and the same way the prices of the entire consumer good also increased like vegetables, cereals, pulses, oil, and onions. Today the price of rice increased Rs15/- to 45/- rupees and it leads to increasing the consumption expenditure. This is a mistory the farmers sold their output with less price in the same he purchased with can paid high price in the market .All these thinks are pushed the farmers in to debt crisis and majority of farmers are depended on the money lenders, traders and commission agent for credit and this is leads to increasing the indebtedness then its leads to suicides. Many states including Punjab, Andhra Pradesh, Karnataka, Maharashtra and kerala have recorded a spurt in distress driven suicides among the farmers. The status of suicides victims was poor and which belongs to tenants, marginal and small farmers who could not sustain frequently price stock.

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## TEXT EDITION ISSUE OF MUTRIB POEMS

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### ABSATRACT

*In the late 19th and early 20th centuries, Khorezm's Muhammad Rahimkhan Feruz created a unique literary atmosphere around his palace. Poets and writers who are Tabibi, Mutrib, Bayani, Avaz Otar, and Chokar worked during this period. The works of the poets are in Persian-Tajik and Turkish languages and have their own traditions. The interest in science significantly grew in Khiva. According to the khan's decree, qualified secretaries set up devons, mukhammases, bayozs, tazkirs, and complexes. At present, such works are kept in the manuscript fund of the Institute of Oriental Studies of the Academy of Sciences of the Republic of Uzbekistan and in the Ichankala Museum in Khiva. The collection "Majmuai mukhammasoti ash-shuaroi Feruzshahiy" is a large source of lyrical works of Khorezm literary environment. The complex was built in the second half of the XIX century and was built by Tabibi by royal decree.*

*It contains samples of poems by contemporary artists. This source, which provides valuable information about the literary environment of its time, is now stored in the main fund of the Institute of Oriental Studies named after Abu Rayhon Beruni of the Academy of Sciences of Uzbekistan under inventory number 1134. The complex differs from other collections in that it consists of poems of the mukhammas genre. Muhammad Hasan Devon Haji Tabib o'g'li Mutrib Khonaharab is one of the poets whose works are included in the creative heritage of the poets. The article analyzes the mukhammases of Mutrib Khonaharab, which are connected with the ghazals of the master poets Ogahi and Feruz. The artistic features of Mutrib's mukhammases, which are not found in manuscripts, have been studied. It is based on primary sources that the poet's ghazal retains aspects such as weight and content, and introduces innovations, focusing on the gradual development of the content. The mukhammas and musaddas included in the*

*collection were studied from the point of view of textual and source studies, comparing them with the poems copied to the manuscript.*

**KEYWORDS:** *Manuscript, Complex, Masnavi, Ghazals, Poem, Mukhammas, Musaddas, Inventory, Source.*

## INTRODUCTION

One of the most important issues today is the study of its history, national culture and rich literary heritage left by our ancestors. It is a good idea to study such a heritage, the works of which have not yet been fully applied to scientific use. 1134 inventory digital manuscripts kept in the fund of the Institute of Oriental Studies named after Abu Rayhon Beruni of the Academy of Sciences of Uzbekistan are valuable sources. Written in the second half of the 19th century, the complex contains lyrical works of 19th-century Khorezm. Another important aspect of the complex is the mukhammas associated with Feruz's poems by the poets of that time.

## MATERIALS:

The manuscript, entitled Majmuai mukhammasoti ash-shuaroi Feruzshahi, was originally written in red ink is titled "Debochai masnaviyoti muxammasotu majmuat ush-shuaroi Feruzshohiy doma mulkahu va davlatahu va zayyada umrahu va shavkatahu...".

After "Bismillahir Rahmanir Rahim" there were poems of praise, and praise of the four caliphs. The masnavi master, which consists of eleven verses of musammani mahzuf weight, is an example of respect for the poet. Here are some verses of this masnavi:

*Shahi oliy iqbolu gardun sarir,  
Jahon mulki ichra amiri kabir...  
So 'zi dur, dil oinasin sayqali,  
Ko 'ngul uqdasi mushkulining halli.  
Qachon bir suxan aylasa oshkor,  
Ongo fazl eli jonin aylar nisor.  
O 'zi chun balog 'atg 'a ma 'dan erur,  
So 'zi ham fasohatg 'a ma 'dan erur...  
Taxallus ongo bor edi Ogahiy,  
Maqomi va lekin fanoning rahi....*

In this masnavi, the author describes Ogahi as a konisukhan. The word is likened to a mirror that polishes the mirror of the tongue. "He is a man of maturity, a man of eloquence," he said.

The manuscript contains transcripts of Feruz's mukhammas connected with Ogahi's ghazals after the masnavi. The complex also includes Sultani, Sadiq, Saadi, Ghazi, Assad, Bayani, Aqil, Mirza, Nazir, Shinosi, Ghulami, Purkomil, Kamali, Inoyat, Doi, Ojiz, Haqiri, Niazi, Khaki, Habib The mukhammas of 33 poets, such as Yusuf, Tabibi, Rogib, Devoni, Mutrib

Khonaharob, Avaz, Nadimi, Khadim, Chokar, Muznib, Umidi, Totor, which were first connected to Ogahi's ghazals and then to Feruz's ghazals, are arranged in order.

These assumptions about Ogahi's ghazals, in turn, indicate that he was a kind of teacher for the creators of the later Khorezmian literary environment.

The complex was built by Tabibi in 1326/1908 according to the decree of Sayyid Mukhammas Rahim Bahodirkhan.

### DISCUSSION:

The collection also includes mukhammas of Mukhammas Hasan devon Haji Tabib o'g'li Mutrib, which are connected to the Ogahi and Feruz ghazals. Each mukhammas is preceded by a text of two or four lines written by the author. The fact that all 33 poets were preceded in their poems by Masnavi reveals their qualities shows that this collection is of a tazkira nature. The text of the Masnavi is as follows:

*Biri Mutrib ul zoru Xonaxarob –  
Ki, nag'omatg'a qilg'usi irtikob..[7]*

Or:

*Qilib Mutrib zoru Xonaxarob,  
Bu olam aro mayli changu rubob[7].  
Biri nazm elin Mutribi zor erur –  
Ki, sozandayi changu setor erur[7].  
Ongo gar xarob o'lmasa xonasi,  
Bu ash'or bo'lg'usi afsonasi.*

Speaking about Mutrib's work under the pseudonym "Khonaharob" and composing music, Tabibi said that writing poetry was his motto. He says he is sharp-witted and self-confident. The following verses also confirm this idea:

*Demaki, nazm bo'lmish shiori oning,  
Jahon mulkida yodgori oning[7]  
Vale gohi fikri musaddas qilib,  
Muni qildi zohir muxammas qilib[7].  
Kelib Mutrib ul zoru xonaxarob –  
Ki, hushu xiraddin erur bahrayob[7]/  
Muni aylamish zohir ul boxirad –  
Ki, fazl ahli ichra erur mu'tamad[7]/  
Dedi, Mutrib zoru Xonaxarob,  
Bu shiorni jahd etib behisob[7].*

Bobojon Tarroh Khodim also said in his commentary "Khorezm' poets and musicians" that the poet had the talent to play the tanbur, memorized six and a half notes, learned seven different sciences, namely, poetry, music, books, medicine, have a good command of the Persian-Tajik language, but at the same time does not lose to anyone in the debate [2].

The collection contains 5 mukhammas of Mutrib related to Ogahi and Feruz ghazals.

These are not found in the manuscripts of the poet's office kept in Institute of Oriental Studies named after Abu Rayhon Beruni of the Academy of Sciences of Uzbekistan. In particular, the poet Ogahi's rajazi musammani is associated with the ghazal, which begins with the verses "Jonbaxsh la'ling uzra to xat qildi paydo orazing" in a solim weight (-- V - / - - V - / - - V - / - - V - ).

The first paragraph of mukhammas is as follows:

*Qildi xirad begonasi ko'rgach, nigoro, orazing,  
Aylab manga har lahzada mehr oshkoro orazing,  
Bazming'a yetkurdi bu tun ming zebu oro orazing,  
Jonbaxsh la'ling uzra to xat qildi paydo orazing,  
Xurshid uza jam' ayladi Xizru Masiho orazing.*

The poet omits the third and sixth verses of Ogahi's 9-verse ghazal and connects them to 7 bytes. The omitted verses are as follows:

*Zohid tilar jannat guli sarvin magarkim ko'rmamish,  
Lutf ichra zebo qomating husn ichra hamro orazing.  
Oydek yuzung mahjurlari shom g'amini yorutur,  
Partav maning shoming'a ham solg'aymu oyo orazing.*

Author also linked the rajazi musamman of Ogahi to radif ghazal "Qoshu kozung" in solim height (- - V - / - - V - / - - V - / - - V - ) The first paragraph of the work is as follows:

*Bir g'amzada soldo mango sonsiz yaro qoshu ko'zung,  
Jonu dilimg'a yetkurur ming mojaru qoshu ko'zung,  
Man xastadin yo topdimu jurmu xato qoshu ko'zung.  
Vah, ne balodur bilmadim, ey dilrabo, qoshu ko'zung –  
Kim, bir nazarda soldo o't jonim aro qoshu ko'zung.*

This poem is thirteen verses long. The takhmis created by the poet consists of seven verses. Apparently, the six verses of the ghazal, the third, fifth, eighth, tenth, eleventh and twelfth verses, were omitted by the poet. Here are the verses:

*Jonimg'a qo'ydi dog'lar rashk o'tidin xoli labing,  
Ko'nglumga yetkurdi tumon dardu balo qoshu ko'zung.  
Qoshu ko'zung bedodidin dod aylasam ermas ajab –*

*Kim, ne jafolar qilmadi oxir mango qoshu ko'zung.  
 Yo 'qtur mango ishqing aro yurmak tirik imkonikim,  
 Jonimni yo qaddu yuzung olg'usi yo qoshu ko'zung.  
 El qatlini qasd aylabon mastona qilg'och bir nazar,  
 Soldi jahong'a nolayi vo hasrato qoshu ko'zung.  
 Aylay hayotim naqdini har dam nisoru sadqasi,  
 Yoshurmog'il man zordin aylab hayo qoshu ko'zung.  
 Majlis fazosida usul etgan chog'i raqqos o'lub,  
 Har g'amzada yuz jon olur, ey mahliqo, qoshu ko'zung.*

Mutrib Ogahi's poems "Orazing" and "Qoshu ko'zung" were not changed by his teacher. But most of the verses of the poem are omitted. In our opinion, the reasons for this can be explained as follows: firstly, the poet did not dare to make any assumptions in these verses of these poems, composed by Ogahi;

secondly, it is probable that in the source on which the poet relied, i.e. in the manuscripts of the variants copied to the bayoz, the complex, or the devons, the above verses are given in abbreviated form; and third, that the poet may have relied only on the verses of his choice.

The first verse of the verse, which is related to Feruz's eleventh verse "Ohista-ohista" verse:

*Muruvvat ko'rguzub, huro, nishon ohista-ohista,  
 Mayi la'ling qilib rohat rason ohista-ohista,  
 Boqib yuz jilva birla har zamon ohista-ohista,  
 Mango rahm ayla bul shirin zabon ohista-ohista,  
 Yetushti boshim uzra nogahon ohista-ohista.*

This mukhammas is also found in inventory number 1127. The text in this source and in inventory manuscript 1134 were compared. At the same time, the ghazal, which is the basis of the mukhammas, was compared with the text in Feruz's manuscript inventory number 1152 (p. 676a) compiled by Tabibi. In Mutrib's mukhammas, it is observed that some parts of Feruz's ghazal have been changed.

The word "qilg'ali" in the second verse of the ghazal has been edited and copied as "ayladi" into inventory numbered manuscripts 1127 (p. 57b), 1134 (p. 54a / b). This verse of mukhammas is as follows:

*Uzorin gulgul aylab jannatosa o'lgali gulshan,  
 Tarahhumlar qilib, bilkul bo'lurg'a bu kecha bir tan,  
 Ko'rub holi xarobim hajr aro ul dilbari purfan,  
 Firoqida qarorg'on ko'zlarimni ayladi ravshan,  
 Ochib ruxsorayi xurshedson ohista-ohista.*



In the inventory number 1127 [10], the word "ruxsorayi" in the compound "ochib ruxsorayi" is copied in the form "rukhsorani". The phrase "qucharsan, quch" in the eighth verse of this poem is edited in the mukhammas as "vagar quchsang":

*Agar istarsen o 'pmaklikni eng jonfizo la 'lim,*

***Qucharsan quch** belim eng miyon ohista-ohista.*

In Mutrib's mukhammas:

***Vagar quchsang** belim eng miyon ohista-ohista.*

There is no doubt that such edits were made by Mutrib. This is because in most cases the weight of the poet's mukhammas verses is preserved, but in some places the text has been changed.

Mutrib also linked Feruz's seven-verse ghazal, which begins in the form of a question and answer, with the words, "Dedim, ko'zumni ravshan et, mehri jamoling ko'rsatib."

The first paragraph of mukhammas is as follows:

*Bu ne itob, ul maning dardi nihonim qo 'zg'otib,*

*Yetdim o 'larga furqating domida g'am birla yotib,*

*O'zni nihon etmak nedur, yuz uzra zulfing torqotib,*

*Dedim, ko'zumni ravshan et, mehri jamoling ko'rsotib,*

*Dedi, uzorim o 'tig'a joning netarsan o 'rtotib[7],*

The comparison of the "sango bergum ani" compound in the fourth verses of Feruz's ghazal with the text in the inventory number 1152 (p. 79b) and the text of the inventory number 1134 is as follows.

In real form:

*Dedim, visol ichra labing shahdi maning komim erur*

*Dedi, **sango bergum oni** zahri firoq ichra qotib[6].*

In 1134 inventar manuscript:

*Bag'rimni qoni hajr aro sahboyi gulfomim erur,*

*Ishq ichra chekkan nolishim zotingg'a payg'omim erur,*

*Tokim tirikman, halqai zulfing mani domim erur,*

*Dedim, visol ichra labing shahdi maning komim erur,*

*Dedi, **oni bergum sango** zahri firoq ichra qotib[7].*

The same mukhammas have been copied to the 1127th inventory manuscript collection [p. 10: 78b] in accordance with the original. The fourth paragraph of mukhammas is copied to inventory manuscript № 1134 in the form of "Bazm ichra topti shodlig' bu lahza ko'nglum uyi" with the suffix "'s" in the word "ko'nglum". This mukhammas text has been restored from inventory manuscript 1127 [10: 23<sup>b</sup>, 24<sup>a</sup>]. The edited item is as follows:

*Bazm ichra topti shodlig' bu lahza **ko'nglumning uyi**,  
 Sunbulmu atrafshon erur boshingni, jono, gesuyi,  
 Ketdi ko'zumdin tiyralig' tushgach jamoling partavi,  
 Dedim, labingni sharbati, shirinmu yo kavsar suy-i,  
 Dedi, bo'lurmu har **suvni** obi baqog'a o'xshotib.*

The word "water" in the last verse is copied to Manuscript No. 1127 as سویی (suyi) from inventory number 1152.

The change in the place of the composition "Oni bergum sango" did not affect the content of the work. However, due to the secretary's negligence, the omission of the suffix "'s" caused a weight loss.

### ANALYSIS:

Professor Nurboy Jabborov recommends studying editing in two ways according to its size and scope: "1) editing of the whole text; 2) editing related to a particular part of the text" [3, 28]. The examples also show that the edits in the source under study are mainly related to a particular part of the text. The praise of the above ghazal was also slightly edited by Mutrib. For example, "Dedim, ko'zungdin o'rgulay Feruzg'a bir bo'sa ber..." changed to "Feruzg'a" in accordance with the words "dil so'zg'a", "kunduzg'a", "navro'zg'a" in the verses of mukhammas (inventory №. 1127). The same page [10] inventory manuscript 1134. (Pages 79a / b [7]). The text of the poem is as follows:

*Fosh aylabon mehru vafo man tashnayi dilso'zg'a,  
 Keldi qoshimg'a cho'lg'anib, sanjob ila qunduzg'a,  
 Ey Mutribo, emdi do'nub, har bir kuning navro'zg'a,  
**Dedim, ko'zungdin o'rgulay, bir bo'sa ber Feruzg'a,**  
 Dedi, yuzumni og'ritur har yon xating nishi botib.*

The first verse of Mutrib's hymn to Feruz's nine-verse rajazi musamman in solim weight is a radif ghazal "Labing":

*Tushgach ko'zum qildi mani sargashtayi hayron labing,  
 Har nuktasida bergusi o'lgan tanimga jon labing,  
 Aylab oyo ilking tutub qilg'ung mango pinhon labing,  
 Yoqutdurmu bilmadim yo, la'l, ey jonon, labing.  
 Yo orazing gulzorida bormu guli xandon labing.*

In the second verse of Feruz's poem, the poet replaces the words "jovidon", "jonon" to "tozakim", "hayvon". For example,

*La'lingni bir o'pmak bila topdim hayoti **jovidon**,  
 I'jozi Isomu ekan yo sharbati **jonon** labing[1152-inv.].*

*La'lingni bir o'pmak bila topdim hayoti tozakim,*

*I'jozi Isomu ekan yo sharbati hayvon labing[1134-inv.].*

The seventh verse of Feruz's ghazal has also been slightly edited. Mutrib “Doim ko‘ngulda saqlabon pinhon labingning shavqini” (inventory manuscript 1152. pp. 387<sup>b</sup>-288<sup>a</sup>) in the verse he omitted the suffix “ning”, he uses the suffix “ni” in the first, second, and third verses of the poem. For example:

*Jon ichra tun-kun asradim jonon labingni shavqini,*

*Aylab dili mahzunima mehmon labingni shavqini,*

*Xavf aylab ag'yor ahlidin olon labingni shavqini,*

*Doim ko'ngulda saqlabon pinhon labingni shavqini,*

*Emdi yetibman o'lgali o'ptur mango pinhon labing.*

Textologist Nafas Shodmonov writes: “... the author of the text, while reflecting the reality of the action, undergoes a certain creative mental process. In the process, it can change its attitude to certain parts of the text under the influence of objective and subjective reasons, and make corrections of various sizes. Such corrections and changes form the basis for the study of the historical, artistic, ideological and methodological aspects of the material, creation, formation, construction, etc. of the text.

“Although Mutrib’s poems in the collection do not reflect the reality of the movement, it is clear that the author has gone through a certain creative mental process. Edits in the text should be considered as a product of this creative process. Therefore, the edits mainly served to improve the text.

The mukhammas analyzed above have not been copied to the manuscripts of Hamid Suleiman of the Institute of Oriental Studies of the Russian Academy of Sciences and Mukhammas Hasan devon Haji Tabib o‘g‘li Mutrib devon of inventory numbers 2679 / II, 903 / V, 906 / VII kept in the main funds. Although this bayoz was copied in 1326 AH and 1908 AD, it was not included in the above three devons. (Inventory number 2679 / II was copied in the same year as digital manuscript, inventory number 903 / V was copied in 1907, inventory number 906 / VII the copying year is not known)

These mukhammas vary in size, with the smallest being 7 points and the largest being 11 points.

Some of the muhammads transferred to the collection (beginning with Feruz's 7-line verse "I said, brighten my eyes, showing your kindness ..." and 11-verse "Ohista-ohista", 7-byte "Labing", Ogahi's "Qoshu ko'zung" radif muxammas) inventory number 1127, copied in 1908, in the bayoz. Only Ogahi's 7-point radiz muhammad "Orazing" was not found in this complex.

One mukhammas and two musaddas of Mutrib, which are included in inventory number 2679 / II, are also found in the inventory number 1134. However, when comparing the texts of these poems from these two sources, differences were observed. For example, the fourth verses of a 9-verse mukhammas beginning with “Ko‘rgach yuzingni ketdi ilkimdin ixtiyorim...” copied to the devon as “Bu dam kelib boshimg‘a daf‘ aylagil xumorim...”; to inventory manuscript № 1134 revised as “Bir tun kelib yonimg‘a raf‘ aylagil xumorim”.

In the dictionary [6], the phrase "Raf" aylamak" has two meanings. 1. Raise, elevate; 2. Delete. "Daf" aylamak" means to return, to reject, to remove, to drive away. [6]

When analyzing mukhammas's verses, the word "def" comes from the context. It turns out that in the process of copying the collection from the original, some of these subtleties were overlooked. The author did not make such a mistake. However, in this mukhammas text, which was copied to the manuscript, there are some loss.

## RESULT:

The differences between two sources are shown in the table:

№	Manuscript divan under the inventory № 2679.	Complex under the inventory № 1134.
<b>The differences in the first verse</b>		
1/1	Ko 'rgach yuzingni ketdi ilkimdin ixtiyorim,	Ko 'rgach yuzingni ketdi ilkimdin ixtiyorim,
	Chiqdi falakka, ey sho 'x, ishqingda ohu zorim,	Chiqdi falakka, ey sho 'x, ishqingda ohu zorim,
	Mag 'ruri husning o 'lg 'ach hech qolmadi qarorim,	Mag 'ruri husning o 'lg 'ach hech qolmadi qarorim,
	<u>Bir dam</u> kelib yonimg 'a <u>daf</u> aylagil xumorim	<u>Bir tun</u> kelib yonimg 'a <u>raf</u> aylagil xumorim
Oromijon nigorim, sarvi ravon nigorim.		
<b>The differences in the second verse</b>		
2/2	<u>Vaslingg 'a bermasang yo 'l, ey sarvari diloro</u>	<u>Soldi xayoli husning boshimg 'a turfa g 'avg 'o,</u>
	La 'ling zilolin istab ko 'nglumda <u>muncha savdo,</u>	La 'ling zilolin istab, ko 'nglumda <u>yuz tamanno,</u>
	<u>Husning xayoli birla boshimda muncha g 'avg 'o,</u>	<u>Hajr ofatidin aylab qaddimni xam mudomo,</u>
	Tokay jaf o qilursan, <u>tark</u> aylamassan aslo,	Tokay jaf o qilursan, <u>kam</u> aylamassan aslo,
Oromijon nigorim, sarvi ravon nigorim.		
<b>The differences in the third verse</b>		
3/3	Fahm aylamassan, ey sho 'x, ishqingda mubtaloman,	Fahm aylamassan, ey sho 'x, ishqingda mubtaloman,
	Kelmasmu <u>emdi</u> rahming, <u>bezori</u> benavoman,	Kelmasmu <u>zarra</u> rahming, <u>bir zori</u> benavoman,
	<u>Tokay</u> tilab visoling <u>shomi sahar</u> gadoman,	<u>Har dam</u> tilab visoling <u>sargashtai</u> gadoman
	Vaslingdin, ey sumanbar, bilmon ne deb judoman,	Vaslingdin, ey sumanbar, bilmon ne deb judoman,
Oromijon nigorim, sarvi ravon nigorim.		
<b>The differences in the forth verse</b>		
4/6	<u>Shavq o 'ti(g 'a)</u> jong 'a etgach beixtiyor	<u>Ishq o 'ti</u> jong 'a etgach beixtiyor o 'lubman,

	<i>o'lubman,</i>	
	<u><i>Gul orazingni bir</i></u> dam ko'rmakka zor <i>o'lubman,</i>	<u><i>Mehri ruxingni har</i></u> dam ko'rmakka zor <i>o'lubman,</i>
	<u><i>La'ling mayini, jonon, behad xumor</i></u> <i>o'lubman,</i>	<u><i>Shirin kaloming istab devonavor</i></u> <i>o'lubman,</i>
	<u><i>Shirin kaloming istab ko'b intizor</i></u> <i>o'lubman,</i>	<u><i>La'ling mayini, jono behad xumor</i></u> <i>o'lubman,</i>
<i>Oromijon nigorim, sarvi ravon nigorim.</i>		
<b>The differences in the fifth verse</b>		
5/8	<i>Sansiz manga tiriklik dahr ichra pur</i> <i>jafodur,</i>	<i>Sansiz manga tiriklik dahr ichra pur</i> <i>jafodur,</i>
	<u><i>Zebo</i></u> qading xayoli ko'nglumga <i>muttakodur,</i>	<u><i>Sarvi</i></u> qading xayoli ko'nglumga <i>muttakodur,</i>
	<u><i>Baxtim kamolig'a ham la'li labing</i></u> <i>davodur,</i>	<u><i>Har g'amza(nga), nigoro, jonu jahon</i></u> <i>fidodur</i>
	<u><i>Har g'amzanga, nigoro, jonu jahon</i></u> <i>fidodur,</i>	<u><i>Chun murg'i ko'nglum iki zulfunga</i></u> <i>mubtalodur</i>
<i>Oromijon nigorim, sarvi ravon nigorim.</i>		
<b>The differences in the sixth verse</b>		
6/7	<u><i>Chekmak ishim fig'ondur la'li ziloling</i></u> <i>istab,</i>	<u><i>Tinmay ko'zumni ashki la'ling zilolin</i></u> <i>istab,</i>
	<i>Har lahza iztirobim ikki hiloling istab,</i>	<i>Har lahza iztirobim ikki hiloling istab</i>
	<i>Sorg'ordi</i> <u><i>orazim, chun nozik</i></u> <i>niholim(ng) istab,</i>	<i>Sorg'ordi</i> <u><i>rangi ro'yim, nozik niholing</i></u> <i>istab,</i>
	<u><i>Jodu ko'zing tegida parvona xoling</i></u> istab,	<u><i>Oadim duto yuzungni bir dona xolin</i></u> istab,
<i>Oromijon nigorim, sarvi ravon nigorim.</i>		
<b>The differences in the seventh verse</b>		
7/5	<i>O'rtar xayoli hajring, ey podshohi</i> <u><i>xo'bon,</i></u>	<i>O'rtar xayoli hajring, aylab ko'zumni</i> <u><i>giryon,</i></u>
	<u><i>Kulbam sori qadam qo'y chekdurma ohu</i></u> <u><i>afg'on,</i></u>	<u><i>Etdi chiqarg'a jonim, ey kokili parishon,</i></u>
	<u><i>Vomuq g'amida goldim, ey kokili</i></u> <u><i>parishon,</i></u>	<u><i>Muncha jafo qilursan ne muddao sanga</i></u> <u><i>jon</i></u>
	<u><i>Muncha jafo qilursan, ne muddao sanga</i></u> <u><i>jon,</i></u>	<u><i>Chekmak ishim tunu kun shavq ichra ohu</i></u> <u><i>afg'on</i></u>
<i>Oromijon nigorim, sarvi ravon nigorim.</i>		
<b>The eighth verse of the mukhammas copied to the divan is radically different from the mukhammas bytes copied to the complex.</b>		
8/4	<i>Ko'rma ravo jafoni boshingdin</i> <i>oylonaman,</i>	<i>Yig'larman hasratingdin begona</i> <i>bo'lmag'uncha,</i>
	<i>Tuz ahdinga vafoni qoshingdin</i>	<i>Tiyg'i firoqing ichra vayrona</i>

	<i>oylonaman,</i>	<i>bo 'lmaq'uncha,</i>
	<i>Yetganda, o 'nsakizda boshingdin</i> <i>oylonaman,</i>	<i>Ishqingda dahr eliga afsona bo 'lmaq'uncha</i>
	<i>Ming jilva birla otg'on toshingdin</i> <i>oylonaman,</i>	<i>Rahm aylagil g'amingda g'amxona</i> <i>bo 'lmaq'uncha,</i>
<i>Oromijon nigorim, sarvi ravon nigorim.</i>		
<b>The differences in the ninth verse</b>		
9/9	<i>Bemori hajring o'ldim, <u>ey xo'b la'li</u></i> <i><u>xandon,</u></i>	<i>Bemori hajring o'ldim, ey <u>lablari</u></i> <i><u>durafshon,</u></i>
	<i><u>Ko'ksing</u> jahon boshimg'a go'yoki bo'ldi</i> <i>zindon,</i>	<i><u>Bo'ling(di)</u> jahon boshimg'a go'yoki, bo'ldi</i> <i>zindon,</i>
	<i><u>Furgat yarosi ichra bu Mutribi xush</u></i> <i><u>alhon,</u></i>	<i><u>Nolangni qilmag'ilkim, ey Mutribi xush</u></i> <i><u>alhon,</u></i>
	<i><u>Bu dam kelib, nigoro, dardimga ayla</u></i> <i><u>darmon,</u></i>	<i><u>Shoyad kelib nigoring, dardingg'a qilsa</u></i> <i><u>darmon,</u></i>
<i>Oromijon nigorim, sarvi ravon nigorim.</i>		

It should be noted that the table fully reflects the issue of the history of the text of the mukhammas. According to D.S. Likhachev: "The concept of text history covers all issues of the text of a particular work. Only a thorough (or, if possible) study of all issues related to the work will allow us to fully explore the history of the text of the work "[5, 33]. Nurboy Jabborov explains in detail how the history of the text covers the process from the search for a work of art to the publication and publication of a work of art.

"... the history of the text, from examining the genealogy of manuscript sources to studying the worldview and ideas of the author and even the secretary who copied the source, from the realization of the author's creativity in its creation covers all the processes leading up to the study of the interrelationships with monuments "[4, 12].

It would be more accurate to link the edits here to the factor of "the realization of the author's creative intent in the creation of the work." It seems that there is a mismatch between the whole points of the work. Buhol, firstly, affected the content of the mukhammas, and secondly, caused weight loss. For example, in the text of the mukhammas copied to the devon, the word "Bir zori" is in the form "Bezori", the suffix "... ga" is superfluous, "Ziloling istab", "Niholing istab" is a rhyming compound, in the third verse of the mukhammas, it is given as "Niholim istab" which caused serious mistakes.

Mistakes in the collection: The word "gamzanga" in the verse "Hargamza (nga) nigoro jonu jahon fidodur ..." means "g'amza", "Bo'ling(di) jahon boshimg'a go'yoki, bo'ldi zindon..." the word "Boldi" in the verse is copied with textual flaws in the style of "Boling".

The text of Mutrib's poems, which begins with "Mash'ali bazmima husnini balosini ko'rung...", "Gulshan ichra jilva-u yuz nozi izhor ayladi" verses, was studied comparatively on the basis of inventory number 2679 / II and manuscript set number 1134.



When comparing the text of these poems, there are some differences between them. In particular, in the seven-line verse “Mash’ali bazmima husnini balosini ko’rung...”(pp. 231a / b) the phrase “Balosini ko’ring” has been transferred to the complex as “Jilosini ko’ring”. It should be noted that the option is correct in its “Mash’ali bazmima husnini jilosini ko’rung...” content. Therefore, it can be said that in the future, in the preparation of the scientific-critical text of the poet's works, it would be expedient to restore this sacred text on the basis of the version in the manuscript collection inventory number 1134.

The following table shows the differences in the text of the poem, which begins with the verse "Gulshan ichra jilva-u yuz noz izhor ayladi":

Poem and verse	Manuscript divan under the inventory number - 2679	Complex under the inventory number - 1134
1/1	“Qilmadim komim ravo <u>ul</u> yorlig‘ hangomida” (232 <sup>b</sup> -bet)	“Qilmadim komim ravo <u>chun</u> yorlig‘ hangomida” (209 <sup>a</sup> -bet).
3/1	<u>Doimo</u> ko’rgach o‘zin majnunshior aylar ongo...	<u>Dahr eli</u> ko’rgach o‘zin majnunshior aylar ongo...
6/3	Ohkim, ehsoni lutf ila dame <u>shod</u> etmayin, Xasta ko’nglumni g‘amu hijrondin <u>ozod</u> etmayin, <u>Lablarini kavsaridin</u> qatra <u>xayrod</u> etmayin, Mutribi sargashtani bir jom ila <u>yod</u> etmayin, Do’stlar, ul dilrabo ishq i mani zor ayladi, Rashk tiyg‘i jon ila ko’nglumni afgor ayladi.	Ohkim, ehsoni lutf ila dame <u>shod</u> etmayin, Xasta ko’nglumni g‘amu hijrondin <u>ozod</u> etmayin, <u>Lablaridin kavsarini</u> qatra <u>xaridor</u> etmayin, Mutribi sargashtani bir jom ila <u>yod</u> etmayin, Do’stlar, ul dilrabo ishq i mani zor ayladi, Rashk tiyg‘i jon ila ko’nglumni afgor ayladi.

Apparently, the word "ul" means "chun" while the word "doimo" is edited as "dahreli. The next verse of the poem “Lablarini kavsaridin qatra xayrod etmayin” radically changed the content of the work as “Lablaridin kavsarini qatra xaridor etmayin” in “Bayozi majmua”. In particular, it is illogical to translate the word "haridor" as a rhyme to the words joy, freedom, and remembrance in the following verses of the musaddas.

In general, based on the analysis of sources, it can be said that the text of this poem is only more perfectly found in the inventory number 2679 / II. Inventory number 1134 contains many weight and rhyming errors in the text of mukhammas and musaddas.

This source is covered with solid black cardboard.

The title "Amali Muhammad Rahim sahhof 1326" is inscribed on the top and bottom of the three ornaments on the cover.

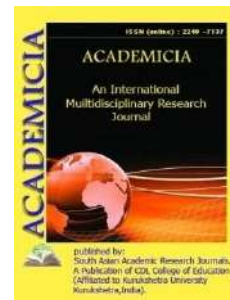
The text was copied on factory paper in black and red ink, in a nasta'liq letter, in the form of two columns. Each page contains 17 lines of text. Dimensions 27x17. The collection consists of 432 pages, 4 pages are blank at the beginning and end of the source. The manuscript is preserved very well.

## CONCLUSION

In short, "Majmuai muxammasoti ash-shuaroi Feruzshohiy" is a source of special importance not only for the study of Ogahi and Feruz's works, but also for the study of the Khorezmian literary environment. In particular, the source plays an important role in the study of Mutrib's lyrical heritage from the literary point of view. A comparative study of Mutrib's poems in this manuscript with other sources preserved in the fund of the Institute of Oriental Studies of the Academy of Sciences of Uzbekistan also plays an important role in the study of the text's history and text editing. The facts surrounding the text editing in the collection are also valuable in that they provide a deeper insight into Mutrib's creative laboratory, explore the poet's secrets of working on words, and explore his creative spiritual world more fully.

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## SOLVING EXRTEMAL PROBLEMS BY A NON – CLASSICAL METHOD

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### ABSTRACT

*Many extreme problems can be solved by not a classic method. In this article we have shown a few example of such tasks. To do this, we applied the discriminant, geometric methods. And also considered the application of inequalities to finding the largest and smallest values of the function.*

**KEYWORDS:** *Not a classic method, geometric and discriminant methods, the expression, optimal, extreme, function.*

### INTRODUCTION

You can select a class of non – linear problems related to the classic method optimization. Such tasks arise when you try to optimize the planning and management of complex systems, first of all economic systems. Optimization problem can be formulated as follows find variables  $x_1, x_2, \dots, x_n$  satisfying the system of equations

$$\gamma_i(x_1, x_2, \dots, x_n) = b_i \quad i = 1, 2, 3, \dots, m$$

and forming  $a$  maximum (minimum) of the objective function

$$Z = f(x_1, x_2, \dots, x_n)$$

Such tasks in principle, you can solve the classical methods differential calculus. However, along the way there are such computing difficulties that make it necessary to search for other methods solutions.

For example – 1. Find the greatest value of expression of  $x + 2y$ , if  $x$  and  $y$  negative and satisfy the inequality of

$$x^2 - 4xy + y^2 + 3 \leq 0$$

Solution. Find out, under what values of  $A$  system

$$x + 2y = A$$

$$x^2 - 4xy + y^2 + 3 \leq 0$$

has solutions  $x < 0$ ,  $y < 0$  most of these values and will be the decision of the problem. Substituting  $x = A - 2y$  in the inequality, we give it to mind

$$13y^2 - 8Ay + A^2 + 3 \leq 0$$

This inequality has solutions in

$$D \geq 0 \text{ or } 64A^2 - 4 \cdot 13(A^2 + 3) \geq 0.$$

From here  $A^2 \geq 13$ . At  $A = -\sqrt{13}$  one of his solutions  $y = -\frac{4}{\sqrt{13}}$ , and then the decision of the system is a couple

$$\left( -\frac{5}{\sqrt{13}}; -\frac{4}{\sqrt{13}} \right).$$

Thus, the desired the greatest value equal to  $-\sqrt{13}$ .

Example 2. The number  $x$ ,  $y$ ,  $z$  are such that the

$$x^2 + 3y^2 + z^2 = 2$$

what is the greatest value can take the expression of

$$2x + y - z$$

Solution. Let

$$2x + y - z = t$$

Expressing  $x$ ,  $y$  and  $t$ , come to the equation, the square about  $y$ :

$$4y^2 + 2(2x - t)y + 5x^2 + t^2 - 2 - 4xt = 0$$

For the existence of making this equation is necessary to perform condition non-negativity discriminant, or after the calculations, the condition

$$16x^2 - 12xt + 3t^2 - 8 < 0$$

In order to this inequality had  $a$  solution, in turn, must non-negativity it discriminant that leads to the inequality

$$12t^2 \leq 128, \quad t \leq \frac{\sqrt{32}}{3}$$

i.e  $\max \{2x + y - z\} = \frac{\sqrt{32}}{3}.$

Example 3. Find the greatest value of the expression

$$\sqrt{(x_1 - y_1)^2 + (x_2 - y_2)^2}$$

if  $x_1^2 + x_2^2 = 1$  and  $y_1^2 + y_2^2 = 4$

Solution. Can be given  $a$  geometric interpretation: if  $A(x_1, x_2), B(y_1, y_2)$  - two point plane, the length of the segment  $AB$  not more than the sum of the lengths of segments  $OA$  and  $OB$ , where  $O(0, 0)$ .

$$OA + OB \geq AB$$

$$AB = \sqrt{(x_1 - y_1)^2 + (x_2 - y_2)^2}$$

$$OA = \sqrt{x_1^2 + x_2^2} = \sqrt{1} = 1, \quad OB = \sqrt{y_1^2 + y_2^2} = \sqrt{4} = 2$$

$$\sqrt{(x_1 - y_1)^2 + (x_2 - y_2)^2} \leq \sqrt{x_1^2 + x_2^2} + \sqrt{y_1^2 + y_2^2} = 1 + 2 = 3$$

Example 4. Find the greatest and the smallest value of the expression  $f = x_1 \cdot y_1 + x_2 \cdot y_2$ , if known that the  $x_1^2 + x_2^2 \leq 2, y_1^2 + y_2^2 \leq 4$ .

Solution. Applying the Cauchy-Bunyakovsky inequality, we obtain

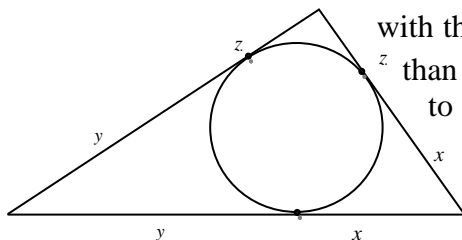
$f^2 = (x_1 \cdot y_1 + x_2 \cdot y_2)^2 \leq (x_1^2 + x_2^2) \cdot (y_1^2 + y_2^2)$ , location using the conditions of the problem we find

$$f^2 \leq 8, \quad \text{i.e. } f \leq \sqrt{8} = 2\sqrt{2}.$$

Example 5. Find the lowest value expression of  $(x + y) \cdot (x + z)$ , if  $x, y, z$  - positive numbers and

$$xyz(x + y + z) = 1$$

Solution. We set  $a = y + z, b = x + z, c = x + y$  and let us consider the Triangle



with the parties  $a, b, c$ ; it exists, because each of numbers  $a, b, c$  less than the sum of the other two (fig). The perimeter of Triangle is equal to

$2p = a + b + c = 2(x + y + z)$  and the, according to Heron's formula

$$x = p - a$$

$$y = p - b$$

$$z = p - c$$

$$x + y + z = p$$

$$S = \sqrt{p(p-a)(p-b)(p-c)} = \sqrt{(x+y+z)xyz} = 1$$

On the other hand,  $2s = bc \sin \alpha$ , where  $\alpha$  – the angle between the parties  $b$  and  $c$ , so  $(x+z)(x+y) = bc \geq 2s = 2$ .

And equality is achieved for a rectangular Triangle, that is subject to  $a^2 = b^2 + c^2$ , equivalent to this:

$$x(x+y+z) = yz$$

(In particular,  $(x+y)(x+z) = 2$  at  $x+y = x+z = \sqrt{2}$ ,  $y+z = 2$ , i.e. that is  $y = z = 1$ ,  $x = \sqrt{2} - 1$ )

Guessed, when is achieved equality, easy to find and short purely algebraic the proof of using inequality

$$p + q \geq 2\sqrt{pq}$$

$$(x+y)(x+z) = x(x+y+z) + yz \geq 2\sqrt{xyz(x+y+z)} = 2.$$

Example 6. Find the lowest value function

$$f(x) = \sqrt{2x^2 - 2x + 1} + \sqrt{2x^2 - (\sqrt{3} - 1)x + 1} + \sqrt{2x^2 + (\sqrt{3} + 1)x + 1}$$

Solution. Since the

$$f(x) = \sqrt{2x^2 - 2x + 1} + \sqrt{\left(x - \frac{\sqrt{3}}{2}\right)^2 + \left(x + \frac{1}{2}\right)^2} + \sqrt{\left(x + \frac{\sqrt{3}}{2}\right)^2 + \left(x + \frac{1}{2}\right)^2},$$

then for points  $M(x, x)$

$$A(0,1), B\left(\frac{\sqrt{3}}{2}, -\frac{1}{2}\right), C\left(-\frac{\sqrt{3}}{2}, -\frac{1}{2}\right) \quad f = MA + MB + MC, \text{ and how easy to check}$$

$ABC$  – the right Triangle the center at  $O(0, 0)$ .

Is known to the least amount of distance to the vertices of the right Triangle has its center, i.e the sum of  $MA + MB + MC$  takes the lowest value for the point of  $M(0, 0)$  and there fore



$$f_{\min} = f(0) = 3.$$

Example 7. Find the lowest value of expression of

$$\frac{x^2}{x+y} + \frac{y^2}{y+z} + \frac{z^2}{z+x}, \quad \text{if } x, y, z > 0$$

and  $\sqrt{xy} + \sqrt{yz} + \sqrt{zx} = 1$

Solution. Note first, that

$$\frac{x^2}{x+y} = x - \frac{xy}{x+y} \geq x - \frac{xy}{2\sqrt{xy}} = x - \frac{\sqrt{xy}}{2}, \text{ and denoting the set expression through}$$

$f(x, y, z)$ , we obtain that  $f(x, y, z) \geq x + y + z - \frac{1}{2}$ . Because of the well-known inequality

$$a^2 + b^2 + c^2 \geq ab + bc + ac$$

we have

$$f(x, y, z) \geq \sqrt{xy} + \sqrt{yz} + \sqrt{zx} - \frac{1}{2}, \text{ i.e}$$

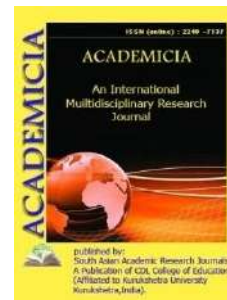
$$f(x, y, z) \geq \frac{1}{2}. \text{ In } x = y = z = \frac{1}{3}$$

we have

$$f\left(\frac{1}{3}; \frac{1}{3}; \frac{1}{3}\right) = \frac{1}{2}, \text{ so that the lowest value } f(x, y, z) \text{ equal to } \frac{1}{2}.$$

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## **GOLDEN GRAM PLANT AND ITS IMPACT ON SOIL PRODUCTIVITY**

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### **ABSTRACT**

*The following article deals with the Golden gram plant and its effects on soil fertility. The results of the scientific research conducted by local and foreign scientists on the Golden gram plant, the analysis of conclusions and opinions are described in detail. The results of research on agro technologies of Golden gram cultivation, different planting procedures, norms and methods, as well as their impact on the growth, development, yield of golden gram, and the data presented in the literature are described. It also reveals the theoretical and practical significance of the collected results, and provides recommendations for the implementation of research results in practice.*

**KEYWORDS:** *Golden Gram, Soil Fertility, Planting Schedule, Cereals, Legumes, Repeated Crops, Growth, Development, Yield, And Root-Stubble Left In The Soil, And Humus In The Soil.*

### **INTRODUCTION**

Today, the issue of food security has become one of the priorities in all countries of the world. Due to favorable soil and climatic conditions in the country, corn, golden gram, soybeans, rice, millet, sesame, sorghum, soybeans, soybeans, soybeans, sorghum, soybeans, sesame fodder crops, potatoes and various vegetables are planted, and there are opportunities to grow high and quality crops up to twice a year.

Today, moss is the leading producer of legumes in the world. Myanmar (Burma) is the largest exporter of moss with 58.5%. India consumes 39.6 percent of the golden gram grown and China 13.5 percent. According to the Food and Agriculture Organization of the United Nations and the World Health Organization, millions of people around the world are currently experiencing the problem of malnutrition.<sup>1</sup> At the same time, food prices are rising day by day. Research in solving these problems is aimed at maintaining and increasing soil fertility through high yields of golden gram crops and crop rotation.

At present, the country pays great attention to grain, legumes and oilseeds and expands their arable lands. Great opportunities have opened up for the development of agriculture and the efficient use of land. One of the most pressing issues today is the issue of protein, i.e. meeting human demand for protein, in this case, the importance of legumes are in the growth.

In the conditions of the republic, there is an opportunity to increase the grain yield from winter wheat to 60-70 t / ha, and from golden gram crop to 15-20 t / ha, and to increase the grain yield to 75-90 t / ha during one season. Legumes are grown on 135 million hectares of land. Among legumes, moss is the second largest crop in the world after soybeans (about 74 million hectares worldwide), followed by peas (about 10 million hectares worldwide).

It is widely used in the food industry in the Central Asian and Caucasus republics. If you add it to the dark, it will increase the saturation. It belongs to the group of legumes and grains; 24-28% of ox toxin is accumulated in the grain. In addition to the food industry, it is possible to grow nutritious fodder for livestock. Bacteria also grow in the roots of the plant, absorbing free nitrogen and increasing soil fertility.

According to scientific sources, moss accumulates 50-100 kg of biological nitrogen and organic matter in the soil during the growing season, which, along with increasing the natural fertility of the soil, provides a healing grain rich in protein and vitamins.

The origin of Golden gram is related to India. It is currently grown in many countries. In particular, it is grown in large areas in Uzbekistan, Turkmenistan, Azerbaijan, Georgia, China, Korea, Japan, India, Pakistan, Egypt, Ethiopia and other countries. According to the Ministry of Agriculture, more than 23-27 thousand hectares are cultivated in the country as a secondary crop.

Golden gram is an annual herbaceous plant. The root of the plant is an arrow root and it is vigorously developed. It grows to a depth of 110-140 cm in the soil, but the main part of the root is spread in the topsoil. Although the stem looks round, it is angular. From the beginning of the growing season it grows upright, then creeping or half-lying. Height 30-130 cm, average 50-60 cm, and well branched. The lateral horns are spreading or branched.

**Agrotechnics.** Golden gram maintenance is a complex of activities. These include cultivation, irrigation, weed control, pest and disease control, and crop nutrition. The scale of the work varies depending on the condition of the soil, the condition of the crop, the availability of water, fertilizers and other conditions. During the dry season, during the flowering and flowering period, it is irrigated 3-4 times at the rate of 800-1000 m<sup>3</sup> / ha. The number of irrigations per sow is 1-2 times depending on the location of the water table. As a result of the study, the irrigation norms were increased to 900 m<sup>3</sup> during the growing season, and the soil yield was 29.9 t / ha when the soil was kept at 70-75-65% humidity. This means that the increase in moisture leads to an increase in crop yields. The plants need to be cultivated at a depth of 6-8 cm in the first 3

leaves, and at a depth of 10-12 cm in the second crop. The porosity of the soil ensures the good growth of the plant, the activity of the bacteria, which creates the conditions for the better growth of microorganisms in the soil, is further increased and the field is cleaned of weeds, the soil is kept moist. In order not to leave weeds, the weeds are planted with special equipment. When sown as mosquito repellent with the formation of pods, it is pressed horizontally, becomes discal and drives to a depth of 27-30 cm [4-7].

## RESEARCH METHODS

Studies were conducted in laboratories settings and fields, phenological observations and biometric measurements were carried out in scientific research on the basis of "Methods of State Variety of Agricultural Cultures", "Methods of conducting field experiments" (UzPITI). The obtained data were analyzed mathematically and statistically on the basis of B.A.Dospekhov's program "Methods of field experience".

### Part of the experiment

Based on the goals and objectives of the research, first and foremost short alternate planting (1: 1; 1: 2 and 2: 1) systems and the effects of crop types on soil fertility have been identified, as well the effects of improved crop rotation systems were studied.

Therefore, in 2018, repeatedly planted in light gray soil conditions crops growth, development, yields and amount of root remnants were determined. Recycled crops in observations on seed germination dynamics compared to 1.07 days that the most germinated were corn (43.4%) and golden gram (36.4%), less sprouted crops were soybeans and green peas 35.2; 34.6%. Seeds of repeated crops in the experiment average corn (71.5) when germination dynamics were observed at 5.07 days%) and golden gram (61.1%). Compared to soy and blue pea seeds were less, 56.5; 59.8 %. In comparison with the experiment (10.07) more (faster) sprouts - corn (94.7%) and golden gram (93.8%) was found to be less germinated were soybeans and blue pea seeds as, 92.9; 92.1% [5, 6].

Golden gram is a heat-loving plant due to its biological properties. The optimum temperature for seed germination is +25<sup>0</sup>C and can be even higher. However, the soil when sowing golden gram seeds excessive moisture adversely affects germination. Golden gram seeds require 90–92% moisture relative to weight after sowing sprouts in a short time. Planting of average and repeated fodder crops on irrigated lands creates a solid fodder base for livestock, provides animals with blue grass in early spring that is the basis for the organization of the blue conveyor. Also, these crops increase soil fertility; according to scientific data (M.K.Kayumov, 1989) driving 1 ton of blue mass and burying it in the ground is equivalent to 4 tons of manure. When high yields are obtained from 5-7 and more tons of plant mass (roots, stems, leaves) remain per hectare. This situation has a positive effect on the yield of cotton and winter wheat, which are the main crops in Uzbekistan, and ensures the efficient use of fertilizers applied to these crops.

Differences in the growth and development of secondary crop even in the amount of debris and root remnants that left them in the soil appeared.

**TABLE 1 THE REMNANTS OF REPEATED PLANTS ROOTS AND STALKS OF THE REPLICAS**

Option mode	Type of repetition	Residues, s / ha		
		Stubble	Root	Total
1	-	-	-	-
2	Golden gram	9,6	28,5	37,6
3	Poppy	9,4	16,0	25,4
4	Soy	9,1	20,3	29,6

Golden gram, which left relatively high residues among legumes is a plant, the above figures are 9.6-28.5 c / ha, respectively total was 37.6 c / ha. The remaining plants in the soil residues were observed to be in the range of 25.4–29.6 c / ha. Experience as can be seen from the data is golden gram plant that has a high root and a stubble, compared to the blue pea 12.2; 8 c / ha more organic residue than replanted soy left.

It should also be noted that the effect of the root stubble residues left on these repeat crops is favorable for the crops planted after them to create conditions.

The crop that leaves the most residues in the soil is alfalfa, but the current one-year legumes after autumn wheat with period demand. The planting can also maintain positive soil fertility [4; 26-p].

It should be noted that in all variants of repeated crops planted the volume mass in the soil driving layer is less than the control was found. The volume mass of the soil in the variant planted corn (2) drive (0–30 cm) 1.231 g / cm<sup>3</sup> before planting in the stratum and 1.285 g / cm<sup>3</sup> in the fall thus 0.050-0.010 g / cm<sup>3</sup> more proportionally than the control was After soybean planting, the above values are 1,235 g / cm<sup>3</sup> - 1,270g / cm<sup>3</sup>, and in the case of golden gram planted 1,230-1,280 g / cm<sup>3</sup>, relatively less was observed.

So, in the experiment, soybeans and golden gram were planted after the winter wheat. The size of the soil at the expense of roots and furrows left in the soil in the options mass was observed to decrease.

In studies, we have also studied soil water permeability properties. First of all, it should be noted that in all variants it was observed that the water permeability of the soil decreased by 1 hour. This indicates that the soil is compacted by water, resulting in an increase in volume and a decrease in porosity.

In the experiment were analyzed repeated crops before planting and at the end of the application period the total humus, nitrogen and phosphorus content in the soil (Table 2).

The soil in the spring in the unplanted (controlled) option of repeated crops

The humus content in the 0-30 and 30-50 cm layers is proportional. While it was 1,146-0.976%, the figure rose to 1.335% in the fall decreased. Similarly, the total nitrogen and phosphorus content in the driving layer decreased from 0.163-0.277% to 0.160-0.274%, which means that the situation should be understood as due to the assimilation of plants.

In the corn-planted variant, the above figures are 1,149; 0.162 and the amount of humus at the end of the application period from 0.331% compared to the spring 0.011%, total nitrogen - 0.023%, phosphorus - to 0.012% was observed.

Relatively favorable indicators in the experiment were planted golden gram plants taken, the amount of humus increased from 1.753% to 1.156% i.e. 0.003%. Similar figures were again obtained for total nitrogen and phosphorus.

In practice, the highest rate is in the variant of repeated golden gram planting. The amount of humus in the layer of 0–30 cm is 1.147% by the end of the growing season.

This indicator increased by 1.154% or 0.007%. It should be noted that the soil is also affected by the remaining types of secondary crop improved productivity, i.e., a relatively acceptable golden gram.

**TABLE 2 HUMUS IN THE SOIL, TOTAL NITROGEN AND PHOSPHORUS (%),  
FIELD 1, 2018**

№	Repeated plants varieties, 2018 year	Humus, %		Nitrogen, %		Phosphorus, %	
		0-30 cm	30-50 cm	0-30 cm	30-50 cm	0-30 cm	30-50 cm
In spring							
1	Repeated plants were not planted	1,146	0,976	0,163	0,971	0,277	0,321
2	Golden gram	1,147	0,986	0,167	0,990	0,277	0,340
In autumn							
1	Repeated plants were not planted	1,135	0,080	0,160	0,963	0,274	0,320
2	Golden gram	1,154	0,980	0,169	0,9 85	0,271	0,332

So, the balance of nitrogen and phosphorus in the soil of replanted soils is relatively low, satisfactory, but unsatisfactory of potassium, potassium fertilizers should be allotted depending on the amount in the soil.

## CONCLUSION

- The planting of golden gram and other legumes from secondary crops has been shown to have a positive effect on the fertility of light gray soils, improving their agrophysical and agrochemical properties.
- When sowing winter wheat + repeat crop golden gram the amount of organic residue remaining in the soil is equal to that of winter wheat and stubble organic residues left in the soil by the planted soy, it was found that in the 0–30 cm layer of soil increased humus relative to the initial amount.



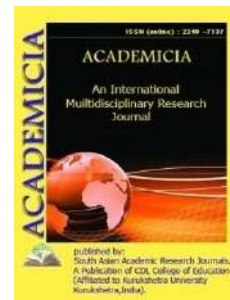
- Repeated legume-grain cropping in short rotation systems organic that leaves them in the soil as a result of the cultivation of crops the volumetric mass of the soil at the expense of the residues, compared to the original, observed an improvement in the water permeability of the soil.
- In the yield structure of golden gram varieties, the number of pods per plant, the number of grains in pods, the number of branches decreased when row spacing was 60 cm and 45 cm, respectively, due to the increase in sowing rates. The increase and decrease in sowing norms affected the grain weight of 1000 golden gram varieties. When both crops were planted with row spacing of 60 cm, it was found that in all planting norms, the grain yield formed in plants was higher than in the variant with row spacing of 45 cm.
- The highest cost-effectiveness in our research, crops short-rotation sowing, winter wheat, followed by repeated sowing, yielded an additional profit of 1,799,600 sums, and the yield was 90.1%.

### RECOMMENDATION

In order to maintain and increase the fertility of typical light gray soils, in the new crop rotation system (1: 1, 1: 2, 2: 1) used in the new farming system for continuous abundant and high-quality production of cotton, legumes are grown as a repetition of winter wheat and planting is recommended.

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## **CORRELATION BETWEEN EDUCATION AND WORKMANSHIP A CASE STUDY OF MUSLIM ARTISANS OF ALIGARH LOCK INDUSTRY**

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### **ABSTRACT**

*India's economic growth cannot be conceived in isolation of its household and tiny level industry such as the Aligarh lock industry. It is more so as the growth of India's petty industrial units has not at par with the over all, rather rapid economic growth of the country and the artisans engaged in the household and tiny level units have also not been equally benefitted with the consequential profits. The Muslims who constitute large number of artisan class have particularly been at a loss as they tend to excessively concentrate in the low-paying jobs, engage in artisanal sectors, or else serve as casual labour. Most of them are self-employed in low income artisan based works. Above all, they are educationally more backwards than their counterparts in other communities. Restrained further by over all security scenario all this goes to curtail their mobility. The present field based study that ascertains the status of Muslim artisans of Aligarh lock industry brings forth the fact that the artisans have been struggling hard for sustaining with the bare minimum of resources (income), yet aspiring to stick to the same hereditary profession. Availing of educational facilities is a far cry for them. Yet, they like to expose their children to formal education, even though it looks the least beneficial to them. This takes us to the next stage: how to improve their lot through educational means that could be geared to provide craft centred education to*

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*them all and educate them in the art of marketing their product, a more profitable step for raising levels of income.*

**KEYWORDS:** *Lock Industry, Muslim Artisans, Educational Status Of Artisans, Reasons Of Educational Backwardness, Socio-Political Condition Of Muslim Artisans*

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## INTRODUCTION

The rapid economic growth— over six percent GDP growth since the 1980s (IHD, 2014, p. 1)— has given India a heightened status in the global economy. Yet, the benefits of economic development have not improved the quality of life of a vast number of socio-religious groups which remain largely conditioned by structurally and historically defined exploitative contexts. Due to the persistent conditions of structural disparity and social inequality, the economic development boom may hardly generate desired social change and class mobility at an equal rate for all social classes, caste groups, and religious minorities. Muslim community is at the heart of this paradox. Accounting for 14.4 percent of India's vast population, making it the largest of all religious minorities in India, the community has been the subject of considerable development discourse, for it has the lowest levels of educational attainment when compared with major socio-religious groups in India and the lowest standard of living in the country (see Ghosh, 2013). Research indicates that Muslims, on average, spend 32.7 rupees per day, whereas Sikhs spend 55.3, Christians 51.4, and Hindus 37.5 rupees (Ghosh, 2013). Muslims' contribution being 11.2 percent to the country's overall GDP growth is relatively low as compared to that of the Dalits and Adivasi (indigenous groups defined as Scheduled Tribes or ST), contributing at 16.5 percent (*Times of India*, 2013). Its major cause lies in their being excessively concentrated in the low-paying jobs. They are mostly self-employed and engaged in artisanal sectors, or else serving as casual labour. Although a copious number of schemes by Government of India and the non-Government organizations took measures aimed at transforming Muslims' social and economic condition but unfortunately these remains notably unchanged. The root cause lies in their educational backwardness and remains true even after the attempts having been made to improve their educational conditions.

In a discussion paper based on research evidence, Humayun Kabir (2016) reported that despite structural constraints, Muslims and other backward classes have responded to the processes of economic and social change in which education is a significant factor (Jeffrey, Jeffery, and Jeffery, 2004). In north India, and especially in Uttar Pradesh, not only Muslims but also other disadvantaged groups have failed to secure salaried employment and "respectable jobs," which often refers to government jobs. Compared to the Dalits, Muslims have a greater tendency to depend on local wage labour and artisanal work, which pay low salaries and have been less successful in obtaining educational credentials and securing regular salaried jobs (Jeffrey et al., 2005, p. 2090). Unlike Dalit youths, Muslim youths are less visible in wider Indian society when translating their social frustration into political activism. What distinguishes Muslims from Dalits is that, when pushed out of formal and regular jobs, they tend to form a "minority enclave labour market" characterized by self-employment, casual labour, and low-paying local artisanal work (Das, 2008). This pattern, resulting from lack of land ownership, appropriate educational credentials, social networks, and cultural capital, continues to reproduce ghettoization and the differences between Muslims and other social classes.

The dearth of scholarship and robust empirical evidence on how social, political, and cultural forces interact in such a way as to restrict social change and sustain the status quo has compelled researchers to depend on tabulated numerical representations of Muslim community in India. Widely held public perceptions often pinpoint religious and cultural conservatism as causal factors of the Muslim community's backwardness. However, recent scholarship and several government reports suggest that the interplay of political, cultural, social, and economic forces continues to produce and reproduce the differences between Muslims and other social and religious communities in India (see GOI, 2006; Das, 2008), thereby challenging the broader public perception that tends to blame the Muslim community for its own poverty. *The Sachhar Committee Report*, a widely circulated and much-quoted study by a government commission, captures multifaceted factors associated with the political, cultural, and social problems that Muslims face in everyday life (GOI, 2006; Basant, 2007). Although many of these factors are also equally applicable to other backward social and religious communities, what distinguishes the Muslims from other groups is *a political and cultural sense of alienation from mainstream Indian society*. Historically defined political conditions, sensitivity to communalism in political campaigns and discourses, and the construction of Indian nationalism in close connection to the notions of "Hindu" land poses a serious political question to Muslims: "Can a Muslim be Indian?" (Pandey, 1999). In this political condition, "Muslims carry a double burden of being labeled as "anti-national" and as being "appeased" at the same time" (GOI, 2006, p. 11). Issues of insecurity and vulnerability push many Muslims to live in a particular location, and therefore Muslim "ghettoization" is markedly visible in housing, schooling, and jobs (GOI, 2006, p. 14; Basant, 2007, p. 828). Low representation in public and private regular employment sectors, collective alienation, perceptions of discrimination in government employment, lack of security, and suspicion of Muslims among state apparatuses and agencies tend to reproduce this process of ghettoization, causing Muslims to attach less importance to formal secular education and preventing them from translating their education into respectable and desirable jobs. Moreover, many Muslims find that making the effort to learn Urdu, a marker of their cultural and religious tradition, presents another limitation within the context of school textbooks and communities that use a different language (GOI, 2006, pp. 14–15; Basant, 2007, pp. 828–829). This is one of the reason Muslims have developed a tendency to depend on local wage labour and artisanal work, which pay low salaries. If we see any artisans' work whether it is chikan kari, dardozi, woodwork, handloom work, lock industry hand tools industry we may find excessive Muslim concentration.

Amongst the artisan based work places we come across Aligarh lock Industry situated in U.P. Aligarh is famous for its Muslim University and lock industry. Aligarh's locks provide security and sense of security to millions of houses in India and neighbouring countries. According to the 2011 Census, the total population of Aligarh district is 12, 74,408. More than 2 lakh people (around 15.7 per cent) are associated, directly or indirectly, with at least 5,000 lock manufacturing units. Muslims form the majority of artisans in the industry whereas big manufacturing units and business houses are owned by both, Hindus and Muslims. Muslims artisans manufacture about 80 per cent of locks of Aligarh. As labourer-artisans they manufacture goods for big players. They are artisans by heredity. All the family members are engaged as labourer-artisans and involved in the process of lock making. At the same time they prepare their next generations artisan-labourers. Although a central University with minority character and dozens of schools are located in their surroundings but they seem to have put their

self made locks on the doors, against the educational opportunities which are available on their doorsteps. The question however remains as to why and to what extent they lag behind in education. To find the answers a survey was done with the following objectives in mind.

**Objectives of the Study**

- To examine the educational status of the artisans of lock manufacturing industry.
- To investigate the causes of educational backwardness.
- To analyze the problems or hurdles in getting Education.
- To suggest the measures for educational improvement and income enhancement

**METHODOLOGY:**

The study was qualitative in nature. The data was collected from different wards of Aligarh city.

**The Sample:**

The study was conducted in the mohallas of Aligarh namely, Rasalganj, Sarai Rehman, Usman Para, Jeevan Garh, Atish Bazan, Delhi Gate, Bhojpura, Shahjamal, Hathi Pul, Tantanpara and Chowk Bundu Khan. In all, 1154 respondents were contacted

**Tools of the study:**

The study is, in main, based on primary data collected through field surveys. Household level survey was conducted in through the questionnaire based interviews. The interview was mainly focussed on their educational status and causes of educational backwardness.

**Data Collection:**

For data collection interview model was chosen. This enabled and facilitated asking questions, elicit answers, uncover perspectives and notions, and give the subjects the opportunity in which to give meaning to their respective roles.

**Analysis and Discussion**

After conducting the interviews and having taken field notes it was found that the lock industry employed three categories of workers that are regular, casual, and family workers. The family workers in household units included family members sharing kitchen and some relatives who were paid for the job. Almost all the workers were reported to be more than 16 years of age and thus happened to be adults. The incidence of child labour as reported was found to be very nominal. It may however be mentioned that the figure about number of children engaged as reported by the respective units was presumably much less than the actual number working in the industry. When researcher entered the units she noticed the children working with adults. But owners immediately asked the children to stop working and go inside. It was purported that the children had come to meet their parents. The unit owners were conscious of the fact that they are not allowed to employ child labour. They, therefore, did not appreciate any inquiry related to child labour.

Literacy is generally considered an important condition for both acquisitions of technical skills as well as for upward occupational mobility. The lock industry had large number (72 per cent) illiterate workers. Only 15 per cent of the workers had education up to primary level and another



13 per cent were middle pass. Not even a single worker in household units of the industry had graduation degree. 90 per cent of the women were illiterate and, not a single woman has studied beyond primary level of education. A very few, (just one per cent) could read and write and claimed to have passed primary level examination. The female children worked at household units, the girls helped the parents in family occupations after the school hours or after completing cooking, washing and other household works.

In regards to the reason of not getting education, the respondents of the study reported a number of reasons. Amongst them the prominent ones were the poor quality of schools, pathetic, non-cooperative and idle teachers. The state's institutional discrimination against Muslims is an undeniable presumption. State investment in education in Muslim-dominated areas has been pathetic. Muslims have also not sufficiently benefited from various government schemes meant for general educational and economic advancement.

A very interesting thing reported by a number of respondents was that 'we will neither get admissions in the good institutions nor get jobs only because of our belongingness to a particular religion then why should we waste our time and energy'. One respondent convinced the researcher in a very informed way, 'madam! We are born as a labourer and will die as a labourer only'. Muslims routinely argue that despite possessing adequate educational qualifications they are not employed in government services, and point out that Muslim representation in the services is much less than that warranted by their proportion in population. What is the use, many Muslims ask, of investing in their children's higher education if they are refused government employment simply because of their religion? In the private sector, too, Muslims, like Dalits, believe that discrimination continues unabated, further dampening their enthusiasm for higher education. This has led to demands by some Muslim organisations for reservations for Muslims, either as a single category or for backward caste Muslims, in government jobs and in educational institutions.

Poverty, overall non-conducive environment for learning, lack of assistance for children in homes and the schools non-supportive attitude towards them were other reasons that the workers underlined. That was why that even if they get their children enrolled in schools, they leave the schools midway. Hence the dropout rate is a bit high. In addition, the neo-liberal economic policies of the last two decades or so have hit various Muslim artisan communities across the country, rather severely. Mounting economic marginalisation and deprivation naturally make higher education an impossible proposition for many Muslim families. Given their poverty and the feeling of discrimination in both private and public sector employment and education institutions, many Muslims feel it is enough for their children to receive basic education before seeking some sort of petty self-employment to contribute to the family upkeep. These facts account for the higher dropout rate among school-going Muslims children at all levels as compared to other religious communities. Periodic riots in places where Muslims have witnessed some degree of economic progress have resulted in pushing large sections of the community against the wall, leading to a process of ghettoisation and further strengthening insularity and religious conservatism. Even the Muslim religious scholars (Ulema) take little interest in the real-world concerns of ordinary Muslims, focusing instead on religious, symbolic or identity-related issues.



It was also felt by the researcher that deep-rooted upper caste prejudices, pre-colonial ruling elites (Muslim and Hindu) took little or no interest in the development of lower segments Muslim community. The historical record reveals a deep-rooted contempt displayed for indigenous Muslim converts (profession based castes, in main) by the Muslim nobility or shurafa, who claimed foreign descent. Like other Dalit and low caste groups, these Muslim segments remained educationally deprived. In other words, the caste-class based constraints of many Indian Muslims explain, in part, the overall educational marginalisation of the community today. The partition in 1947 also had momentous consequences for Muslim education. In its wake the bulk of the modern-educated north Indian Muslim middle class shifted to Pakistan, leaving behind millions of economically and educationally deprived co-religionists.

Before 1947, the north Indian middle-class, particularly the products of the Aligarh Muslim University, had played a key role in promoting modern education. In the absence of a class that championed liberal or progressive causes, the prospects for education turned out to be bleak. There was also the fear, not entirely unfounded, that government schools, with their Hindu-oriented syllabus and alleged anti-Muslim bias, would result in de-Islamisation of Muslim children.

Another reason for the overall educational marginalisation of the Muslim community, particularly in north India, is the fact that the community is deeply divided within, and lack political leadership. The Muslim community, particularly in north India, where most Muslims live, is bereft of a substantial educated middle class. This has allowed Muslim clerics or ulema to assert their claim of being its spokesmen as well as the defenders of Islam and Muslim identity. They are backed by various political parties, who use them to garner nothing but Muslim vote. This is also a reaction to Hindu chauvinism, with Hindutva groups also deliberately raking up such issues to create a Hindu vote-bank and to keep Muslims on the defensive, giving them little space to think of their economic and educational concerns or to demand their rights from the state. Consequently, since education, particularly of the marginalised, is not a prime concern of the so called existing Muslim leadership, particularly in north India, Muslims have not been active in setting up community-based educational institutions in sufficient number.

Talk of a hidden nexus between political parties, even those that claim to be secular, Muslim political and religious leaders and Hindutva groups, all with vested interests in keeping Muslim educational and economic issues out of political discourse, is thus not unwarranted.

The measures to be taken up for up-lifting the lot of Muslim artisans may include general strategy as well as specific steps of concrete nature.

The artisan community of lock industry of Aligarh is struggling hard to compete with international players in the era of today's globalization. Large number of Muslim lock workers has lost jobs in the past few years in face of cheaper Chinese locks. If these artisans have to survive in the present era, their upliftment is an essential condition.

Due to forces of competitive market and globalization and also due to deteriorating socio-economic condition of master craftsmen/artisan these skills are not being pursued by the young generation productively. Government of India is of firm conviction that the traditional craftsmanship is needed to be preserved. There is a need to augment traditional arts and entrepreneurial skill which are the backbone of cottage and small scale industry and establish better market linkages enhance branding and ensure access to credit.

Need persists for inculcating trust in the Muslim artisans so as they may come to believe that they are as good Indians as others. They need to be empowered psychologically. This may be done by roping in psychologists and social scientist. The NGOs may also be involved to work at the grass-root level.

Some success stories and case studies of Muslims as well as other artisans may be presented and demonstrated in the related areas. Such stories may motivate for upward social mobility.

With the purpose of enhancing levels of income, technical side of workmanship need to be linked with the marketing of the finished product. This linkage will correlate need for education with the idea of marketing.

Education of girls has to be given top priority. They need to be provided with required facilities in their immediate neighbourhood having female teachers.

Craft oriented education may be arranged for the children, youngsters as well as craft persons' children mainly because craftsmanship is virtually hereditary profession. Adult education centres having specific provisions for craft centred learning and reorientation may be established in the neighbourhood of artisans' settlements/mohallas, etc. Such centres should provide instructions as are linked with the artisans' job requirements.

## CONCLUSIONS AND RECOMMENDATIONS

In north India, and particularly in Uttar Pradesh Muslims and other disadvantaged sections of society have a greater leaning to depend on local wage labour and artisanal work, which pay low salaries and have been less successful in obtaining educational qualifications and securing regular and white collared salaried jobs. If we see any artisans' work whether it is chikan kari, dardozi, woodwork, handloom work, lock industry hand tools industry we may find excessive Muslim concentration. Aligarh is famous for its Muslim University and lock industry. Aligarh's locks provide security and sense of security to millions of houses in India and neighbouring countries. But the workers of this industry are living a insecure life. Education is still a distant dream of the workers of this industry had large number (72 per cent) illiterate workers. Only 15 per cent of the workers had education up to primary level and another 13 per cent were middle pass. 90 per cent of the women were illiterate and, not a single woman has studied beyond primary level of education. Poor quality of schools, pathetic, non-cooperative and idle teachers, poverty, overall non-conducive environment for learning, lack of assistance for children in homes and the schools non- supportive attitude towards them were other reasons of educational backwardness of Muslims.

There is urgent need to the measures be taken up for up-lifting the lot of Muslim artisans may include general strategy as well as specific steps of concrete nature.

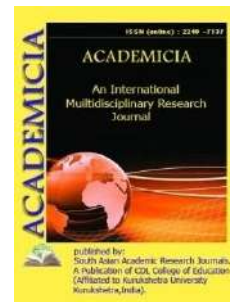
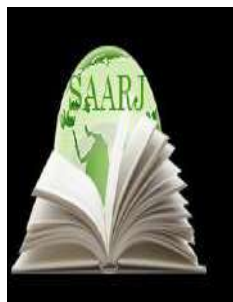
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## ARTISTIC INTERPRETATION OF THE IMAGE OF CRAFTSMEN IN THE POEMS OF SAYFI BUKHARI

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### ABSTRACT

*This article examines the poet's methods of interpreting new images, proves them through poetic examples, and highlights the poet's poetic skill in this direction, his masterful use of the arts. The success of Sayfi Bukhari in the poetry of the XV century lies in the skillful placement of new content and images in the traditional form of the ghazal genre. He was one of the first in oriental literature to introduce a variety of professions to the genre of ghazal, thus making a major turn in the ghazal of his time. As a result, the image of craftsmen in the poems of the poet comes to the fore. The article shows that when comparing the contemporaries and predecessors of Sayfi Bukhari's ghazals with examples of creativity, the images he created differed from traditional images. At the heart of this are clarifications on the role and contribution of Sayfi Bukhari in the process of the literary period.*

**KAYWORDS:** *Ghazal, Theme, Image, Novelty, Reality, Skill, Craftsmanship, Literary Environment, Fine Arts.*

### INTRODUCTION

There are many creative works created in the XV century, which vividly reflect the literary and cultural life of the period. For example, in Alisher Navoi's Majolis-un-nafois, we can see many examples of the literary environment of the XV century, the life of craftsmen and artists. Because some craftsmen also took an active part in the poetry of the period and contributed to the growth of the literary process. Especially in the second half of the XV century in Samarkand, Bukhara, Herat, Tabrez and other famous centers the large-scale development of handicrafts influenced the literary life of that period. As a result, Mavlono Qadimiy - drummer, Mavlono

Zayn-kisadoz, who was interested in poetry and wrote poems, Mavlonov Havoipainters, Mavlonov Said Kulol-kosagars, Mavlonov Argun-khaymadoz, Mavlonov Khovariy-zardoz, Mavlonov Baqoi-kamongars, Mavlonov Majnuni-calligraphers. Under the influence of this, the emphasis on the theme of artisans is vividly reflected in fiction, including poetry.

### THE MAIN PART

The poetry of a number of poets, including Abishak, Sayfi Bukhari, Darvesh Dehakiy, who created in the literary environment of Samarkand and Herat, realistically shows the character of the people of art and craft, their role in cultural life. Among the poets whose names are mentioned, the activity of Sayfi Bukhari is noteworthy. Sayfi Bukhari was born in Bukhara in the 1840s. He studied in Bukhara and Herat madrassas and spent most of his life in Herat. In his poems, Sayfi Bukhari praised farmers and professionals. The divan Sanoe'-ul-badoi was famous in Herat, and each of its ghazals was dedicated to a single profession and art, such as butcher, needleman, baker, carpenter, tokiduz, bird, musician, fisherman, halvagar, and others. It is more important that these poems are formally simple and that they do not exceed 5-6 bytes. What is important is that at the end of the poem, the poet reports on what he was called and to what extent he found a position in his time:

In nusxa, kitolibandxosumash,  
Farxundachuog'ozbuvadanjomash.  
Lafzashhamasan'atastuma'nesh bade',  
Az on gasht "Sanoe'-ul-badoe" nomash. [6, p. 301]

**(Contents:** Everyone wants this copy, it's fun to read from start to finish. The language is an example of art and its content is a work of art, hence its name (Sanoe'-ul-badoi').

According to the literary critic Alokhan Afsahzad, the manuscripts of Sanoe'-ul-badoe' in the library of the University of Iran, numbered 43-44 and 45-85, are complete and complete, consisting of 1320 bytes. According to the scholar, the poet considered various professions, which are an integral part of city life, as the main object of description and described a total of 133 people from the professions. [3, p.103]

Hazrat Navoi, in his Majlis-un-nafois, gives information about his contemporary poet Sayfi Bukhari, noting that his poems soon became famous. Welcoming the poet's ghazals written in a unique theme and style, he said, "He has written many latoif poems for the people of art and hirfa, and in this way he is authoritative," and cites a verse from his ghazal dedicated to the beautician. [1, p.340]

Apparently, the theme of Sayfi's ghazals was the life of craftsmen and artisans, so it was recognized by Navoi as a novelty in ghazal poetry of that time. "... Alisher Navoi," writes academician Botirkhon Valikhodjaev, "in his Majlis-un-nafois, supports one of his contemporaries, Sayfi Bukhari, for including the working people, especially craftsmen, in the image of the ghazal, calling him an inventor in this field." [4, p.78]

While praising every artist and craftsman, Sayfi embodies him in the form of a friend, for example, "the needle is important." (Mohi so'zangar, ki dar dil mexalad mijgoni o'), "attor gulruxsorim" (Do'ston, to oshiqam attori gulruxsorro), "rangchi guluzorim"(Gul'uzori rangrez



kori maseho mekunad) he begins and tries to express his relationship in a romantic tone. As an example, it is expedient to consider the text of the poet's "Ghazal of Attar":

Do'ston, to oshiqam attori gulruxsorro,  
Do'st medoram ba bo'i o' hama bozorro.[6, p.302]

**(Contents:** Friends I am in love with ul gulrukhsor attor because I love all the markets because of its smell).

Expressing his love for the perfumer, the poet sells perfume, he wants to say that the reason is that he not only likes the market air, but enjoys it all his life. In other verses of the poem, the poet describes in detail the role of the acting profession in the life of that period, the delicate taste and culture of this profession. In other words, using the interpretation of the image of "attor", Sayfi tries to define the cultural life of the city in the XV century, the social status of the professionals who work in it. The poet's "Ignachi Ghazali" also attracts attention with its subtlety and art:

Mohi so'zangar, ki dar dil mexalad mijgoni o',  
On ki dil mexonamash man, hast so'zandoni o'.  
Chashmi Sayfi basta bud az dard to ro'I tu did,  
Boz shud chun chashmi so'zan az farah chashmoni o'. [6, p.307]

**(Contents:** The eyelashes of the needle-needle pierce the heart, and when I call it the heart, for it my heart has become a box of needles; Sayfi's eyes were closed with pain, but when he saw your face, his eyes opened like needles with joy).

In this ghazal, the poet used the art of rhyme more and was very adept at finding new images and analogies. The lashes-needle in the ghazal, the heart-word box, the iron heart of the charmer-sandon, the hammer-and-needle hammer's allusions are not visible in poetry until Sayfi. In traditional poems, we often see the mistress's eyelashes being likened to a spear, a merciless heart to a stone, and the power of a lover's ahi to fire and storms. For example, if we pay attention to the following verses of Kamol Khujandi, a famous representative of the Persian-Tajik ghazals of the 14th century:

Nisbati xoro chi kunam bo dilat,  
Chun dili berahmi tu sangintar ast.[7, p.160]

**(Contents:** I made you like a stone because of the cruelty of your heart, it seems to me even harder than a stone).

Apparently, the poet complained about the cruel heart of the lover and compared it to a stone, the hardness of the lover's heart - indifference, cruelty - reminds the poet of the hardness of the stone. Sayfi goes beyond this tradition and manages to find a new allegory in the "Gazelle of the Needle". He compares the hardness of the needle wound to the hardness of the iron that makes the needle, the needle that processes it.

In his ghazals, Sayfi addresses new heroes through a new theme. He replaces the image of the mistress, which is predominant in traditional gazelles, with representatives of various professions, such as baker, tailor, needleworker, painter, blacksmith, farmer, drummer. From each ghazal of the poet new images and images are formed in the eyes of the reader. In this style,

the object of the image in Sayfi's ghazals changed in contrast to the traditional ghazals, and this situation required a state of diversity and renewal even in the layer of artistic image. The skill of the poet in the needle of the needle is also seen in the fact that he managed to bring the protagonist - the needle needle into reality from the world of fantasy through new words and images. In other words, the poet introduced the real hero to the students on the basis of his profession, position and character. In this important work, the poet was able to include in the image the tools typical of the art of needlework, including needles, needle boxes, egov, steel, hammers, sandals.

This style of interpretation can also be seen in Sayfi's Balikpapan Ghazali. The text of this ghazal begins as follows:

Mohi mohipaz, ki teg'ash raxna dar jonam kunad,

Sinaam bishkofadu bar toba biryonam kunad. [6, p.305]

**(Contents:** The knife of the fisherman mohim pierces my soul; pierces my heart and cooks it on a hot stone).

The poet wrote this poem about a fish-cooking crack. It is known that the profession of fishing has been known to our people since ancient times, and many people have lived in this profession. It is clear from Sayfi's ghazal that this profession was widespread among the people in the 15th century, and the poet describes this very profession. This time the poet interprets his mistress in the image of a fisherman. Now he creates new images using the tools used in the craft. The poet likens the state of a man in love with a fisherman to the state of a fish he encounters every day. In the poet's image, his gaze is sharper than the knife in his hand, and with this knife he pierces the poet's heart like a fish, and cooks it on a hot stone. Through these new images, Sayfi interprets the wound of this profession in the image of a ruthless and suffering mistress.

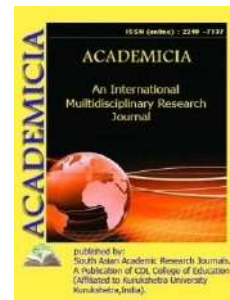
## CONCLUSION

1. Speaking about the novelty and achievements of the talented poet Sayfi Bukhari in the ghazal poetry of his time, which attracted the attention of many contemporaries, it is expedient to draw the following conclusions:
2. The ghazals written by Sayfi Bukhari to the people of the profession are not only new in terms of subject matter, but also the heroes who took part in it can be found first in terms of their time.
3. The unique artistic style in the poems of the poet helped to vividly interpret the image of craftsmen. He tried to create new images and new images in each of his poems. He introduced the craftsmen to the student based on his profession. He interpreted how delicate and charming they were.
4. On the one hand, Sayfi Bukhari enriched the poetry of his time with his poems dedicated to the arts and crafts, and on the other hand, gives a wide range of information about the development of crafts in the life of the peoples of Central Asia in the XV century and the cultural life of various professions.

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## POETIC CONTENT AND FORM OF FERUZ'S POETRY

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### ABSTRACT

*Muhammad Rahimkhan Soni-Feruz has a special place in the formation and development of the literary environment in Khorezm in the second half of the XIX - early XX centuries and has a special place in the history of Uzbek literature. As a great statesman, he sponsored the development of culture and the arts. As a potential poet, he left a rich poetic legacy. The more important the socio-political activity of Muhammad Rahimkhan Feruz the more valuable his poetry, called the "Great Enlightener" the famous orientalist V.V. Bartold. Much work has been done in the study of the literary and social environment of the period, and although many scholars have conducted research, the study of Feruz's work requires more research. The study of Feruz's work, his artistic mastery, is one of the urgent tasks of today's literary criticism. The article examines the images in the poems of the king and poet, a representative of Uzbek literature Muhammad Rahimkhan Feruz. Based on the analysis of the poet's poems, the issue of artistic interpretation of the romantic theme in his work is studied. The mastery of the arts, the secrets of the poetic mastery of the artist are covered.*

**KEYWORDS:** *Ghazelle, Classic, Love, Tashbeh, Tanosib, Talmeh, Tazod, Rival, Lover, Beloved.*

### INTRODUCTION

As a result of the influence of Feruz, who had a huge heart, more than a dozen artists emerged from the khan's generation. Each of them arranged at least one divan. About fifty artists in this environment, regardless of social class, profession and nationality, had a certain level of artistic talent, creating works in different genres. Feruz himself left a rich poetic legacy as a poet. The study of these poetic works on a scientific basis, which has not lost its relevance in today's XXI century, in particular, the study of the scope and genre features of the poet's poems, is one of the

most pressing issues facing literature. The study of the works of Muhammad Rahimkhan Soni Feruz was widespread during his lifetime. Muhammad Riza Ogahi in his work "Shahidu-l-Iqbal" about the period of Feruz Shah writes about the high level of his poetry, as well as the full coverage of his administrative-political, socio-economic, spiritual and enlightenment activities under his rule.

Besides, valuable information is also given in the works of Bayani's "Shajarai Khorezmshahiy", Ahmad Tabibi's "Majmuai muhammasoti ash-shuaroi Feruzshahiy", Hasanmurad Laffasi's "Biography of Khiva poets and writers", Bobojon Tarroh's "Khorezm musicians", and Kamil Khorezmi's "Latoyifu-z-zaroyif". It should be noted that during the independence period, the services of Davlatyor Rahim, Shikhnazar Matrasul, and Gulsara Ismailova were special.

As noted in the textbook "Uzbek literature of the period of national awakening", Feruz's creative heritage has come down to us in a fragmentary form. But he did not take seriously the collection and arrangement of his poems. This is probably why his creative legacy that has come down to us is not so great. The total volume consists of 2534 verses - 98 ghazelles, 7 muhammas, 2 musaddas, 4 masnavi, 7 rubais "[1; 78]. As a result of Gulsara Ismailova's services, on the basis of manuscript sources 12060, 3446 in the fund of the Institute of Oriental Studies of the Academy of Sciences of Uzbekistan, the poet's divan was published under the name "Elga shohu ishqqqa qul" [2]. The article analyzes the samples from the poetry collection.

## MAIN PART

Feruz's poetry is colorful in terms of subject matter. The thematic scope of the poet's poetic heritage, which seeks to continue the classical poetic traditions with dignity, can be grouped as follows:

- 1) romantic;
- 2) religious and enlightenment;
- 3) social.

The theme of love is one of the main themes of all-Oriental poetry, including Uzbek literature. If we look at the history of literature, we can see that every artist has enriched this old theme with new metaphors. According to the literary critic Rahim Vahidov, "it is absolutely impossible to find a poet who does not sing love and a poem that does not mix the pain of love" [3; 142].

A significant part of Feruz's literary heritage was romantic lyricism, in which he sang love in almost all genres of poetry, depending on the possibilities of the same genre. G. Ismailova, a literary critic who is directly involved in the work of the poet, also emphasizes this: "Most of Feruz's works are poems about love, details of human experiences, and the beauty of a charming place" [4, 5]. In his poems on this subject, the poet has repeatedly referred to the dream of date, the sufferings of separating, the conflict of soul and beauty. The poet began writing poetry on this subject in the early stages of his career. Feruz studied the works of poets as Navoi, Lutfi, Fuzuli, his great contemporary Ogahi, his fellows Kamil and Bayani. He considered Muhammad Riza Ogahi as his mentor. His teacher tried to continue the tradition with dignity:

*Komil ersam nazm aro Feruzdek, ermas ajab,  
Ogahiydek she'r mashq aylarda ustodim mening.*

Muhammad Rahimkhan Feruz was a musicologist and composer, as well as an art critic with a perfect knowledge of music. He did a great job with the great thinker Kamil Khorezmi and his son, composer, musicologist Muhammad Rasul, in preserving the status of Khorezm and passing it on to future generations. The depth of Feruz's love poems and the great attention he paid to his artistic perfection can be explained by his perfect knowledge of music.

The artistic interpretation of the theme of love is the basis of any poet's work. Indeed, as a lyrical poet, Feruz sings with pure human emotion - passion, passion and pleasure. He praises love in a unique way and puts the feelings of the heart into poetry. In his poems, he describes human love in rhythm. He explores the sacred feeling of not knowing time and space - unique methods of expression for the definition of love - and the search for rhymes and rhymes that match the experiences he wants to portray. It should be noted that at this point it is necessary to dwell on the most important of such studies.

*Azmi guliston ayla zulfunga berib ziynat,*

*Rashk o'tiga sunbulning paykarini so'zon qil.*

The ghazelle with the radif "Qil" is widely used in Uzbek literature, in the works of poets such as Amiriy, Uvaysiy, Fazliy, Ado (Sultonxonto'ra Ahroriy), Hotif, Nola, Xijlat, Feruz, Furqat, Muqimiy, Haziniy, Kamiy, Hamza, Sidqiy Xondayliqiy. As the poet chooses this radif for the description of the ideas and experiences he wants to express in his ghazelle, he enters into a creative contest with the poets who have finished the ghazelle in this radif. At the same time, he manages to express in a unique way the feelings, the sufferings of love, which are stored in the depths of the soul:

*Ko'zunga chekib surma, yuzunga urub g'oz,*

*Lola birla nargisni ul ikovga hayron qil.*

This verse shows that Feruz was deeply aware not only of the works of the Khorezm literary environment, but also of the traditions of the poets and writers of the Kokand literary school. He also studied the works of the representatives of the literary environment of Kokand during the reign of Amir Umar Khan through Fazli's "Majmuai shoiron".

The main theme of Feruz's lyrics, which is known as the "Councilor of romantic gazelles", is love. The poet has written his own captivating poems on the subject. His lyrics expressed the emotional experiences and sufferings of an ordinary man - a lover, not the king. In Feruz's poems there is a symbol of a lover with high human qualities - a lover and a single beauty, sometimes kind, sometimes cruel. According to the lyrical protagonist, the king and the slave are equal in love:

*Garchi erurman tole'i Feruz ila olamg'a shoh,*

*Lek ul parilar sarvari oldidaturman qul bu kun" [5;63].*

Analyzing this verse, Nusratullah Jumakhoja, Doctor of Philology, expresses the following points: "This verse shows that there is such a law in art that a career-like closeness between crowned poets leads to a closeness of thought and emotion." As we read this verse of Feruz, we involuntarily remember Babur's famous rubai:



Sen gulsenu men haqir bulbuldurmen,  
 Sen shu'lasenu ul shu'lag'a men kuldurmen.  
 Nisbat yo'qdur deb ijtinob aylamakim,  
 Shohmen elga, vale senga quldurmen" [1;78].

It should be noted that in Feruz's poetry, as in traditional romantic poetry, the main characters are the *lover, beloved, and the rival*. In his romantic lyrics, the poet expresses his feelings, his attitude to love through the images of a lover and beloved. In the poet's lyrics, the mistress is interpreted as an incomparably beautiful. Therefore, many traditional adjectives are applied to it, such as «sweetheart», "moon-faced", "chubby", "fairy", "fay", "peri", "petite", "flower" and "beauty". The helplessness of the lover, his constant hope for the vision, is vividly reflected in the images of "propeller", "begger", "whacky", "nightingale" used by the poet. The purpose of love is vision. There is no creature more beautiful for a lover than a lover. Nothing else interests him:

*Lutf etib agar yoring kelsa bazmingg'a, Feruz,*  
*Bu aziz joningni maqdamig'a qurbon qil [2;63].*

The opponent is an image that walks side by side with a lover and a lover in romantic lyrics. Described with such adjectives as "white", "other monk", "stranger", this image occupies a leading place in the poet's poems. In Feruz's lyrics, this "third person" is often the main cause of love and grief. The lover's attention is more on it. This, of course, breaks the heart of the lover:

*Ul sanamga o'zga rahbon bor ekandur, bilmadim,*  
*Ko'ngli oning moyili ag'yor ekandur, bilmadim [2;68].*

The fact that the lover has an "other rahbon" - a guide, a "heavy-hearted" - touches the heart of the lover. But the lover is patient with all the persecutions of his lover. He wants sweetheart's sunny face to shine. He sees this as the only remedy for the pain of longing:

*Ko'zumni ayla ravshan mehr yanglig' orazingdinkim,*  
*Bo'lubtur tiyra, asru torta-torta intizoringman [2;74].*

In the verse, the art of tasbeh (mehr yanglig' 'oraz), tazod (tiyra - ravshan) is skillfully used to describe the lyrical romantic mood. As a result, the impact of the idea was achieved. Feruz's love poems are mainly in the traditional direction, and the artistic means are also aimed at depicting the hijra experiences of the lover, the beautiful beauty of the lover, the flirtations. In the image of the poet, the mistress is extremely compassionate, commiserative, every word of which gives life to a dead body like Masih, and from her beauty the evening of the lover turns into the morning, the morning of the mourner into the evening. The lover is so pleased with the poet's heartfelt compliment that he wishes him the highest status and happiness from Allah:

*Bu oqshom keldi ul dilbar adab birla salom aylab,*  
*O'luk jismimga jon berdi Masihoso kalom aylab.*  
*Shabistonimni qildi orazing mehriddin ravshan,*  
*Ochib ruxsorida parda quyosh yanglig' xirom aylab.*

*Ayon aylab jamolin qildi shomim subhga tabdil,  
 Yuzi hijronida ag'yorning subhini shom aylab.  
 Kelib yuz nav' nozu ishva birla mehr etib og'oz,  
 Qoshimda o'lturub dedi tili mu'jiz kalom aylab  
 Ki: «Ey, hajrimda ko'ngli loladek dog' uzra dog' o'lg'on,  
 Yurursan bo'yla toki ayshu rohatni harom aylab?  
 Visoling'a chu yetting shodu masrur aylabon o'zni,  
 Bayon ayla menga sen arzi holingni tamom aylab...» [2;19]*

If we pay more attention to the poem, the poet will find tazod (gloom - bright, night - day, separation - date), tasbeh (Masih, like the sun, as the spot on the tulip), and question and answer (dialogue between lover and beloved), we witness that he skillfully used poetic arts such as talmeh (Masih). Through this, it is observed that the poet strives to make the thought impressive and the expression artistic.

As described in the poet's radiant ghazelle "Yo, Rab", the lover is extremely beautiful, in love with his "worldly beauty" - the poet also wants clarity for his feast. But it only hurts the suffering lover. The portrait of the mistress is perfectly depicted in the poem. This fact testifies to Feruz's mastery of portraiture as well. The poet tries to show the oppression he inflicts on the lover by describing the beauty of each member in the appearance of the wound. In this way the poet manages to give a deeper picture of the psyche of the lyrical hero. But in any case, the lover hopes for the cabbage of grace, is patient:

*Yetushti hajridin jonimg'a yuz ranju alam, yo, Rab,  
 Ko'rub holimni, kam qilmas manga bir dam sitam, yo, Rab.  
 Sochi savdosida doim qorong'udur manga olam,  
 Mening bu shomi hijroning'a yetkur subhidam, yo, Rab.  
 Jahonoro jamolidin mening bazmimg'a ham bir tun  
 Yeturg'aymu ekan ravshanlig' ul mahvash sanam, yo, Rab.  
 Agar lutf aylabon o'z ilki birla bersa bir sog'ar,  
 Ko'ngulda qolmas erdi orzuyi jomi Jam, yo, Rab.  
 Na yanglig' sabr qilsun ul quyosh hijronida Feruz,  
 Ziyod aylar jafosin, aylamas bir zarra kam, yo, Rab [2;18].*

This prayer - the theme of love in the ghazelle - is written with high art. The poet expresses his resentment at the emigration of his friend, and complains of his cruelty. Separation explains why he stays in the dark with his friend's hair color. He asks the Creator to bring clarity to the night of separation. Jamshid says that he does not dream of a jam if he shows a yorlutf and holds a sagar with his own hand. Ghazelle praises him for his patience in the hijrah of his companion, who is increasing day by day without diminishing his suffering in the last verse. In drawing the image of

the mistress, the poet makes very appropriate use of the symbols and metaphors that exist in our classical literature:

*Orazing davrida har yon zulfi anbarmu ekan?*

*Yo'qsa ganj ustida yotg'on ikki ajdarmu ekan? [2;77]*

Oraz is a symbol of treasure in Eastern poetry. The two curls are dragons and snakes. According to legend, where there is a treasure, there will be a guardian dragon. The poet skillfully used the art of rhyme in this verse.

## ANALYSIS

Feruz's love poems are mainly in the traditional direction, and the artistic means are also aimed at depicting the hijra experiences of the lover, the beautiful beauty of the lover, the flirtations. In the image of the poet, the mistress is extremely compassionate, compassionate, every word of which gives life to a dead body like Masih, from her beauty the evening of the lover turns into the morning, the morning of the mourner into the evening. The lover is so pleased with the courtesy of the poet's lover that he wishes him the highest status and happiness from Allah. It is known that the use of the art of talmeh in romantic lyrics - the naming of great historical figures, famous literary and artistic figures - has become a tradition in classical poetry. In the works of the poets who were the great predecessors of Feruz, the verses adorned with the art of talmeh are distinguished by their special influence. However, the construction of the whole ghazelle on the basis of talmehsan is a unique phenomenon that is not found in the poets of this period. The following ghazelle by Feruz is an example of the renewal of poetic traditions in terms of its adornment with the art of the end:

*La'li shiriningni ta'rif aylab o'lmish shahdkom,*

*Anvariyyu Fazliyyu, Xoqoniyu Masnad mudom.*

*Chashmi fattoninga nargisni nechuk tashbeh etar,*

*Soyibu Bedil, Hiloliy, Hofizi shirinkalom.*

*Vah, ne yanglig' sharh qilg'ay orazing tavsifini,*

*Unsuriyyu Asjadiyyu Farruxu Sa'diy, Humom.*

*Ko'rsa husnang Layliyyu Shirinni vasf etmas edi*

*Xusraviyyu ham Navoiy, Jomiyu Shayx Nizom.*

*O'xshatib bo'lmas yangi oyg'a muqavvas qoshlaring,*

*Sayyidoyu Nozimu Lutfiy, Kiromiyu Xisom.*

*Sarvoso qomating vasfin qilurda lol o'lur,*

*Andabilu Ravnaqu Ziyarak masihiy xush kalom.*

*OGahiyu Komilu Feruz, Xolis, Chokaring,*

*Rojiyyu Mirzoyu Akmal, Munisu Xokiy, G'ulom [2;71].*

This ghazelle can prove that Feruz has a high level of poetry. After all, the content of each verse corresponds and corresponds to the high rank achieved by each poet in the creation. For example, Feruz mentions the names of Saeed, Bedil, Hilali and Hafiz, who rose to the status of a high artist in poetry.

Describing the unequal beauty of his land, he came to the astonishing artistic generalization that if he saw this beauty, he would stop describing the great Hamsanavis - Khusrav, Navoi, Jami and Nizami Layliyu Shirin. The last stanza of the ghazelle is that in makta, the names of the poets Chokar and Ghulam are used both in the sense of nicknames and in the lexical sense (slave, servant), creating a unique example of the art of iyham. Building a poem from the beginning to the end on the basis of art is found not only in this ghazelle, but also in other lyrical works. To prove this, this ghazelle, which was created on the basis of contemporary art, can be cited as an example:

*Qilurman yutub shavqi la'lingda qon,  
Fig'onu fig'onu fig'onu fig'on.  
Yuzung to mani zordin aylading  
Nihonu nihonu nihonu nihon.  
Ko'zumga qorong'udir ondin beri  
Jahonu jahonu jahonu jahon.  
Tilarman ko'zung fitnasidin mudom,  
Omonu omonu omonu omon.  
Erur qoshlaring ishq eli qatlig'a,  
Kamonu kamonu kamonu kamon.  
Guli husnungga yetmasun dahrdin  
Xazonu xazonu xazonu xazon.  
Kel, ey sho'x, Feruz ko'ksini qil  
Makonu makonu makonu makon [2;75].*

It should be noted that the words repeated in each byte served to strengthen the expressed content, increase the impact of the thought, and provide melody. The repetition of these words does not bother the reader in the slightest; on the contrary, it leads to the rise of art from line to line, the deepening of the content, and the emphasis on the essence of the verses. The fact that the ghazelle is based on such an impressive repetition from beginning to end testifies to Feruz's great skill as a poet. In the poet's lyrics, the theme of love is sung on high curtains. Feruz manages to express himself on this ancient theme through beautiful poetic arts, allegorical allegories, metaphors. As the saying goes, "Love is an old pain, but every heart renews it," there is no poet left who has not written the theme of love in poetry. But every artist discovers a new side of it, in other words, creates something new at the heart of the tradition. As Feruz sings of love, he writes:

*Ishq bir o'tdurur, nechukkim barq,  
Aylamas shoh bila gadoni farq.  
Tushsa ondin ko'ngulga bir uchqun,  
Kuydurub boshiga solur qaro kun [2;124].*

The poet, who skillfully uses the opportunities of such artistic arts as tanosib (grass - lightning), tazod (king - begger), tashbeh (nechukkim bark), tries to give a difficult, new definition of love and achieves it.

The art of analysis, which means "beautiful proof", is used in Eastern poetry in the unique way in the work of each poet, and plays an important role in the expression of deep meaning in a beautiful artistic form. The following verse by Feruz is a unique example of this art:

*Sayri bog' etsang agar, ey sarvqaddu gulbadan,  
Sarv ayoqingg'a qo'yar bosh, chok etar gulpirahan [2;72].*

That is, when a cypress tree leaves a flower garden for a walk, a lover who is fascinated by its beauty bows at the foot of its cypress tree, and the flower tears its collar out of jealousy of its beauty. In order to prove the idea that "Sweetheart is unique in beauty", the poet uses the art of analysis of the beauty of the face (cypress puts his head on the foot of the flower, tears the neck of the flower), tanosib (garden, cypress, flower) also uses skillfully. This creates the perfect example of art. It can be evidence of an artistic expression of thought.

Or it is in this verse that the poet depicts the unparalleled beauty of the land through the art of allegory. It is said that the land of sweetheart is the sun of the beautiful sky. Grace (latofat) is artistically described as even better:

*Husn avjining xurshididur, ey mohsiymo, orazing,  
Bilkim, latofat ichradur ondin ham a'lo orazing.*

In the next verse, the poet, who skillfully uses the arts such as diagnosis (animation), adjective (pure face), manages to express the idea in a more beautiful way:

*Kun zohir aylab infiol o'ldi shafaq ichra nihon,  
Subhi saodatdin tulu' etgach musaffo orazing [2;53].*

That is, on the morning of bliss, when the pure fast of the lover appears, the day hides in the dawn, embarrassed that it is not so bright. Byte analysis as a whole is a rare example of the art of beautiful proof.

## CONCLUSION

In general, the theme of love, which occupies a leading place in the poetry of Muhammad Rahimkhan Feruz, is characterized by the poet with high artistic skill. The poet tries to portray the traditional images of lover, mistress and rival in a unique way, through which he manages to express ideas of great importance. They manage to give a new spirit to the interpretation of the traditional theme of love.

The theme of love occupies a leading place in Feruz's poems. The study of the interpretation of the theme of love in the poems of the poet shows that they have a unique artistic interpretation of the images of the lover, mistress and rival (rival) in the tradition of our classical literature. The dreams and aspirations of the creator, the riots in the psyche, the inner experiences, the joys and sorrows are expressed through this trinity.

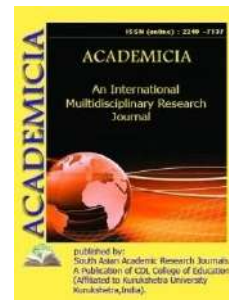
The lover, who is interpreted as an incomparably beautiful in the poet's lyrics, has many moments such as «sweetheart», "moon-faced", "chubby", "fairy", "fay", "peri", "petite", "flower" and "beauty" are described by means of traditional adjectives. The helplessness of the lover, his constant hope for the vision, is vividly reflected in the images of "propeller", "begger", "whacky", "nightingale" used by the poet. In romantic lyrics, the image of a lover walking side by side with a lover is interpreted with such qualities as "gentleman", "other guide", "and stranger".

In his interpretation of the theme of love, the poet not only continues the creative traditions of his predecessors such as Alisher Navoi, Ogahi, and Munis in creating a poetic image, but also clearly demonstrates his individual artistic skills. He makes unique creative experiments on the harmony of poetic form and poetic content. Loading a lot of meaning into a few words can show that a person has mastered the art of expressing an image through unique images. The interpretation of love in Feruz's poetry corresponds to Alisher Navoi's "xoslar ishq" in "Mahsub ul-qulub". Describing the beauty of the world, the poet said in the words of Hazrat Navoi: "A pure eye brings a pure face to a pure face, and a pure heart is aroused by a pure face and with this pure means of mockery, the lover enjoys the true beauty of the lover." In this respect, the poet remained faithful to the traditions of our classical literature and developed them.

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## STUDYING THE SCIENTIFIC AND METHODOLOGICAL BASIS OF SERVITUDE LAW IN REGULATING LAND RELATIONS

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### ABSTRACT

*In this article, the concept, nature, meaning and characteristics of the right to use a land plot, the scientific and legal basis for restriction of land use rights in the republic have not yet been developed and implemented. Therefore, the study, development and implementation of the current situation of restriction of land use are one of the most pressing problems facing the land cadastre and legislation.*

**KEYWORDS:** *Ground Servitude Legal, Restriction Of Land Use Rights, Servitude Agreement, Servitude Legal, Types Of Land Servitude.*

### INTRODUCTION

Efficient use of land at the level of scientific development, ensuring its protection is one of the key factors of economic development.

However, despite the formation of laws and other normative-legal and technical documents adopted during the years of independence, the number of cases of non-compliance with the requirements and rules of land use in our country has not decreased. The current situation is exacerbated by the fact that the current state of land use legislation, in particular land servitude legislation, is unsatisfactory and inadequately regulated, there is a need to improve land legislation, as well as insufficient research on scientific issues related to limited land use rights in Uzbekistan.

Indeed, one of the most pressing issues is the rational and efficient use of land resources, optimal management of land use, improvement of the system of regulation of land relations, especially land servitude and the implementation of the state control system aimed at its legal protection.

In our opinion, in near future (5-10 years) the issues of implementation of the land servitude system and the regulation of relations in the field will remain relevant. Thus, the practical and theoretical study of the relationship with the technical and legal regulation of land servitude, as well as the improvement of relevant legislation is one of the most pressing issues facing scientists today.

The laws and regulations that form the legal basis for the implementation and regulation of land servitude, the history of the implementation of the servitude, the development of our national legislation, as well as theoretical and practical aspects of the application of international and foreign experience in regulation. Limited use of land, scientific and practical aspects of the introduction and regulation of land servitude, as well as issues of their improvement.

The main purpose of this study is to develop a system of servitude types on the example of land users, scientific analysis of existing problems in the limited use of land.

In the face of radical positive changes in Uzbekistan, there is a growing need to regulate limited land use. There is also a need to study the existing problems of limited land use in the country on the basis of international and foreign experience.

The practical significance of this research work is reflected in the fact that scientific and theoretical ideas have studied the procedures, the limited use of land and help to improve the legislation. When a particular need or necessity arises, one or more landowners and land users serve to exercise limited use of another's land.

Hence, a land servitude can be described as a limited use of another's land. It is also important in terms of resolving the inconveniences and conflicts that arise due to the fact that private ownership of land is defined and the benefits are not evenly distributed among individual land users, which encourages the introduction of land servitude.

In general, a servitude is a limited right of another to use a plot of land, ie a limited use of one or more adjacent areas.

Servitude (Latin "servitus", "servitutis" - "dependence", "slavery") - the right to limited use of another's property, the formation and development of which is directly related to private ownership of land. The allotted plot of land will not have all the features necessary for its use. In particular, the lack of water on the plot of land or the lack of access to public roads, and so on. In order for this land to be usable and economically viable, there is a need for limited use by the neighbor.

Land servitudes are divided into several types, such as the servitude of agricultural lands, that is, the servitude of urban lands for cultivation, and the servitude of land given for the construction of buildings. Figure 1 below shows the mechanisms for introducing land servitude.

→	<b>Mechanisms of introduction of land servitude</b>
→	Research and introduction of foreign experience in limited land use in the Republic
→	Theoretical and methodological study of the introduction of land servitude
→	Improving land servitude based on research of legal bases
→	Development of samples of land servitude contract by types of implementation
→	To study the reasons, procedure and factors of termination of the right of land servitude
→	Development of legal procedure and methods of introduction of land servitude
→	Development of the procedure for establishing the rights, tasks, scope and powers of the service bodies for the management, control and dispute resolution of the introduction of land servitude
→	Development of models and samples for the introduction of land servitude and their testing
→	Assumptions in the direction of land servitude, development of scientific and methodological bases for determining the future stages

**Figure 1. Mechanisms for the introduction of land servitude in Uzbekistan.**

- Based on the current legal and technical basis of the easement, the specific features include:
- - the use of another's land is required as a condition for the formation of the land servitude;
- - land servitude usually arises by mutual agreement;
- - the use of another's land plot as a condition for recognition as a land servitude is used incompletely, i.e. in a limited way;
- - land servitude agreement is bilateral or multilateral and can be determined or ruled in court;
- The land servitude agreement is required to be registered by the state authorities.

In addition to the specific features determined by the legal basis of the land servitude, the following important features should be noted, namely:

- The servitude is not limited to certain persons. The conditions of the easement remain the same even if the neighbors or one of them changes, provided that the conditions requiring the formation of the land servitude are maintained.
- in servitudes in agriculture, the landowner or user must fully recognize the limited use of this land plot by a neighbor. However, he will not be obliged to provide financial assistance to his neighbor in the use of his land plot. For example, it does not undertake to allocate an additional separate road or prepare a road for crossing.
- the contract of land servitude is also terminated in case of loss of the bases of activity necessary for existence of the land servitude.

As a result of studying and analyzing the theoretical and methodological bases and normative documents of land allocation for state and public needs in the territory of the administrative district, it is possible to identify priorities for a positive solution to this problem.

The principle of participation of citizens and public organizations in decision-making on land rights in the legislation on the basic principles of land legislation, given in Article 2 [1] of the Land Code of the Republic of Uzbekistan, based on the right to participate in decision-making on the needs of citizens and society we consider it expedient to supplement it with.

Article 35 of the Land Code of the Republic of Uzbekistan stipulates that the state registration of rights to land plots and land transactions may be appealed in court in accordance with Article 16 of the Law of the Republic of Uzbekistan "On State Land Cadastre". It is also desirable to determine.

The grounds for termination as a result of the revocation of the circumstances that were the basis for the establishment of the land servitude as a result of the restriction of the intended use of the land plot in respect of which the servitude was established, can be recognized as a list of standard grounds.

We believe that the implementation of the model easement agreement in the legislation of the Republic of Uzbekistan, along with the efficient use of land, will eliminate various conflicts, save land and generate additional revenue for the state treasury.

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From October 22, 2018 to the present he is the head of the department "Cadastre of buildings and structures" of the Samarkand State Institute of Architecture and Construction. Year of birth: 01.01.1957 Place of birth: Gallaorol district of Jizzakh region.

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In 1980 he graduated from the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Faculty of Land Management. Candidate of Technical Sciences, Associate Professor

**WORK ACTIVITY:**

1975-1980 - Student at the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers

1981-1985 - Assistant of the Department of "Engineering Geodesy" Samarkand State Institute of Architecture and Construction

1985-1988 - Postgraduate student of Moscow Institute of Civil Engineers

1989-1995 - Junior Research Fellow at Samarkand State Institute of Architecture and Construction, Assistant Professor, Department of Engineering Geodesy, Deputy Dean of the Faculty of Construction Technology

1995-1996 - Dean of the Faculty of Construction Technology, Samarkand State Institute of Architecture and Construction

1996-1997 - Acting Head of the Real Estate Cadastre Service of Samarkand Region

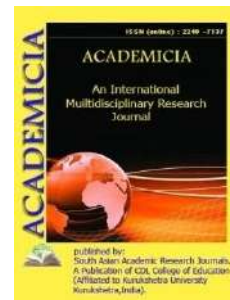
1997-2006 - Head of the Real Estate Cadastre Service of Samarkand region

2006-2008 - Head of the Department of Land Resources and State Cadastre of Samarkand region

2008-2010 - Deputy Head of the State Unitary Enterprise "Ermulkkadastrxizmati" Samarkand region, State Registrar

2010-2018 - Head of the Department of Geodesy, Cartography and Cadastre of Samarkand State Institute of Architecture and Construction

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## APPLYING INEQUALITIES TO CALCULATING LIMITS

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### ABSTRACT

*In this article considered the use of inequalities to find the limits of fairly complex sequences. To this end, proved a few inequalities and with the help of these inequalities calculate limits.*

**KEYWORDS:** *The Limits Of, Sequence, Inequality Harmonic Series, Convergent, Divergent*

### INTRODUCTION

The important role of inequalities is determined by their application in various questions of natural scenic and technology.

The fact is that the values determined from one practical task, or another can be found not exactly, but approximately. In the decision of practical problems have to take into account all error measurements. Moreover, as the improvement of the art and complications problems have to improve and technique measurement values.

In the following tasks, using inequalities, we calculate the limits of fairly complex sequences.

Lemma. For any natural  $n$ , the following inequality holds

$$\frac{1}{n+1} < \ln\left(1 + \frac{1}{n}\right) < \frac{1}{n} \quad (1)$$

Evidence. It is known that a monotonically increasing and bounded variable has a limit. Therefore, there is a limit to the variable  $x_n$ . This limit is denoted by the letter  $e$ , i.e.



$$e = \lim_{n \rightarrow \infty} x_n = \lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n$$

Since the value of  $x_n$  approaches its limit increasing, then  $x_n$  is less than its limit, i.e.

$$x_n = \left(1 + \frac{1}{n}\right)^n < e \quad (2)$$

It is easy to check that  $e < 3$ . We now show that the limit of the variable  $Y_n$  is equal to  $e$ . In fact

$$\lim Y_n = \lim \left(1 + \frac{1}{n}\right)^{n+1} = \lim \left(1 + \frac{1}{n}\right)^n \cdot \left(1 + \frac{1}{n}\right) = e \cdot 1 = e$$

As  $Y_n$  approaches number  $e$  decreasing, that

$$\left(1 + \frac{1}{n}\right)^{n+1} > e \quad (3)$$

Combining inequalities (2) and (3) we get

$$\left(1 + \frac{1}{n}\right)^n > e < \left(1 + \frac{1}{n}\right)^{n+1}$$

Logarithm these inequality in the basis of  $e$ , finally we find

$$n \ln \left(1 + \frac{1}{n}\right) < \ln e = 1 < (n+1) \ln \left(1 + \frac{1}{n}\right), \quad \frac{1}{n+1} < \ln \left(1 + \frac{1}{n}\right) < \frac{1}{n}$$

Lemma proved.

The task of 1. Believing

$$x_1 = 1 + \frac{1}{2}, \quad x_2 = \frac{1}{2} + \frac{1}{3} + \frac{1}{4}, \quad x_3 = \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6},$$

$$x_4 = 1 + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} + \frac{1}{7} + \frac{1}{8}, \quad x_n = \frac{1}{n} + \frac{1}{n+1} + \frac{1}{n+1} + \frac{1}{n+2} + \dots + \frac{1}{2n},$$

find  $\lim_{n \rightarrow \infty} x_n$ .

The solution. Replacing  $n$  by  $n-1$  in the first part of inequality (1), we get

$$\frac{1}{n} < \ln \left(1 + \frac{1}{n-1}\right) = \ln \frac{n}{n-1}$$

From this inequality and the second part of inequality (1) it follows that

$$\ln \frac{n+1}{n} < \frac{1}{n} < \ln \frac{n}{n-1}$$

Now, using inequalities (4), we write inequalities

$$\ln \frac{n+1}{n} < \frac{1}{n} < \ln \frac{n}{n-1},$$

$$\ln \frac{n+2}{n+1} < \frac{1}{n+1} < \ln \frac{n+1}{n},$$

$$\ln \frac{n+3}{n+2} < \frac{1}{n+2} < \ln \frac{n+2}{n+1},$$

.....

$$\ln \frac{2n+1}{2n} < \frac{1}{2n} < \ln \frac{2n}{2n-1}$$

Adding then and taking into account that the sum of logarithms is equal to the logarithm of the product, we get

$$\begin{aligned} \ln \frac{(n+1)(n+2)(n+3) \dots (2n+1)}{n(n+1)(n+2) \dots 2n} &< \frac{1}{n} + \frac{1}{n+1} + \dots + \frac{1}{2n} < \\ &< \ln \frac{n(n+1)(n+2) \dots 2n}{(n-1)n(n+1) \dots (2n-1)} \end{aligned}$$

i. e.

$$\ln \frac{2n+1}{n} < \frac{1}{n} + \frac{1}{n+1} + \dots + \frac{1}{1n} < \ln \frac{2n}{n-1} \quad (5)$$

Because

$$\frac{2n+1}{n} = 2 + \frac{1}{n}, \quad \text{that}$$

$$\lim_{n \rightarrow \infty} \ln \frac{2n+1}{n} = \lim_{n \rightarrow \infty} \ln \left( 2 + \frac{1}{n} \right) = \ln 2$$

Exactly the same from

$$\frac{2n}{n-1} = 2 + \frac{2}{n-1} \quad \text{that}$$

$$\lim_{n \rightarrow \infty} \ln \frac{2n}{n-1} = \ln 2$$

So, the extreme members of inequality (5) have the same limits. Consequently, the middle term has the same limit, i.e.

$$\lim_{n \rightarrow \infty} \left( \frac{1}{n} + \frac{1}{n+1} + \dots + \frac{1}{2n} \right) = \lim_{n \rightarrow \infty} x_n = \ln 2$$

The task of 2. Putting  $z_1 = 1$ ,  $z_2 = 1 - \frac{1}{2}$ ,  $z_3 = 1 - \frac{1}{2} + \frac{1}{3}$ , ...,  $z_n = 1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \dots + \frac{1}{5} - \frac{1}{6} + \dots + (-1)^{n-1} \frac{1}{n}$ , calculate  $\lim_{n \rightarrow \infty} z_n$ .

The solution. we have

$$\begin{aligned} z_{2n} &= 1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \frac{1}{5} - \frac{1}{6} + \dots + \frac{1}{2n-1} - \frac{1}{2n} = \left( 1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} + \dots + \frac{1}{2n-1} + \frac{1}{2n} \right) - \\ &2 \left( \frac{1}{2} + \frac{1}{4} + \frac{1}{6} + \dots + \frac{1}{2n} \right) = \left( 1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} + \dots + \frac{1}{2n-1} + \frac{1}{2n} \right) - \left( 1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n} \right) = \\ &\frac{1}{n+1} + \frac{1}{n+2} + \dots + \frac{1}{2n} \end{aligned}$$

In the previous task we put

$$x_n = \frac{1}{n} + \frac{1}{n+1} + \dots + \frac{1}{2n}$$

Consequently,  $z_{2n} = x_n - \frac{1}{n}$ . But  $\lim_{n \rightarrow \infty} x_n = \ln 2$ . In this way,

$$\lim_{n \rightarrow \infty} z_{2n} = \lim_{n \rightarrow \infty} \left( z_n - \frac{1}{n} \right) = \ln 2$$

Note also, that  $z_{2n+1} = z_{2n} + \frac{1}{2n+1}$ , and hence  $\lim_{n \rightarrow \infty} z_{2n+1} = \lim_{n \rightarrow \infty} \left( z_{2n} + \frac{1}{2n+1} \right) = \ln 2$

So,  $\lim_{n \rightarrow \infty} z_n = \ln 2$ .

The task of 3.

Series

$$1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{n} + \dots$$

is called harmonic series. Prove that harmonic series diverges.

The solution. according to inequality (1)

$$\frac{1}{n} > \ln \frac{n+1}{n}$$

Assuming  $n = 1, 2, 3, \dots, n$ , we write  $n$  inequalities:

$$1 > \ln \frac{2}{1},$$

$$\frac{1}{2} > \ln \frac{3}{2},$$

$$\frac{1}{3} > \ln \frac{4}{3},$$

.....

$$\frac{1}{n} > \ln \frac{n+1}{n}$$

Adding them, we get

$$x_n = 1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n} > \ln \frac{2 \cdot 3 \cdot 4 \dots (n+1)}{1 \cdot 2 \cdot 3 \dots n} = \ln(n+1)$$

From this inequality it follows that  $\lim_{n \rightarrow \infty} x_n \geq \lim_{n \rightarrow \infty} \ln(n+1) = \infty$

Therefore, the harmonic series diverges.

The task of 4. Find limit

$$\lim_{n \rightarrow \infty} \frac{1 + 2^\alpha + 3^\alpha + \dots + n^\alpha}{n^{1+\alpha}}, \quad \alpha > 0$$

The solution. we first prove inequality

$$\frac{n^{\alpha+1}}{\alpha+1} < 1 + 2^\alpha + 3^\alpha + \dots + n^\alpha < \frac{(n+1)^{\alpha+1}}{\alpha+1}, \quad \alpha > 0$$

Since  $\alpha > 0$ , then  $\alpha+1 > 1$  and therefore

$$\left(1 + \frac{1}{n}\right)^{1+\alpha} > 1 + \frac{1+\alpha}{n},$$

$$\left(1 - \frac{1}{n}\right)^{1+\alpha} > 1 - \frac{1+\alpha}{n}$$

Multiplying these inequalities by

$n^{1+\alpha}$  we get

$$(n+1)^{1+\alpha} > n^{1+\alpha} + (1+\alpha)n^\alpha,$$

$$(n+1)^{1+\alpha} > n^{1+\alpha} - (1+\alpha)n^\alpha,$$

From these inequalities it follows that

$$\frac{n^{1+\alpha} - (n-1)^{1+\alpha}}{1+\alpha} < n^\alpha < \frac{(n+1)^{1+\alpha} - n^{1+\alpha}}{1+\alpha}.$$

We write these inequalities at values of  $n = 1, 2, 3, \dots, n$ :

$$\begin{aligned} \frac{1}{1+\alpha} < 1 < \frac{2^{1+\alpha} - 1}{1+\alpha}, \\ \frac{2^{1+\alpha} - 1}{1+\alpha} < 2^\alpha < \frac{3^{1+\alpha} - 2^{1+\alpha}}{1+\alpha}, \\ \dots\dots\dots \\ \frac{n^{1+\alpha} - (n-1)^{1+\alpha}}{1+\alpha} < n^\alpha < \frac{(n+1)^{1+\alpha} - n^{1+\alpha}}{1+\alpha} \end{aligned}$$

Adding them we get

$$\frac{1}{1+\alpha} < 1 + 2^\alpha + 3^\alpha + \dots + n^\alpha < \frac{(n+1)^{1+\alpha}}{1+\alpha} < \frac{(n+1)^{1+\alpha}}{1+\alpha}$$

From here

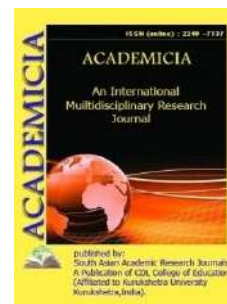
$$\frac{1}{1+\alpha} < \frac{1 + 2^\alpha + 3^\alpha + \dots + n^\alpha}{n^{1+\alpha}} < \frac{\left(1 + \frac{1}{n}\right)^{1+\alpha}}{1+\alpha}$$

The last part of the last inequalities is the constant number  $\frac{1}{1+\alpha}$ , and the right side tends to the limit equal to  $\frac{1}{1+\alpha}$ , when  $n$  tends to infinity. Hence, the middle part of the inequalities tends to the same limit, i.e.

$$\lim_{n \rightarrow \infty} \frac{1 + 2^\alpha + 3^\alpha + \dots + n^\alpha}{n^{1+\alpha}} = \frac{1}{1+\alpha}$$

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## THE ROLE OF NATIONAL AND RELATIVE PEOPLE'S POETRY IN THE FORMATION OF RAUF PARFI'S LITERARY AND AESTHETIC VIEWS

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### ABSTRACT

*This article deals with the work of Rauf Parfi. In particular, the poetry of national and relative peoples, which was the basis for the formation of his literary and aesthetic views, is analyzed. In order to look to the future of our poetry, we involuntarily refer to his personality and poetry, to his extraordinary creations. Rauf Parfi's personality and poetry are extraordinarily unique and captivating. He was humble and humble, a man and a dervish, a poor man and a poor man, a gentleman and a wise man, a man of truth and courage. Anyone who does not understand Navoi does not know or understand his people today. As an ordinary poet, I say, is not the infinite sin of not understanding Navoi great? Isn't that a big mistake? [5.78-p.].*

**KEYWORDS:** *Literary-Aesthetic View, Theme, Idea Style, Research, Interpretation, Analysis*

### INTRODUCTION

*...there is no poet, there is poetry.*

**Rauf PARFI**

"One who understands both worlds may not understand the third world, poetry," said one scholar. There are reasons for this, of course. Poetry, unlike both worlds, has its own rules, forms, and methods of expression. They enchant, attract, delight, excite. He convinces them of his wisdom, says Shukur Qurbon.



They come to the world in search of truth, valued by love. They live with the forgiveness of the afflictions and the afflictions of the heart. Until the Day of Judgment, man's destiny will be beautiful, burning, pure, and adorned with words. It is not in vain that it is said, "There is magic in words and wisdom in poetry." Indeed, the address of humanity's example and lesson, hope and trust, is also approached through the enlightenment of poetry. [Page 5.6].

The poet Rauf Parfi Ozturk (Tursun Parpiyev), who entered the literature in the second quarter of the last century with bold, unique steps, has a bright place in Uzbek literature with his unique poetry and translations. In order to look to the future of our poetry, we involuntarily refer to his personality and poetry, to his extraordinary creations. Rauf Parfi's personality and poetry are extraordinarily unique and captivating. He was humble and humble, a man and a dervish, a poor man and a poor man, a gentleman and a wise man, a man of truth and courage. It is important that a person burns, lives, devotes himself to the word - poetry to the extent that he worships, loses, and finds, accordingly, arouses admiration, respect, and love. to poetry, to this poet. Rauf Parfi is a schoolboy poet who has had a profoundly positive effect on his peers and even some of his teachers, especially those who followed this path with enthusiasm and showed new passages to the creators they considered to be destiny, enriching the poetic landscape and addresses. In order to look to the future of our poetry, we involuntarily refer to his personality and poetry, to his extraordinary creations. In short, the understanding and discovery of this poetry is in its infancy. Rauf Parfini's research and development can be traced back to the development of Uzbek literature and poetry, the retreats from our own rivers due to the social events of the last two centuries, and various other influences.

Rauf Parfi's first steps were taken with the white blessing of his teacher, poet and literary critic Askad Mukhtar. An article published in the 1966 issue of Sharq Yulduzi under the heading "White Road" praised the poet's work.

"I think Rauf Parfi started singing in a voice that I don't think anyone else has. Such an event is very precious for poetry. From the very beginning of his work, such a poet begins to add a new symbol to poetry, a fresh breath...

Rauf Parfi began to sing in a voice unlike anyone else. This is a difficult creative process. But in Rauf's work, this difficulty is not felt, it is as smooth, natural, sincere as if it were easy to move. There is no declarative, no exhortation, no illustration, no didactic nudity in these poems. They are born out of the poet's world of pleasure. If the world expands and waves, if it is enriched with human passion and civic sense, Rauf Parfi will undoubtedly become a sensitive poet".

We have seen many cases of real talent being influenced by the environment and the social environment, even if they live only by their own laws. Attitudes toward Rauf Parfi and his work, who did not want to submit much to the demands of socialist realism, changed radically.

Rauf Parfi drew good conclusions about the position of poetic forms in poetry and did research on poetic forms such as sonnets, rondel, tanka, hokku, and they became experiments.

In the sonnet, which is mainly devoted to dedication, Rauf Parfi continues this tradition not only to the beloved, but also to the Motherland (three sonnets "Homeland", three sonnets "Pain"), classics and historical figures "Beethoven", three sonnet ("Michelangelo's love", "Alexander Ulyanov"), great artists and famous characters they create (three sonnets "Hamlet", "Chingiz Aytmatov") and their devotion to such sacred people and ideals reflected. The poet's sonnets

were highly appreciated by A. Mukhtor (his sonnets in "Return" were "artistically designed"), N. Rakhimjanov ("Hamlet").

Rondels also have a special place in the poet's work. Rauf Parfi enriched our poetry with a new form with his Rondels such as "Goodbye...", "I am transient...", "It's a sad night..."

We see that Rauf Parfi adapted his poems in the form of tanks to the weight of a finger:

*Sen-la ko 'rishmog'im kerak, Albatta – 11 hijo*

*Ne uchun? Bilmayman. Albatta kerak – 11 hijo*

*Taxminan, men senga – dunyo qorong'u, - 11 hijo*

*Dunyo bir bedarddir – kabi so 'zlarni – 11 hijo*

*Aytmog'im uchun ham keraksan menga – 11 hijo*

Not only in Rauf Parfi's "tank" and trinity, but in most of his poems, the conclusion is left to the reader. Not only do our poets not know the requirements of the poetic form, but they are also very accustomed to concluding poems...

In the discussion of the spiritual world of the lyrical hero Rauf Parfi (referring to the debate covered in "UzAS" in 1981-1982), a critic said that it is necessary to pay attention to his art, and therefore to analyze the poems. did not throw.

In addition to the above analysis, Rauf Parfi's free-flowing poems are analyzed separately, and the similarity of the poet's and Nazim Khikmat's styles is discussed:

Nozim Khikmat:

*Otliqlar g'oyib bo'lar*

*quyosh botar yerda...*

*Otliqlar, otliqlar, qizil otliqlar,*

*Otliqlari shamol qanotlilar...*

*Otlari shamol qanot...*

*Otlari shamol...*

*Otlari...*

*Ot...*

By Rauf Parfi:

*Ikki rang: Oq va qora*

*Haqiqat va yolg'on.*

*ey jafokash haqiqat.*

*Bu san'at,*

*san'at!*

*san...*

He also quoted A. Mukhtor as saying that in the environment of R. Parfi's research there are such painful, rebellious and eloquent poets as Nazim Hikmat, Oybek, Garcia Lorca, Ghafur Ghulam, Pablo Neruda, Andrey Voznesensky, Mahmud Darvesh, Mirtemir. meditates on the fact that the wide sea, which arises from many streams, drinks water from the ocean. B. Akramov's article "The Artist of the Spirit" [pp. 3.48-51] analyzes the poet's poems in terms of ideas and peculiarities. The analysis is divided into two:

1. The motivation of poetry, the fate of the poet
2. Orifona punctuation marks

The poems, which reflect the creative spirit in them, reveal the harmony and influence of the works of Khazrat Navoi:

*Rom etmas, hech narsa, sahrodir ko 'ngil,*

*Osmonlarga faqat afsona so 'zlar*

*Malomat toshida ochilgan bir gul,*

*Dam o 'tmas qular ul, dam o 'tmas bo 'zlar.*

Surprisingly, Hazrat Navoi figuratively called his lyrical hero, the poet, the sage, the lover, the rind, the governor, the dervish, the nobleman, a "nightingale of reproach." Rauf Parfi, following the words of a very responsible person, such as "You are in a hurry to recite a poem only in the blessed language of the great Alisher", encourages the poet's metaphor and encourages the poet's unique heart in endurance and devotion. a flower that opens from a stone. ”

... The rebellious spirit is sometimes expressed in a hopeless-sad tone (this is a bright hope for poetry!), Which is reminiscent of the involuntary Navoi line. "People's despair has brought joy to my heart." This strange contradiction has a special tone in Rauf Parfi:

*Hechnarsayupatmas, shoir, hechnarsa,*

*G 'aribbaxtiyorlikendiyupatar.*

*ehtimol, nohaqman, ehtimolhaqman,*

*Lekin men muqaddas so 'zni izlarman.*

In the article "Symbols of the Spiritual Creation" B. Akramov introduces the poet's unique creative world. In the article he took account into the followings:

- Specific parables of the poet;
- Experiences of the lyrical hero;
- Symbols drawn on the word board;
- Analysis of poems

The attitude to the poet's work is reflected in the articles published about him in the press.

Based on the views of Rauf Parfi, a great representative of the sonnet writing of the 60s and 80s, academicians B. Nazarov and S. Mamajonov, the concepts of truth and justice at the heart of the poet's poetry It can be acknowledged that the genre of poetry of other nations is elevated on the

basis of national poetry. Rauf Parfi's works include "Dilorom's Eyes", "Michelangelo's Love", "Hamlet", "Love", "Mother Tongue", "Abdurauf Fitrat", "Abdulhamid Sulaymon Cholpon", "Mother Turkistan", "Sunbula", "Pain", "Black Wall", "Siyovush", "Passenger", "Without You", "Missing God", "The Last Poem of Thakur", "A Letter to the World, My Mother" and analyzes some of them. In particular, the analysis of the series of sonnets "Mother Turkiston" leads to the following conclusions:

"The patriotic poet Rauf Parfi has managed to place the nation's hundred-year past in one work. Symbols, through metaphors, promoted the most dangerous, most rebellious ideas in an environment of an unjust system. From the point of view of poetry, he expanded the possibilities of the sonnet and the series of sonnets by combining three epochs (late 19th century, early 20th century and 70s). Each of the sonnets in the category has three tenses. They became so intertwined that the three sonnets became a single work [p. 10.106].

Commenting on the aesthetics, images and essence of the poet, N. Rakhimjanov said:

- The poet's point of view in the evaluation of the work of art in determining the artistic aesthetic function of the word in the poem;
- The phenomenon of freedom is artistically studied in the aesthetics of Rauf Parfi at the level of socio-philosophical category;
- Justification of truth and truth, rebellion against it, hypocrisy, oppression, etc., are the essence of Rauf Parfi's aesthetics;
- The fact that the artistic word in the aesthetics of Rauf Parfi has brought a new wave of realism to the direction of figurative thinking, based on fantasy, in favor of a brutal truth;
- Love in the poet's interpretation is an unattainable love in the form of a dream;
- The word itself, the eye of truth, is the essence of Rauf Parfi's poetry.

N. Rakhimjanov in the article "Factors of formation of literary and aesthetic views of the poet" from the book "Independence and modern literature" gradually analyzes the work of Rauf Parfi and discusses in detail the factors of its formation. From the first exercises of the poet at the age of 16-17 to the last years of his life, he focuses on the issue of poetic aesthetic ideals in his poems. The poet's spiritual world focuses on his "burning words":

"Do poets now live for scientists alone? If no student knows what you're talking about, isn't that a false life, a false creation? Who benefits from it? After all no one can enjoy ?! Well, do we know Navoi? We need to start the culture of understanding Navoi from kindergarten. Anyone who does not understand Navoi does not know or understand his people today. As an ordinary poet, I say, is not the infinite sin of not understanding Navoi great? Isn't that a big mistake? [5.78-p.].

O. Oltinbek notes that in the article "Literary and aesthetic views of Rauf Parfi" published articles on the literary and aesthetic views of Rauf Parfi, although the views of previous critics were published, they did not cover the topic in full. N. Rakhimjanov's articles are based on the poet's article, literary dialogue and preface, and in his article he uses the poet's poetry as the source. The article discusses the most frequently repeated word in Rauf Parfi's poetry - the WORD, a remarkable image in his creative development - about the bird, the influence of

inspiration on the poet, etc. reaches in particular, the image of a bird did not rise to the level of an image in the poet's first exercises (50s), but he dreamed of seeing a resemblance to it, and later (in the 60s) wrote a poem to the level of a bird's artistic image. that he rose and approached the poet, that he sang hopefully with a sorrowful heart, though unknown, and that in a poem written in 1994, the bird began to sing bitterly, though it remains unknown. In a poem written in the last years of Rauf Parfi's life:

*Yo 'q, men qushman, chala so 'yilgan qushman,*

*Aytilmagan bir so 'zim bor bog 'zimda.*

By saying that, it is thought that the poet himself became a bird. In his article, O. Oltinbek enriched his previous research by analyzing the literary and aesthetic views of the poet.

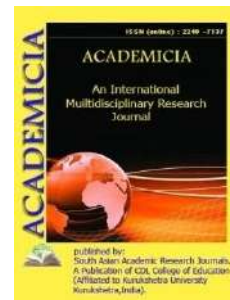
The results of research show that the phenomenon of the poet, his analysis, has always been in the spotlight and recognition of the literary community. In the study of Rauf Parfi's work, the articles and reviews written about the poet in his early speeches, in particular, the articles and reviews of A. Mukhtor and I. Khaqqul, play an important role. Although the first and later articles show a two-pronged approach to the poet's work, Rauf Parfi has a special place in the literature of the period.

The period of independence was a time of opening new horizons for the study of the poet's work, as well as a period of appreciation for his work. From the first days of independence, Rauf Parfi's work was recognized and awarded the International Mahmoud Kashgari Prize. The researches of such scholars as N.Rahimjanov, B.Akramov, O.Oltinbek on the art of the poet's work play an important role in this period. His literary and aesthetic views are studied in N. Rakhimjanov's articles "Conversation with words and colors", "Edges of mastery", O. Oltinbek's articles "Literary and aesthetic views of Rauf Parfi". There is a beautiful analysis of the poet's work based on the demands of art.

The study of Rauf Parfi's work serves as a basis not only for the individual poet, but also for the renewal of Uzbek poetry, which began in the 1960y, and for its current horizons.

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## SCIENCE AND EDUCATION IN THE RENEWED HISTORY OF UZBEKISTAN: ANALYSIS, AND STRATEGIC GOALS

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### ABSTRACT

*The article highlights the systematic changes in recent years in the field of science and education, including new initiatives in science, preschool, secondary specialized, higher education. It also contains views on the issues put forward by the President of the Republic of Uzbekistan to the Oliy Majlis Yanuar 24 2020 y.*

**KEYWORDS:** Science, Academy Of Sciences, Education, Preschool Education, Higher And Secondary Specialized Education, Higher Education, Statement, Decision, Decree, Kindergarten, Lyceum, College, Institution, University, Reform.

### INTRODUCTION

#### Relevance of the topic:

The rapid changes taking place in our society, especially the large-scale reforms in science and education, play an important role in ensuring the socio-economic development of our country. The upbringing of the younger generation, their level of knowledge, spiritual and physical maturity is one of the priorities in the development of our state. In particular, the near-term development of this industry is scientifically and theoretically substantiated in the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021. In particular, it is important to bring up young people who are physically healthy, mentally and intellectually developed, independent-minded, loyal to the Fatherland, with a strong outlook on life, and increase their social activity.

For several years now, the Addresses of the President of our country Shavkat Mirziyoyev to the Oliy Majlis have put forward important initiatives for the accelerated development of science and education, as well as all other spheres, and put forward many proposals for their solution. The economy and development of any country is based primarily on science, science and modern technologies. Therefore, based on numerous discussions and international experience in terms of



building an economy based on digital technologies, enhancing the prestige and prestige of science in the life of the state and society, and taking into account the views of the general public, 2020 is the Year of Science and Digital Economy in Uzbekistan. was announced. This will be a solid foundation for the rapid development of science and education in the future.

2. Research methods: Accelerated reforms in science and education, including new initiatives and systemic changes in the development of science in the "Renewing Uzbekistan" on the basis of comparative, historical comparisons, methods of historical analysis and in the Address of the President of the Republic of Uzbekistan to the Oliy Majlis on January 24, 2020 the conceptual issues raised were analyzed.

3. Research results: In the new history of our country, attention is paid to the history of the President's Addresses. The Address dated December 28, 2018 addresses the issues of strengthening the role of academic science in the development of the state and society, development of research and innovation, implementation of advanced scientific achievements, enhancing the prestige of local scientific schools and enhancing the country's scientific potential internationally. special attention was paid. A lot has been done in the last two or three years, a lot of progress has been made in this regard. It is noteworthy that the Decree of the President of the Republic of Uzbekistan "On approval of full members of the Academy of Sciences of the Republic of Uzbekistan" (December 29, 2017) [1].

As noted in the Address of the President of the country to the Oliy Majlis on December 28, 2018, the last elections for the full membership of the Academy of Sciences were held in 1995. Since then, the issue has been neglected, prompting new reforms in this area. It was no secret that the number of academics has more than halved over the years for various objective and subjective reasons. Even by December 2017, there were only 63 full members left in the academy.

As a result of special attention to the field, in a short period of time a series of targeted measures aimed at further improving the regulatory framework and funding mechanisms, strengthening the material and technical capacity and increasing efficiency have been consistently implemented. As a result, 9 research institutions were returned to the Academy of Sciences, a number of scientific organizations were reorganized, 3 departments of the Academy of Sciences and the Navoi branch were established, and the Public Council for the Modern History of Uzbekistan was established.

The head of state adopted the "Comprehensive Program of Measures to Strengthen the Infrastructure of Research Institutions and Develop Innovative Activities for 2017-2021" and stressed that systematic work is being done in this area. The Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 includes the promotion of research and innovation as the most important areas of development of science and education, the creation of effective mechanisms for the implementation of science and innovation, higher education and research. Serious attention is paid to the establishment of specialized scientific and experimental laboratories, high-tech centers and technoparks at the institutes.

In particular, by 2018, after a long break of the last 22 years, the most suitable scientists were selected on a competitive basis to confirm their academic status in the Academy of Sciences. In accordance with the Presidential Decree, 32 new full members of the Academy of Sciences have been approved on the recommendation of full members who are active in the development of science, education, culture and arts, sports. From January 1, 2018, full members of the Academy of Sciences of the Republic of Uzbekistan and former members of the Academy of Agricultural Sciences of Uzbekistan are paid 12 times the minimum wage, corresponding members of the Academy of Agricultural Sciences of Uzbekistan are paid 8 times the minimum wage [3]. It is noteworthy that these fees are exempt from personal income tax.

Particular attention has been paid to the ongoing work on reforming the preschool education system in modern Uzbekistan. This is confirmed by the following examples. That is, by 2019, the number of kindergartens in our country increased by 1,400 to 6,367. In this regard, it should be noted that in recent years, a number of important decrees and decisions have been adopted, which serve to raise the education system to a whole new level. In accordance with the decree of the President of the Republic of Uzbekistan dated September 30, 2017, the Ministry of Preschool Education was established for the first time in our country. In a short period of time, more than 980 kindergartens have been built and put into operation, where educational work is carried out using the most advanced methods and tools. As the head of our state noted, "The number of private pre-school educational institutions built on the basis of public-private partnership has doubled over the past year and now stands at 568. Practical work has begun to open another 1,000 such kindergartens."

As a result of the reforms launched in the Address of the President to the Oliy Majlis on January 24, 2020, 5,722 public and private family kindergartens were established in 2019. It was noted that the coverage of our children with preschool education has increased from 38% to 52% in one year [4].

Another important reform in the field of education over the past 3 years is the radical changes in the areas of general secondary as well as secondary special, vocational education. In this regard, a comprehensive analysis of the results of the transition to 12 years of compulsory education has shown that the current system of secondary special, vocational education is not responsive to today's students and needs to be radically reformed. In order to systematically address the existing problems in this area, to radically improve the system of vocational education based on the experience of advanced foreign countries, the Presidential Decree of January 25, 2018 "On measures to radically improve the system of general secondary, secondary special and vocational education." accepted.

If we look at the numbers, in 2019, 4 Presidential schools and 3 creative schools with a completely new content and form were launched. As of January 1, 2019, more than 5.2 million students study in 9.7 thousand schools in the country, more than 450 thousand employees work in the educational and management process. Special attention was paid to the issues of their material life and social status in society. In particular, President Shavkat Mirziyoyev at a meeting on July 17, 2018 on the reform and development of the general secondary education system stressed the need to raise the social status of teachers. The world experience confirms

this, the President said. For example, in countries such as South Korea, Japan, Germany, and Canada, a teacher's salary is 1.5 times higher than the national average. In our country, the salary of a teacher is only 79% of the average average salary [4].

However, as a result of radical reforms in the industry in our country over the past two and a half years, important reforms in this area have been reflected in the following:

The salaries of primary and secondary school teachers have been equalized. In this sense, today the creation of all facilities for teachers, the provision of housing for teachers, the allocation of car loans to them has become a product of great attention. According to the resolution, a part of affordable housing built annually in rural and urban areas on standard projects is provided to teachers working in the public education system for a period of 20 years, with a grace period of 3 years and the first 5 years at 7% per annum. of particular concern is the issuance of a mortgage loan with an initial assessment rate of 10 per cent in the amount of the refinancing rate.

From September 1, 2018, the salaries of more than 450,000 teachers and administrators working in schools have been increased. A special state award was established for them. The practice of involving teachers in various other economic and compulsory activities and conducting unfounded inspections in schools has been curtailed. In the last 2 years, about 13,000 male teachers have returned to schools, and the full payment of pensions to working retired teachers has been introduced.

In the new era of reforms, the next stage of the education system - higher education - is also being modernized. For example, in 2017-2019, extensive work was carried out in our country to create a system of higher education that meets international standards. In today's era of rapid changes in the field of higher education, in the context of increasing attention to the training of qualified personnel, the period itself requires an increase in the level of admission (quota) of higher education. If we look at the figures, including the data of the State Statistics Committee, until 2017, 163 out of every 1,000 people aged 25 and older in the country had higher education. Compared to the total population, only 12% of the population had higher education. According to the State Investment Committee, there were 18.5 million people with secondary, secondary special and higher education in Uzbekistan. These indicators indicate that the coverage of higher education in the country is still narrow [5].

Analyzes and studies have shown that in our country today, the majority of the population, who have fallen into the ranks of unorganized youth without access to education and employment, make up the majority of those with higher education. In our opinion, the main reason for this problem is, first of all, the low level of coverage of young people in different stages and forms of education, especially in higher education.

If we compare the level of enrollment of students in higher education institutions in our country until 2018 with the Central Asian republics, we will see that so far our indicators are much lower than in these countries. For example, if we take into account that at that time Kazakhstan had a population of more than 17 million, there were 122 universities with more than 496,000 students. Kyrgyzstan has a population of more than 7 million and more than 230,000 students study at 56

universities in the country. In Uzbekistan, as of September 1, 2018, for a population of more than 32 million, 81 higher education institutions, 15 regional branches, 260,905 students studied in 7 branches of foreign universities [6]. These figures show that the coverage of higher education is much lower than in neighboring countries. This shows the need to involve more people in education today, especially young people. Only when a citizen has a specialty can he or she think about a job. It goes without saying that only a citizen with a secondary special education or no education will have limited access to employment.

As noted in the Address of President Shavkat Mirziyoyev to the Oliy Majlis on January 24, 2020, 19 new higher education institutions were opened in 2019, including branches of 9 prestigious foreign universities, for the development of higher education. In cooperation with leading foreign universities, training on 141 joint educational programs has been launched. A total of 146,500 students were admitted to higher education institutions, or 2 times more than in 2016.

Over the past three years, the country has made significant progress in this area. If we look at the numbers, in 2018 alone, a total of 13 new higher education institutions in the country, including the International University of Tourism "Silk Road" in Samarkand, the Almalyk branch of the Russian Federal State Autonomous University "National Technological Research University", Tashkent, South Korea. A branch of Puchon University, a branch of Amiti University in India and a number of private higher education institutions have been launched. In accordance with the Decree of the Head of State, the El-Yurt Umidi Fund has been established under the Cabinet of Ministers. In 2018, for the first time, a national ranking of higher education institutions was created on the basis of international experience, and the processes of education and research were analyzed.

For three years, about a dozen higher education institutions and their branches have been established in our country. For example, Chirchik State Pedagogical Institute of Tashkent region, Almalyk branch of Tashkent State Technical University, Termez branch of Tashkent State Technical University, Termez branch of Tashkent State Pedagogical University, Denau branch of Termez State University, Termez branch of Tashkent Medical Academy, Termez branch of Tashkent State Agrarian University, Uzbekistan Fergana regional branch of the State Institute of Arts and Culture. Among them is a branch of the Moscow Institute of Steel and Alloys in Almalyk and Webster University in Tashkent. Due to the demand and needs in the real sector of the economy, part-time and evening departments have been established in higher education institutions. In addition, the Samarkand Institute of Veterinary Medicine, the University of Journalism and Mass Communications of Uzbekistan were established. These efforts are playing an important role in expanding the scope of higher education and increasing the number of graduates.

In this direction, for the first time since 2019, a system of simultaneous application of applicants to 3 universities was introduced, the admission process in 2018 and 2019 was organized in a transparent and fair manner, resulting in a wide range of applicants who could not enter for several years. created opportunities.

But we must all sincerely feel that we have a huge task ahead of us in this regard. As noted in the Address of the President to the Oliy Majlis on January 24, 2020, the coverage of the admission quota of higher education institutions has been increased to 25% compared to graduates of secondary schools and in 2021 to 50.60%. However, this figure is 74% in Russia and 96% in the Republic of Korea.

In the future, special grants will be allocated for girls. The Women's Committee was tasked with developing criteria for the selection and selection of candidates for training on the basis of these grants. The President emphasized that the focus is on optimizing the entrance exams to higher education institutions, simplifying the admission process, and getting real knowledge and education in higher education institutions. It is also necessary to create a national test system for assessing knowledge of the mother tongue. If young people take the exam at any time and receive the appropriate certificate, there will be no need to retake the test in their native language at the time of enrollment. Higher education standards will be improved on the basis of foreign experience, educational directions and disciplines will be reconsidered. The number of non-specialty subjects will be halved,"the President said in his address.

Clearly defining the priorities in the field of science for the country is to develop several priorities of science each year. In particular, it was noted that this year it is necessary to intensify fundamental and applied research in mathematics, chemistry, biology and geology, to create all conditions for scientists, to radically reconsider the mechanism of allocating targeted grants for fundamental and innovative research in science. Every higher education and research institution must establish cooperation with prestigious foreign universities and research centers. This year, the President noted that the El-Yurt Umidi Foundation should send more than 700 scientists, professors and teachers abroad for research and training [7].

To address these issues in the country, the program of integrated development of higher education in 2017-2021 sets target parameters for training. According to him, by 2021 the quotas will be 18.4 in the humanitarian sphere, 3.5 in the social sphere, 3.5 in the economy and law, 32.8 in the industrial and technical spheres, 38.5 in agriculture and water management, health and social security. 25.7 percent in the service sector and 39.7 percent in the services sector. The gradual implementation of this work by 2021 has been identified as a strategic goal [8].

As a strategic direction of the industry from 2020 in 6 areas of pedagogical education, the duration of training is set at 3 years, 10 higher education institutions will move to self-financing. Science grants will be doubled in the future, and Aiti Praks with modern infrastructure will be built in the capital Tashkent and regional centers. To implement these tasks, it is planned to develop a program "Digital Uzbekistan -30".

#### 4. CONCLUSIONS:

reforms and innovations, opportunities for scientists and researchers, aspiring students and youth in the field of science and education are expanding. In particular, the transition to various forms of science and education, radical reform of preschool education, fairness and transparency in the admission of applicants in higher education, the possibility of self-determination of admission quotas in universities, expanding the scope of students, the introduction of modern digital



technologies. is the result of new reforms. The most important thing is that the work carried out in all spheres of science and education is being reformed on the basis of critical analysis, strict discipline, which means that our society has entered a new era of development..

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## ABOUT INTERNATIONAL ECONOMIC AND SOCIAL RELATIONS BETWEEN UZBEKISTAN AND CHINA

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### ABSTRACT

*The article discusses modern trends in the development of integration processes and trade and economic relations in Central Asia in the context of the Great Silk Road, the dynamics of market services and prospects for deepening economic cooperation. Particular attention is paid to the development of foreign economic activity of the Republic of Uzbekistan, the efforts of the leadership to expand economic relations with China. Uzbekistan's foreign policy is aimed at developing good neighborly relations, at weakening economic cooperation with all countries of the Central Asian region.*

**KEYWORDS:** *Republic Of Uzbekistan, China, Trade And Economic Relations, Economic Cooperation, The Silk Road, Foreign Trade, Integration Ties, Strategic Partnership, Market Services.*

### INTRODUCTION

The strengthening of mutual understanding between peoples, the mutual rapprochement and enrichment of cultures and civilizations on this basis, the promotion of a deep understanding and respect for the traditions and customs of people - are among the most important missions of any state and society. Today, in this interdependent world there is not a single country, where representatives of only one nation or adherents of only one faith would live. All countries are multinational and multiconfessional. All this requires all states to conduct a deeply thought-out ethnocultural policy within their countries, as well as expand cultural and humanitarian cooperation and interaction with other countries, which will certainly serve to strengthen mutual understanding between people and states. In this context, I would like to emphasize that new Trends in Uzbekistan's foreign policy are based on giving even greater importance to strengthening cooperation in various areas, including the development of cultural and humanitarian exchanges, especially with neighboring countries in the region, as well as the

closest states, including China, which has always been and remains a close and reliable friend for Uzbekistan, a time-tested partner.

The interaction between the people of Uzbekistan and China has historical foundations, originating from the distant past. Millennia ago on the Great Silk Road there were traces of friendly and mutually beneficial contacts between the two people. The fact that the bonds of friendship between Uzbeks and Chinese have deep historical roots is a solid foundation for further strengthening good neighborliness between Uzbekistan and China. The territory of present-day Uzbekistan has been an important hub on the Great Silk Road since ancient times. There is no doubt that the Great Silk Road contributed to the development of relations, the exchange of information between states and regions, the spread of new types of products, the mutual enrichment of cultures. Being on the key sections of this historic transnational path of movement of social, economic, spiritual and cultural values - both of our countries made an important contribution to the development of world civilization. There are many rare and valuable Chinese written sources (books) in the book depositories of the Beruniy library of the Institute of Oriental Studies in Tashkent our historical cities of Bukhara, Samarkand, Khiva. Scientists believe that "The history of ancient ties between the Uzbek and Chinese peoples is most fully reflected in the writings of the Ambassador of the Han Empire, the scientist and traveler Zhang Tsang, which date back to the 2nd century BC.

And today you can see many similarities in the outlook on life and traditions of our people. This is a vivid example, the fruit of a centuries-old neighborhood and the interaction of the ancestors of the Uzbeks and Chinese. Both nations honor their relatives and value friendship. There are many examples. In particular, a common feature in the culture and mentality of the two people is respect for elders. This helps to easily establish trusting relationships with people (spiritual traditions); again one of the similar and mutually understandable features in the behavior of Uzbeks and Chinese is their attitude to entrepreneurship and the ability to organize trade relations. Visiting markets and private artisan shops in both countries, one can see similar features of the culture of trade relations (economic traditions). All this gives reason to note that Uzbekistan and China are countries that have many similarities in socio-cultural terms. One of them is hospitality - an indispensable norm for both Uzbeks and Chinese. We are also used to living in large families, surrounded by neighbors, and take into account public opinion. Today, Uzbekistan attaches priority to solving the problems of socio-economic development, enhancing economic cooperation with neighboring states of the region and leading countries of the world. In this context, the restoration of the Silk Road (within the framework of the large-scale project "One Belt, One Way") and the key role of Uzbekistan on it are considered as a strategic task, a condition for the country's prosperity. Finally, Uzbekistan, like China, is a colorful country with a rich historical and cultural heritage, unique ancient architectural monuments and Muslim shrines, which are carefully protected by the people and the state. In this context, I would like to note that Uzbekistan, according to many tourists and travelers, remains an important tourist center on the Great Silk Road, a very interesting link in this route.

After gaining independence, Uzbekistan has gained its place, position and voice in the world community. Many countries around the world are close to our country. It has been establishing international friendly relations on the fronts. The Republic of China and Uzbekistan, which are currently setting an example to many countries in the world with their rapid development, have established cultural, social, economic and political cooperation. In particular, the relations in the

field of education, science, technology and culture are developing and showing results. On the foreign policy of the Republic of Uzbekistan President Shavkat Miramanovich Mirziyoyev on December 22 In his address to the OliyMajlis in 2017, he put forward the following points. “Over the past period, significant results have been achieved in the field of foreign policy in the development of friendly and mutually beneficial relations with foreign countries, especially with neighboring countries. In 2017, 21 high-level visits took place. Meetings were held with leaders and representatives of more than 60 countries and international organizations. As a result, more than 400 agreements and arrangements were reached, trade and investment agreements worth about 60 billion US dollars were signed”<sup>1</sup>. The achievement of independence has opened the door to great opportunities for our country to join the world community. Uzbekistan is deeply involved in global integration processes, carrying out scientific and cultural cooperation based on openness, equality and multilateralism. In this regard, the first President of the Republic of Uzbekistan I.A.Karimov said: “We use the experience of developed countries to liberalize the governance of the state and society, human rights and freedoms, diversity of ideas in our lives. We stand for peace, freedom and prosperity, mutually beneficial cooperation with the whole enlightened world and the international community”<sup>2</sup>.

The Republic of China recognized the independence of the Republic of Uzbekistan on December 27, 1991. Diplomatic relations were established on January 2, 1992. Bilateral cooperation covers all aspects of relations and is conducted in the spirit of friendship and mutual benefit. Mutually trusting relations between the leaders of the two countries form the basis of cooperation. The commonality and closeness of views on terrorism, extremism, separatism, drug trafficking, illegal arms trade and other security threats play an important role in the conduct of mutually beneficial cooperation between Uzbekistan and China. Visits and meetings of the head of two countries are being held many times. In 1992, 1994, 1999, 2005, 2011, 2012 and 2014, the First President of the Republic of Uzbekistan I.A Karimov visited China. The President of the Republic of Uzbekistan visited Shanghai in 2001 and 2006 and Beijing in 2012 to participate in the SCO summits, as well as Beijing in 2008 to attend the opening ceremony of the 29th Summer Olympic Games. In return, the Presidents of the Republic of China Jiang Zemin (1996), Hu Jintao (2004, 2010), Xi Jinping (2013, 2016) visited Uzbekistan. 2017- The official visit of the President of the Republic of Uzbekistan Sh.M.Mirziyoyev to China on May 11-13, 2012, which was rich in meetings and negotiations, served as an important historical stage in the relations between the two countries. During the visit, talks were held with Xi Jinping - President of the Republic of China, Li Keqiang -Premier of the State Council, Zhang Desjiang - Chairman of the Standing Committee of the National People's Congress and leaders of leading Chinese high-tech enterprises. In 2017, 15 rounds of political consultations between the Ministries of Foreign Affairs and meetings on cooperation within the SCO were held in order to strengthen strategic cooperation between Uzbekistan and the Republic of China, broad trade and economic cooperation, sees the expansion of investment and financial cooperation as a priority of bilateral relations based on the principles of mutual interest and equality. According to the Trade and Economic Agreement signed in 1992, in trade and economic relations between the two countries the mode of maximum convenience is set. China is one of the largest trading partners of Uzbekistan. In 2017, bilateral trade amounted to \$ 5 billion. Exports and imports amounted to \$ 2.8 billion. The bilateral investment partnership is implemented within the program of cooperation between the Governments of the Republic of Uzbekistan and the Republic of China in the field of raw materials and high technologies, signed in 2010. Uzbekistan and China are

actively developing cooperation in the implementation of various projects, especially in the field of high technology. In particular, Uzbekistan supported the initiative of the Chinese leadership in 2011 to establish an Uzbek-Chinese high-tech industrial park with the participation of Chinese companies. A number of Chinese companies produce hydrocarbons in the country. Uzbekistan supports the construction of the Uzbekistan-China gas pipeline and the China-Kyrgyzstan-Uzbekistan railway. There are 786 enterprises with Chinese capital operating in the country. 95 of them are based on 100% Chinese investment. Representative offices of 73 Chinese companies operate in our country. Cooperation in the field of education is developing rapidly, there is a wide exchange of students and interns in the framework of interdepartmental relations.

The Confucius Institute for the Study of Chinese Language and Culture has been operating in Tashkent since May 2005 and currently has more than 350 students, merchants and researchers studying at the university. Since the establishment of the institute, more than 2,500 people have been trained. In September 2013, during the state visit of Chinese President Xi Jinping to Uzbekistan, cooperation was established to establish another Confucius Institute in Samarkand. In accordance with the bilateral agreement and within the SCO, the Government of the Republic of China in the 2014-2015 academic year provided grants to 120 Uzbek students and interns. About 50 Uzbek students study at Lanzhou University through the Confucius Institute. Starting from the 2012-2013 academic year, Uzbek language is taught at Peking University of Foreign Languages. On May 15, 2013, the SCO Research and Diplomacy Research Center of Uzbekistan was opened in Shanghai for the first time in China on the basis of the SCO People's Diplomacy Research Institute at Shanghai University. The program of cultural cooperation for 2017 has been adopted. "Uzbekistan-China", established in 1998, and the Republic of China-Central Asia, established in 2007, have been working to strengthen bilateral cultural relations. On March 13, 2017, on the eve of the 25th anniversary of the establishment of diplomatic relations between China and Uzbekistan, a statue of AlisherNavoi was unveiled at Shanghai University. Tashkent-Shanghai, Navoi-Zhuzhou (Hunan Province), Samarkand-Xi'an (Shaanxi Province) Bukhara-Loyan (Henan Province), Tashkent-Hunan, Samarkand and Shaanxi Regions on the development of regional cooperation between the two countries. There is a fraternal relationship between them.

We all know that China is undoubtedly one of the fastest growing countries in the world today with a strong economy and a high potential for international education. Comprehensive cooperation and partnership between Uzbekistan and China is based on strong friendship and trust. Historical sources show that trade, economic and cultural ties between our people have developed thousands of years ago. In particular, the Great Silk Road, which has a history of more than two thousand years, has united the two countries for centuries. Chinese tourists and ambassadors have written a lot of valuable information about our history and culture. In particular, Chinese chroniclers have written valuable information about the countries that ruled our land, such as Davan (Fergana), Qang, the Turkish Khanate, the values and customs that exist among us on this land. Even today. Relations between Uzbekistan and China are developing and strengthening day by day. This can be seen in the political, economic and diplomatic relations between the leaders of the two countries. In particular, the Chinese magazine- Diplomat magazine recently published an article dedicated to the 25th anniversary of the establishment of diplomatic relations between Uzbekistan and China. It was noted that at the present stage, bilateral relations between Uzbekistan and China are developing successfully in various

directions. Cooperation within international organizations such as the UN and the SCO is also expanding. Today, China is one of the most important partners of Uzbekistan in the world, one of the largest investors actively involved in long-term projects to modernize the Uzbek economy. There are more than 650 enterprises with Chinese capital operating in our country.

To conclude, cooperation between our countries in the fields of culture, science, education and tourism is always developing day by day. Uzbekistan-China and China-Central Asia Friendship Societies are functioning. Scientific cooperation between scientific and technical institutions, student exchange between universities is expanding. Uzbek is taught as a subject at Chinese Central Nationalities and Beijing Foreign Language Universities. Chinese language is taught in a number of universities in Uzbekistan. The Uzbek Research and Education Exchange Center has been opened on the basis of the SCO Public Diplomacy Research Institute at Shanghai University. Many of our young people are studying in the Republic of China, taking advantage of these and similar opportunities. Of course, such opportunities will pave the way for further development of cooperation between the two countries. It is gratifying to see a number of young Uzbeks taking advantage of such opportunities.

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## WAYS TO IMPROVE THE ORGANIZATIONAL AND ECONOMIC MECHANISMS OF TOURISM DEVELOPMENT AND THE USE OF THE AIDA MODEL OF ADVERTISING

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### ABSTRACT

*The article considers ways to improve the organizational and economic mechanisms of tourism development and the use of the AIDA model of advertising. It explains the organizational and specific economic mechanisms used in the development of tourism. The author's recommendation is added to both directions. While the use of information and communication technologies is added to the organizational mechanism, the economic mechanism is recommended to use the AIDA model of advertising, which can be used to attract the world's population to tourism.*

**KEYWORDS:** *AIDA Model, Tourism, Organizational And Economic Mechanism, Tourism Services, Diversification, Advertising, Efficiency, Information And Communication Technology, Domestic Tourism, Inbound Tourism.*

### INTRODUCTION

At the end of the XX century and the beginning of the XXI century, in the context of globalization, the development of tourism has reached a new stage. According to the World Tourism Organization (UNWTO), "tourism accounts for 10% of the turnover of the production and services market on the planet. According to the analysis, by 2020, revenues from international tourism are projected at \$ 2.0 trillion a year. The number of tourists coming to our country from around the world is also growing every year. "The number of incoming tourists increased from 240,000 in 107 countries in 2005 to 2.5 million in 2017 and 5.3 million in 2018. formed a man. Of these, 5 mln. 325,000 came from CIS countries and far abroad. This is evidence of the fact that the opportunities for the wider and more effective use of tourism potential in the world are expanding. Accordingly, there is a need to accelerate the development of tourism in our country. This situation requires in-depth research in this area. It is this necessity that determines the relevance of this topic.



**Analysis of the literature on the subject.** Problems related to scientific-theoretical and practical issues of tourism development were studied by economists of the country NTTukhliev, KHAbdurahmonov, ISTukhliev, N.Ibragimov, A.Norchaev, B.Mirbabaev, O.Kim, S. Ruziev, N.Raximova, D.X.Asanova A.F.Saidov, B.Sh.Safarov, T.Abdullaeva, B.X.To'raev, O.M.Pardaev, O.X.Khamidov, M.T.Alimova etc.6. In the works of these scientists, extensive attention is paid to the theoretical and practical issues of further development of tourism in Uzbekistan, improving the quality of tourist services and their improvement. However, the issue of improving the organizational and economic mechanisms, strengthening the role of advertising in it is poorly studied. This situation necessitated research on this topic.

### Analysis and results

The structure of organizational and economic mechanisms of tourism development used information and communication technologies and the AIDA model of advertising. Demonstrating the attractiveness of the valley through participation in tourism exhibitions and conferences in foreign countries, popularization of the valley's unique national cultural heritage abroad, regular participation in international exhibitions in major cities around the world to attract more foreign tourists to the region, as well as the Internet and It was noted that in order to use the opportunities of information technology and the development of domestic tourism, it is necessary to hold various exhibitions and public events aimed at attracting the population of our country.

At the same time, in order to modernize the process of tourist services, it is necessary to use the opportunities of abortion technologies in the promotion of tourism, attracting tourists from around the world. This will require the modernization of the means used in the provision of tourist services. There is a need to expand the organizational and economic mechanisms, using the model of advertising "AIDA" using information and communication technologies to showcase the potential of tourism around the world.

Our research has shown that there is a number of literature on the types, classification and groups of organizational and economic mechanisms. In our opinion, the most detailed of them is the monograph of OM Pardaev. Because it covers in detail the specific economic and organizational mechanisms. However, this recommendation is given in this table (Table 1).

**TABLE 1 CLASSIFICATION, GROUPS AND TYPES OF ORGANIZATIONAL AND ECONOMIC MECHANISMS<sup>1</sup>**

Organizational mechanism	Property relations	Private property
		Collective property
		State property
		Private property
		Mixed property, etc.
	Organization of business process	Specialization
		Cooperation
		Introduction of division of labor
		Organization of multidisciplinary work
	Structural structures	Independent enterprises
		Associations
		Joint stock companies

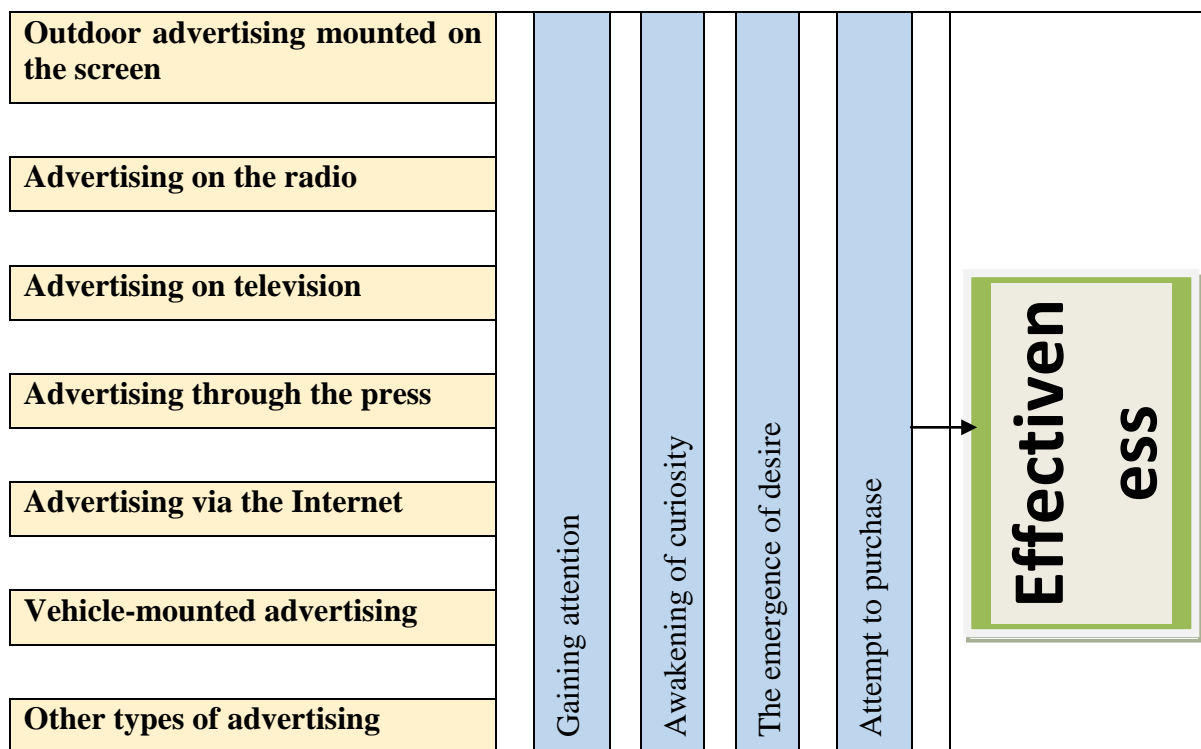
	Regulatory framework	Likelimitedliabilitycompanies
		Laws
		Regulations
		Legitimatedocumentssuchasnorns, rules
Бизнинг тавсия	Useofinformationandc ommunicationtechnol ogies	Computers
		Computerprograms
		Experts
		Videoconferencinghalls
Economic mechanism	Managementanditsfun ctions	Accounting
		Control
		Analysisoffinancialandeconomicactivity
		Planning
	Financing	Attheexpenseoftheowner'sownfunds
		Attheexpenseofdomesticandforeigninvestors
		Attheexpenseofloans, etc.
	Incentives	Financialincentives (rewards)
		Takevariouspunitive measures
		Spiritualmotivation
	Planning	Adoptionoflong-termprograms
		Planningforthecurrentperiod
		Generalplanoftheenterprise
		Planforeachbranchandsubdivision, etc.
	Standardization	Costnorm
		Thenormoftime
		Suchasthenormofnaturallosses
Recommend ations	Using the AIDA model of advertising to attract the world's population	A - Attention
		I - Interest
		D - Desire "desire",
		A - Astion "trytobuy"
		Visitingtourists

As can be seen from this table, these organizational and economic mechanisms do not include either information and communication technologies or advertising. However, today, if information and communication technologies and advertising based on them are not used for the development of tourism, it will be very difficult to "invite" the world's population to our country. Due to this information is from communication technologies

In order to attract the world's population to our country as tourists, it is necessary to use the model of advertising "AIDA".

The content of this AIDA model consists of the capital letters of the English words A - Attention, I - Interest, D - Desire, A - Astion. consists of. It is obvious that the use of information and communication technologies and the AIDA model of advertising can attract the world's population. The Uzbek abbreviated version of this model is called the "Advertising EQXX" model. By applying this model, tourism organizations first draw people's attention to tourist

facilities and then arouse their interest. Then there is a desire to visit our country and finally try to buy tickets and vouchers for a trip to our country. It is scientifically and practically justified that all this is an important factor for the development and efficiency of tourism. The AIDA (Advertising EQXX) model of advertising includes the means of transmitting advertising. In the second step, the EQXX appearance of these is represented sequentially and finally its effectiveness is achieved. The structure of this is shown in the following figure (Figure 1).



**Figure 1. The structure of the AIDA model<sup>2</sup>**

As can be seen from the picture, the AIDA model of advertising can be used in tourism through the use of information and communication technologies. Because from a distance, it will be difficult to increase the number of domestic and inbound tourists, create new jobs in the region, improve the welfare and living standards of the population as a result of reaching the five stages of spirituality in people.

Conclusions and suggestions. A number of conclusions and recommendations were made by studying the ways to improve the organizational and economic mechanisms of tourism development and the use of the AIDA model of advertising.

First of all, despite the great importance attached to the development of tourism in our country, the organizational and economic mechanisms of tourism development are sufficiently studied and, accordingly, poorly covered in the economic literature.

Second, during the study, we gave a separate explanation of the organizational and economic mechanisms used in the development of tourism, added to it the issue of the use of information and communication technologies, and tried to fully justify it. In the current digital economy, it is impossible not to use this support.

Third, we recommended the use of the AIDA model of advertising in the economic mechanism of tourism development. This model can also be used to attract the world's population to tourism in our country.

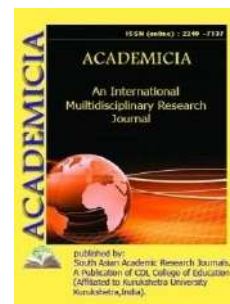
## CONCLUSION

In short, the recommendations developed by the author will have not only theoretical but also important practical significance for the future development of tourism in our country. Ultimately, it will also serve the implementation of the concept for the development of tourism in our country for 2025.

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## FUNCTIONAL SEMANTIC FEATURES OF TRANSPOSITION IN CHINESE

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### ABSTRACT

*This paper we describe the misuse of one part of speech in the function of other parts of speech in the modern Chinese language, because it is the most prominent representative of isolating languages: the relationships between words in Chinese are not expressed by the form of words, but with the help of function words, word order in sentence, and no form of words does not depend on the other, which at first glance complicates the selection of parts of speech in Chinese.*

**KEYWORDS:** *Chinese, Funksional Transpozitsiya, Parts Of Speech, Types Of Transition Parts Of Speech, Syntactic Transposition, Conversion, Conversion Homonyms.*

### INTRODUCTION

In some languages, especially in languages that are characterized by poorly developed word forms, one can observe cases of the so-called transition of a lexical unit from one part of speech to another. A word belonging to one lexico-grammatical category, as a result of a change in position in a sentence and a different verbal environment associated with it, as it were, passes into another lexico-grammatical category, changes its categorical affiliation.

Thus, the exchange between words is a kind of exchange of functional features inherent in individual parts of speech. Use was expressed by a different education in different functions, depending on its occurrence in a particular syntactic education, S. Bally called functional transposition [Bally S. 1955: 130].



Functional transposition is especially characteristic of languages of an isolating type, since in them the concretization of the lexical unit occurs mainly depending on the syntactic position it occupies.

In Chinese, functional transposition is a widespread phenomenon. Often you can observe verb transition into a noun.

However, often a noun, due to a change in position, becomes a representative of the verb category. In addition, sometimes there is a transition of a verb into an adjective, an adjective in an adverb, as well as an adjective into a noun and a noun into an adjective. Transposition is sometimes accompanied by the appearance of earlier not characteristic of the lexical unit of the inflection paradigm.

Given the features associated with the transition of a word from one lexico-grammatical category to another, it is advisable to outline and consider separately two varieties of transposition.

If the transposition is not accompanied by a change in the morphological environment and, consequently, the formation of a new inflection paradigm, and the result of this process is only a change in the syntactic functions of the original lexical unit, then this kind of transposition is usually called as a transposition.

For the Chinese language, especially for its old literary norm of Wenyang, the most characteristic process is precisely the syntactic transposition, that is, the use of the same word in the function of different parts of speech. In Chinese, “a word, without breaking up into homonyms, can combine the features of several parts of speech” [Korotkov N.N. 1968: 397].

## RESEARCH METHODS

The basis of the transposition is the asymmetry of the linguistic sign, the semantic or functional juxtaposition of linguistic units. As for the Chinese linguistic tradition, on the issue of transposition, many linguists hold the view that in the Chinese language there is a complete (morphological) and - in a more debatable form - syntactic transposition, when there are no formal affixes of the transpositional word and, due to the isolated character of the Chinese language, any changes to the word. In Wenyang, the process of transitions of parts of speech had a high frequency and, in the case of syntactic transposition, a stylistic coloring.

*Here are the transitions of parts of speech of a verb-noun in ancient Chinese texts [Lee Tinnin]:*

### Morphological transposition phenomena in Wenyang

Hieroglyph- word	Nominal value (noun)		Verb meaning	
部长	the minister	49,5%	appoint a minister	50,5%
雨	rain	55,2%	it's raining, falling out precipitation	44,8%
朋友	friend	60,2%	make friends relationship	39,8%
宾馆	hotel	56%	live in a hotel	44%
蚕	mulberry worm	65,4%	grow mulberry worms	34,6%
衣服	clothes	70,5%	dress	29,5%

家	nest	70,8%	make a nest, live in a nest	29,2%
帽子	headdress	7,7%	put on your head	22,3%
大门	gate	78,4%	attack the city gates	21,6%

In the modern language of Putonghua, there are also quite a lot of them. We give examples and statistical use of words in the position of the noun / verb on the material of the modern Chinese language.

#### Morphological transposition phenomena in putonghua.

Hieroglyph- word	Nominal value (noun)		Verb meaning	
学习	study	63%	study	37%
生产	production	43%	produce	57%
决定	decision	51%	make a decision	49%
行动	act	45.5%	act	54.5%
安装	setting	38%	to establish	42%
通知	notice	87%	to inform	13%
传真	fax	32%	throw off by fax	68%
要求	demand	61%	require	39%
进攻	attack	33%	make an attack	67%
声明	statement	81%	declare	19%
阐述	description	61%	to describe	39%
保证	guarantee	52%	to guarantee	48%
宣传	propaganda	74%	to advocate	26%

In general, we can say that in the Chinese language there are three types of part-transitions.

#### *Types of Transposition in Chinese*

[Dragunov, 1952; Solntsev, 1977; Kurdyumov, 2005 Tan Aoshuang, 2002]

transposition

occasional

stable

fixed

When determining the common-word affiliation of the Chinese word, the etymological criterion (2.1.5) is relevant. Any part-transition in the Chinese language, enshrined in the norm (i.e., according to the European classification, is morphological rather than occasional, is subject to certain laws: i.e., units that are now interpreted as prepositions can have verb functions in a

different context). Thus, any Chinese preposition in diachrony is a derivative of the previous verb meaning, while in synchrony one unit can be used in both meanings, for example:

在 他的位置在第九排 *His place is in the ninth row.*

在 他读在大学 *He studies at the University.*

在 我在大学 *I am at the university.*

Thus, the issue of highlighting parts of speech in Chinese remains debatable.

## RESULTS AND DISCUSSION

We adhere to the point of view that, despite the syntactic criterion for distinguishing parts of speech in the Chinese language (names, verbs, adjectives, adverbs acquire their partial affiliation only in the sentence), we can talk about the part of speech in a noun, based on Formal and semantic indicators. The formal indicators of Chinese nouns are counting words - classifiers, suffixes and half suffixes.

The syntactic indicators of nouns in Chinese are: the syntactic position of the subject; syntax position of the complement; use of a noun in a frame design. The peculiarity of the Chinese noun (and the Chinese language as a whole) is the phenomenon of transposition: in modern Chinese there are transitions from one part of speech to another (for example, a name in a verb and vice versa), and transitions within the same part-ternal meaning (inside a noun)

There are quite a few types of syntactic transposition. Consider only some of the most common types.

**Type Noun — Adjective.** In this case, the noun as the original lexical unit as a result of changing the syntactic position, being in a different verbal environment, denotes the relative attribute of the subject and thereby serves as an adjective.

1)用木头做东西 – make things out of wood ; 木头桌子 – wooden table;

2)金比铁贵 - Gold is more expensive than iron; 铁箱 – iron box;

3)科学和艺术 – science and art ; 科学工作 – scientific work;

这种论点是不科学的。 - This statement is unscientific (汉俄词典) .

这句话本身就不科学的 。 - This situation is not scientific in itself. (报上) .

4)讲卫生 - observe hygiene; 卫生体操 – hygienic gymnastics;

不卫生的习惯 – unhygienic habits;

吃的睡的都不卫生. (报上) - Do not hygiene with food and sleep.

Since the words 科学 and 卫生 have become predicative, we can say that they have a double syntactic valency, or bivalence.

**Type adjective-noun** This transposition is the case when an adjective, taking a different syntactic position, which is not peculiar to it, is combined with pronouns or numbers and, thus, becomes able to fulfill the function of a noun.

1) 在这里生活是很寂寞，很单调的。（巴金） - Life here is very boring, very monotonous.

这寂寞，这单调，真叫人难忍受下去。（巴金） - - This boredom, this monotony is truly unbearable for people.

2) 好人是活不长久的。（巴金） - After all, good people do not live long.

他的性情，他的学识，我都知道，没有什么不好。（一圣陶） - His character, his knowledge I know; there is nothing wrong with it.

3) 我和你的情况两样。（汉俄词典） - The situation with you is not the same (different).

没有什么两样。（同上） - (There is no difference (no difference) in this).

4) 这个办法对。（汉俄词典） - This is the correct method.

没有什么不对。（书） - (There) there is nothing wrong.

5) 发生了一件不痛快的事。（汉俄词典） - An unpleasant story has happened.

您要是再给他一个不痛快，我就把您这两年做的事都告诉哥哥。（曹禺） - If you trouble her again (do something unpleasant), I'll tell my older brother what you did two years.

**Adjective Type — Adverb.** This transpositional model is widespread. In Chinese, one can often observe its many realizations. It is a transposition in which a high-quality adjective, being in a preposition or postposition in relation to a verb, explains it and thereby fulfills the function inherent in an adverb.

The given examples illustrate functional-semantic features, a kind of 'internal mechanism' of syntactic transposition.

1) 早春 - early spring; 早霜 - early frosts; 睡得早，所以醒得早（书） - I go to bed early, so I wake up early.

2) 快车 - fast train ; 快中子 - fast neutron;

他们走得很快。 - They walked very fast.

3) 高山 - high mountain; 高价 - high price; 鸟飞得很高 - The bird flies very high.

Syntactic transposition, in contrast to morphological transposition, without being associated with the formation of the inflection paradigm, is, in fact, a special case of the functioning of lexical

units. The free movement of a word from one position to another and, as a consequence of this, intercategory substitutions, meaning a kind of interchange of functions between parts of speech, this is the essence of syntactic transposition.

If the transposition is associated with a change in the lexical-morphological environment and as a result of this, the earlier inflection paradigm that is not inherent in the lexical unit arises, and other syntactic features also appear, then this kind of transposition is usually called a morphological transposition.

Morphological transposition, often referred to as conversion (conversion transposition), is a word-formation method using the word-changing paradigm without involving a special structural component (a special derivational morpheme) as a word-formation tool. The formation of a new word occurs by moving some foundation to another inflection paradigm. Thus, the conversion is defined as “the process of morphological transposition of the basics” [Kuryakova ES 1974: 75].

For the Chinese language with its underdeveloped form-formation, conversion is not characteristic as a process of morphological transposition, and words created by conversion do not form any consistent paradigm of inflection. They are attached to only single word forms, a kind of 'fragments' of the paradigm.

V. M. Solntsev believes that “apparently, one can speak about conversion as a word-formation technique only when such pairs of words have clearly expressed systems of forms (characterizing at least one word of the pair) and a system of formal syntactic features” [Solntsev VM 1975: 75]. Developing this position, it should be said that sometimes only a derivative word forms a paradigm, sometimes only a producing word has a paradigm. A morphological transposition, having a word-building character, as applied to the peculiarities of this process in the Chinese language, could, by analogy with semi-affixation, be called semi-conversion.

Let us consider two main types of morphological transposition on the actual material of modern Chinese.

**Type Noun — Verb.** This conversion model, according to Lu Shusyan, is represented in Chinese by a small number of lexical units [吕叔湘。1989 年: 17 页]. The ability of registered morphemes of this type to combine with the suffixes of productive verbs, form affirmative temporal and modal forms, and also to take an addition denoting a direct object, translates them into a class of verbs, thereby changing their categorical affiliation.

Examples:

1) 一把锁 one lock, 这把锁 this lock, 锁上 close the lock, 锁上了 closed the lock, 锁着 closed the lock, 锁门 close the door to the castle;

拿把锁把门锁上。(叔相) - Taking the lock, close the door.

2. 一把锯 one saw, 这把锯 this saw, 锯树 saw wood, 锯木头 saw wood, 锯开了 sawed, 锯不动 impossible to saw. 把木板锯成两段 (汉语词典) - cut the board in half.

3. 一把剪 one scissors , 这把剪 these scissors , 剪发 - cut the hair , 剪指甲 cut the nails , 剪成两件 cut the scissors in half.

这个简讯是从报上剪下来的。(汉俄词典) - This note is cut from a newspaper.

This model is characterized by the fact that only the derivative word (verb) forms the paradigm, while the producing word (noun), without a system of forms, has only a certain set of syntactic features (in particular, the ability to combine with pronouns and numerals).

**Type Verb — Noun.** This conversion is the case when a verb, being in a syntactic position unusual for it, is able to fulfill the function of a subject or complement with a verb predicate, as well as accept a definition expressed by a pronoun or an adjective, that is, acquire syntactic features characteristic of a noun. This model is characterized by the formation of a paradigm only in the generating word (verb). Regarding the derived word, then it has only some syntactic features, usually inherent in the noun.

#### Examples:

- 1) 在等待 expect, 等待了 expected , 这等待 this is expectation , 我似乎在等什么。 (巴金) - I kind of expect something. 这等待是相当痛苦的。 (巴金) - This expectation was rather painful.
- 2) 在要求 demand , 要求过 demanded , 我的要求 my claim , 一个要求 one claim , 这个要求 this requirement bi talab , 提出要求 make a claim 我们要求满足我们的要求。 (曹禺) - We require you to satisfy our requirements. 我有一个要求。 (曹禺) - I have requirement.

曾金要求过, 这次又是。(茅盾) - Previously demanded, this time again (required).

#### CONCLUSION

The factual material discussed above shows that the lexical units in the conversion relationship have the identical sound and graphic forms in the Chinese language, but differ in word forms (though few), and, perhaps more importantly, in functional features, which manifest themselves in different compatibility with lexical units other classes.

As a special group of lexical homonyms, conversion homonyms are sometimes distinguished, meaning by this term single-rooted lexical units formed by conversion [Khamatova A.A. 1977: 11].

The so-called conversion homonyms are homonyms of a special type. They differ significantly from homonyms themselves. Homonymous words formed by conversion are in close semantic dependence, while homonyms themselves are characterized by a complete absence of a semantic connection or a very distant semantic connection, the establishment of which sometimes requires special research.

It can be reasonably said that homonymy is in some cases a consequence of the synchronous coincidence (sometimes random) in one sound complex of several words of different meanings,



while conversion is usually the result of a diachronic process that leads to the sound coincidence of two close in meaning lexical units.

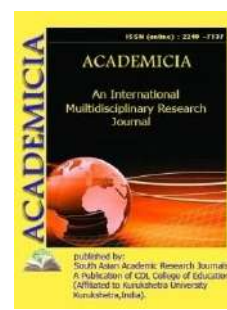
In Chinese, a conversion relationship often arises between a verb and a noun as two lexical-grammatical categories.

At the same time, in modern Chinese, in some cases, one can observe a tendency to formally separate the noun from the verb, which ultimately leads to the elimination of the conversion relations that exist between certain pairs of words.

Formally, isolation is carried out by attaching a semisuffix to the original lexical unit. In this case, the original lexical unit and neoplasm coexist in the modern language

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## STUDY REGARDING DESIGNING SYSTEM RELATED TO RANKING VOICE OF CUSTOMER IN THE MUNICIPALITIES OF TEHRAN

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### ABSTRACT

*By achieving modern methods, customer-oriented organizations and institutes are constantly trying to search for other solutions to inspire more customers so that based on their interests and*

*attitudes, they voice their opinion to the superiors of the organization. Numerous researches all indicate that customers can change the production line. Therefore, organizations consider "voice of customer" more than before. They are constantly ready to meet customers' demands. In this paper, we study the voice of customer in The municipalities of tehran . Fuzzy multiple criteria decision making (FMCDM) is one of the suitable models of ranking the key criteria of the voice of customer. In fuzzy analytic hierarchical process (Fuzzy AHP) and Fuzzy decision making trial and evaluation laboratory (Fuzzy DEMATAL), we ranked the key criteria of the voice of customer in Iran in the municipalities of Tehran.*

**KEYWORDS:** *Fuzzy DEMATEL, Fuzzy AHP, FMCDM, Voice Of Customer.*

## INTRODUCTION

Many different theories and methods of performance for conducting an evaluation have been applied in various organizations for many years. These approaches include ratio analysis, total production analysis, regression analysis, Delphi analysis, balanced scorecard, analytic hierarchical process (AHP), data envelopment analysis (DEA), decision making trial and evaluation laboratory (DEMATEL), fuzzy AHP(FAHP), fuzzy DEMATEL, etc. Each method has its own basic concept, aim, advantages and disadvantages. Which one to choose for assessing performance depends on the status and type of the organizations? However, all successful enterprises have some common features including a specific vision, positive actions, and effective performance evaluation (Wu et al., 2009).

Decision makers always like to know which option is the best of all alternatives. In the category of cardinal information on the criteria or attribute of multiple criteria decision making (MCDM) methods, alternatives are ranked by their cardinal values of performance (Shih, 2008; Chou, 2010). Although, there are different definitions for MCDM in literature, regardless of the type of MCDM task, two pivotal problems arise; how to compare an alternative? And how to evaluate them? First problem is especially important if the results of evaluations fo alternatives are presented by interval or fuzzy numbers (Sevastjanov and Figat, 2007).

Decision making is the most important and popular aspect of application of mathematical methods in various fields of human activities. In real world situations, decisions are nearly always made on the basis of information that is at least partially fuzzy in nature (Vasant et al., 2007). Also Decision making is the process of defining the decision goals, gathering relevant criteria and possible alternatives, evaluating the alternatives for advantages and disadvantages and selecting the optimal alternatives (Wu, 2008).

However, in the real life, the available information in a MCDM process is usually uncertain, vague, or imprecise, and the criteria are not necessarily independent. To tackle the vagueness in information and the essential fuzziness of human judgment or preference, fuzzy set theory was proposed by Zadeh in 1965 and a decision making method in a fuzzy environment was developed by Bellman and Zadeh (Yang et al., 2008; Kahraman, 2007). Fuzzy set theory was developed exactly based on the premise that the key elements in human thought are not numbers, but linguistic terms or labels of fuzzy sets. A fuzzy decision making method under multiple criteria consideration is needed to integrate various linguistic assessments and weights to evaluate location situation and determine the best selection (Chou, 2007).

MCDM may be considered as a complex and dynamic process including one managerial level and one engineering level. The managerial level defines the goals, and chooses the final “optimal” alternative. The multi criteria nature of decisions is emphasized at this managerial level, at which public officials called “decision makers” have the power to accept or reject the solution proposed by the engineering level (Opricovic and Tzeng, 2004).

The DEMATEL technique was used to investigate and work on the complicated problem group. DEMATEL was developed on the belief that pioneering and proper use of scientific research methods could ameliorate comprehension of the specific problematic, the cluster of intertwined problems, and contribute to recognition of practical solutions by hierarchical structure. DEMATEL has been successfully applied in many situations, such as marketing strategies, e-learning evaluation, control systems and safety problems (Chen, 2009). Fuzzy DEMATEL method is used for solving and modeling some of the complex group of decision-making problems such as strategic planning, e-learning evaluation and decision making in RandD projects (Coussement and Poel, 2008).

#### Voice of customers

Richins (1997) and Smith and Bolton (2002) emphasize that emotions differ when the context change; buying a pair of shoes may not generally raise the same kind of motions as do consumption where the amount of the monetary exchange is more considerable and maybe includes risk (Roos et al., 2009).

In systems of the real world, environmental planning and investment in sustainable development industries may essentially be conflicts analyses characterized by sociopolitical, environmental and economic value judgments. Several strategies should be considered and evaluated in terms of many different criteria, resulting in a vast body of data that are often inaccurate or uncertain. However, in many areas such as manufacturing, engineering, medicine, meteorology and human judgment, evaluation and decisions often employ natural language to express thinking and subjective preferences, but when using the word as a label for a set, the boundaries within which objects do or do not belong to the set become fuzzy or vague (Chiou, 2005).

It is now a leading firm strategy to develop a model from customer expectation. The service quality affects all leisure firm service activities. The performances are usually with multiple criteria for many customers' expectations to judge by the best service quality performance. Improving service quality, increasing assessment and reliability occurs while competition ever increases and tries to retain customers. Service quality conditions might influence a firm's competitive advantage by retaining customer patronage and with this comes market share, and ultimate profitability. Service quality has developed for several years. Service quality is measured to assess service performance, diagnose service problems, and manage service delivery. The criteria used for evaluation of service quality effectiveness are numerous and influence one another (Bell et al., 2005; Lin et al., 2009).

In the past, companies focused on selling services and products with little knowledge or strategy concerning the customers who bought the products. Today business is evolving from this 'product-centered' to a 'customer-centered' environment. Companies need to find ways to capture and enhance market share while reducing costs. Consequently, existing companies must reconsider the business relationships with their customers (Coussement and Poel, 2008b). Customer loyalty are defined as a consumer's intent to stay with an organization (Bell et

al., 2005). Since public services are not perceptible, fewer customers can directly evaluate services by comparing the quality of physical products (David et al., 2006). Customers and consumers constantly search for suppliers who provide much better goods and services for them. There are a lot of evidence and documents indicating that in today's competitive world, discovering needs of customers and meeting their demands before competitors is the basic term for enterprises to succeed. Thus, organizations and businesses are to trying to achieve superior situation in comparison with other competitors by obtaining exclusive advantages. One of the most popular approaches to determine the quantity of meeting needs and demands by means of goods and services offered by organizations is assessment of customer's consent.

In customer-oriented organizations usually the customers are the most fundamental means to identify weak and strong points of organizations. During their relations, they can actually advise you to choose the method of communication with customer, production and design of services. The organization can achieve strategies for new services by surveying its customers and analyzing their needs and find out its weak points of the current services. Some authors believe that customers create different levels of making profits and all customers do not create desired income for companies. Therefore, companies have been recommended to develop their relations with beneficial customers and cut relations with non-beneficial customers (Vukmir, 2006).

Based on a study and an interview with some customers, researches could reach at important facts that determine satisfaction of customers with products and services of a company. Generally, the facts include:

1. Stability of provider
2. Following schedule of goods delivery
3. Technical particulars of products
4. Competitive prices
5. Credit policy of the company
6. Warranty and guarantee

And such items can put an effect on satisfactions with providers (Chakraborty et al., 2007).

Internet enables customers to easily express their problems with a product or a service. Consequently, customer complaint management and service recovery are going to become key drivers for improved customer relationships (Coussement and Poel, 2008a). Further studied customer involvement in new product development, especially in the early stage of product conceptualization plays an important role for a successful product (Chen and Yan, 2008). It is well recognized that voice of customer boasts numerous benefits for organizations. They include customer loyalty increases in satisfaction and product evaluation mutual agreeable problem solving improved offerings and prevention of future problems the opportunity to redress the problem customer "venting" to the organization, rather than to others and reduced likelihood of other negative consumer behaviors such as exit and/or negative word-of-mouth (Bove and Robertson, 2005).

Successful companies have to pursue customer-centric strategies in order to sustain a competitive advantage. Voice of customer (VOC) analysis can play an important role in understanding customer requirements in a new product or service development. Moreover, it can provide value to customers and it can leave the customer with a favorable impression. The VOC analysis system can help determine what customers need and predict what they will need in the future. In

turn, this can assist in the development of appropriate corporate strategies to meet the needs (Bae et al., 2005). However, different customers or experts have different attitudes toward the same requirement. To cope with this situation proposed to use a group decision-making technique to obtain the importance weights for customer requirements. Then, AHP or DEMATEL are proposed to be used in rating customer requirements analyzed the sensitivity of the voice of customer in QFD (Lai et al., 2008).

#### FUZZY MULTIPLE CRITERIA DECISION MAKING (FMCDM) AND FUZZY DECISION MAKING TRIAL AND EVALUATION LABORATORY (DEMATEL)

Human lives are the sum of their decisions-whether in business or in personal spheres. In daily lives, people often have to make decisions. “When decision is made” is as important as “what is decided”. Everyday life and history are full of lessons that can help people recognize the critical moment. People learn by attempts and by examples. Deciding too quickly can be hazardous; delaying too long can mean missed opportunities. What people need is a systematic and comprehensive approach to decision making (Özdağoğlu and Özdağoğlu, 2007).

Fuzzy set theory introduced by Zadeh was developed for solving problems in which descriptions of activities, observations and judgments are subjective, vague and imprecise (Liu, 2009). Since Bellman and Zadeh (1970) developed the theory of decision behavior in a fuzzy environment, various relevant models were developed and they have been applied to different fields such as control engineering, artificial intelligence, management science and MCDM among others. The concept of combining the fuzzy theory and MCDM is referred to as fuzzy MCDM (FMCDM) (Hung et al., 2010; Shieh et al., 2010).

A FMCDM model is used to assess alternatives versus selected criteria through a committee of decision makers, where suitability of alternatives versus criteria and the importance weights of criteria, can be evaluated in linguistic values represented by fuzzy numbers. Numerous approaches have been proposed to solve fuzzy MCDM problems (Chua and Lin, 2009). Although, the problem of obtaining well-defined criteria for a MCDM problem is well-known for more general results, it is often neglected in MCDM theory, methods, and applications (Gal and Hanne, 2006; Keskin et al., 2010; Yu and Hu, 2010).

Fuzzy set theory is very helpful to deal with the vagueness of human thoughts and language in making decisions. Decision-makers tend to give assessment according to their past experiences and knowledge and also their estimations are often expressed in equivocal linguistic terms (Lin and Wu, 2008). Many decisions are involving imprecision since goals, constraints and possible actions are not precisely in description. In fuzzy logic, each number between 0 and 1 indicates a partial truth, where as crisp sets correspond to binary logic [0, 1] (Tseng, 2009a). To deal with the vagueness of human thought and expression in making decisions, fuzzy set theory is very helpful. In particular, to tackle the ambiguities involved in the process of linguistic estimation, it is a beneficial way to convert these linguistic terms into fuzzy numbers (Tseng, 2009; Chang and Hung, 2005).

MCDM is a well-known branch of decision making. It is widely used in ranking one or more alternatives from a set of available alternatives with multiple attributes (Yu and Hu, 2010; Malekly et al., 2010; Chou, 2010; Tzeng et al., 2009; Yu and Tzeng, 2006; Wang et al., 2005) and MCDM techniques support the decision makers in evaluating a set of alternatives (Keskin et al., 2010; Wang et al., 2005). MCDM techniques can help identify desired measures among a



variety of alternatives through analyzing multiple criteria by which the strengths and weaknesses of various adaptation options could be evaluated. Thus, they could be adopted as evaluation tools to help identify the priorities of sustainable goals and to rank the desirability of adaptation options (Qin et al., 2008). Traditional MCDM models are based on the additive concept along with the independence assumption, but individual criterion is not always completely independent (Tseng, 2009a). Multiple attribute decision-making (MADM), like MCDM, deals with the problem of helping the decision maker to choose the best alternative, according to several criteria (Tzeng et al., 2009). Alternatively, MCDM or MADM is the approach dealing with the ranking and selection of one or more vendors from a pool of providers. The MCDM provides an effective framework for vendor comparison based on the evaluation of multiple conflict criteria (Shyur and Shih, 2006).

However, in many cases, the judgments of decision making are often given as crisp values, but crisp values are an inadequate reflection of the vagueness of the real world. The fact that human judgment about preferences are often unclear and hard to estimate by exact numerical values so that fuzzy logic is necessary for handling problems characterized by vagueness and imprecision. Hence, there has a need to extend the DEMATEL method with fuzzy logic for making better decisions in fuzzy environments (Wu and Lee, 2007). The DEMATEL method is used to construct the interrelations between criteria to build an impact-relation map (Yang et al., 2008). FAHP or FMCDM analysis has been widely used to deal with decision-making (DM) problems involving multiple criteria evaluation or selection of alternatives (Hsieh et al., 2004).

#### Decision making trial and evaluation laboratory (DEMATEL)

Complex evaluation environment can be divided into many criteria or subsystems to judge differences or measure scores of the divided criteria groups or subsystems more easily. The factor analysis method is commonly used to divide criteria into groups (Tzeng et al., 2007). The foundation of the DEMATEL method is graph theory. It allows decision-makers to analyze as well as solve visible problems (Chen and Chen, 2010).

The DEMATEL method has been successfully applied in many fields. Recently, there have been a lot of studies on fuzzy DEMATEL applications in different fields (Tzeng et al., 2007). DEMATEL method was developed by the Battelle Memorial Institute in Geneva. Those days, the DEMATEL method was used to study the world's complicated problems, such as: Race, hunger, environmental protection and energy, etc. In the recent years, many scholars have broadly applied the DEMATEL method to solve problem in different fields (Chen and Yu, 2009; Hu et al., 2009; Fekri et al., 2008; Wu et al., 2010). The DEMATEL method is an analytic technique of relationship structure. It can find the critical aspect or criteria of the complex structure system (Lin and Tzeng, 2009). The applicability of the DEMATEL method is widespread, ranging from analyzing world problematic decision-making to industrial planning (Wei and Hshiong, 2009; Li and Tzeng, 2009). The original DEMATEL was aimed at the fragmented and antagonistic phenomena of world societies and searched for integrated solutions. Digraphs are more useful than directionless graphs because digraphs can demonstrate the directed relationships of sub-systems. Moreover, digraph portrays a basic concept of contextual relations among the elements of the system, in which the numeral represents the strength of influence. The DEMATEL is based on digraphs, which can separate the involved factors into cause group and effect group (Kim, 2006; Chang and Cheng, 2009; Wu, 2008; Yang et al.,

2008). DEMATEL has been widely used to extract a problem structure of a complex problematic. By using DEMATEL, we could quantitatively extract interrelationship among multiple factors contained in the problematic. In this case, not only the direct influences but also the indirect influences among multiple factors are taken into account (Tamura and Akazawa, 2005; Wang et al., 2005; Wu, 2008).

#### Fuzzy decision making trial and evaluation laboratory (DEMATEL)

DEMATEL method is presented in 1973 as a kind of structural modeling approach about a problem. It can clearly see the cause-effect relationship of criteria when measuring a problem (Chen-Yi and Gwo-Hshiung, 2007). The decision-making involved in selecting appropriate management systems to create sustainable competitive advantages is a very important topic, which can be formulated as a MCDM problem (Tsai and Chou, 2009). Applying the DEMATEL illustrates the interrelations among criteria, finds the central criteria to represent the effectiveness of factors or aspects and avoids the “over fitting” for evaluation. Thus, non-additive methods, fuzzy measure and fuzzy integral are used to calculate the dependent criteria weights and the satisfaction value of each factor or aspect for fitting with the patterns of human perception (Chen-Yi and Gwo-Hshiung, 2007).

Although, this DEMATEL method is a good technique for evaluating problems and making decisions, we decide the relationships of systems to be usually given by crisp values in establishing a structural model (Liou et al., 2007; Chiu et al., 2006). However, it is generally understood that human perceptions on decision factors are usually judged subjectively. The judgment in social science is always represented as exact numbers. In many practical cases, the human preference model is uncertain and might be reluctant or unable to assign exact numerical values to describe the preferences (Tseng and Lin, 2008). The matrices or digraph portrays a contextual relation between the elements of the system, in which a numeral represents the strength of influence. Hence, the fuzzy DEMATEL method can convert the relationship between the causes and effects of criteria into an intelligible structural model of the system (Chen-Yi and Gwo-Hshiung, 2007; Kim, 2006; Lee et al., 2008). The fuzzy DEMATEL method has been successfully applied in many fields (Lee et al., 2008).

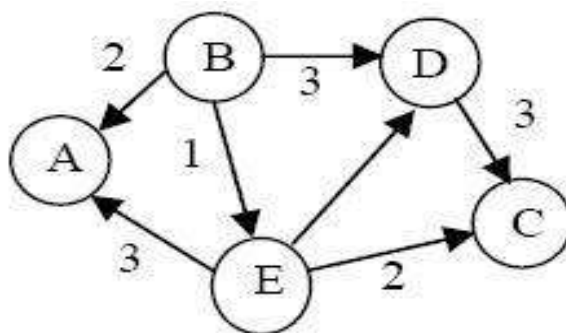


Figure 2.1. The digraph of the Fuzzy DEMATEL example (Lee et al., 2008).

#### STEP1: Defining the evaluation criteria and designing the fuzzy linguistic scale

However, evaluation criteria have the nature of causal relationships and usually comprise many complicated aspects (Wu and Lee, 2007). To gain a structural model dividing involved criteria into cause and effect groups, the Fuzzy DEMATEL method is an appropriate technique. To deal

with the ambiguities of human assessments, the research discard the comparison scale used in crisp DEMATEL method but adopt the fuzzy linguistic scale used in the group decision-making proposed[21-14-78-34].( Wu and Lee, 2007; Kim, 2006; Coussement and Poel, 2008b; Chen-Yi and Gwo-Hsiung, 2007).

**TABLE 2.1.THE CORRESPONDENCE OF LINGUISTIC TERMS AND LINGUISTIC VALUES (EXAMPLE)**

<i>Linguistic terms</i>	<i>Linguistic values</i>
No influence (No)	(0, 0, 0.25)
Low influence(L)	(0, 0.25, 0.5)
High influence(H)	(0.25, 0.5, 0.75)
Stronglyinfluence(VH)	(0.5, 0.75, 1.0)

Different degrees of “influence” are expressed with five linguistic terms as “Strong”, “High”, “Low”, “No” and their corresponding positive triangular fuzzy numbers are shown in Table 2.1 (Shieh et al., 2010).

*STEP 2: Organizing the directed-relation matrix*

Acquire the assessments of decision makers to measure the relationships between the critical success factors which are demonstrated by  $C = \{C_i | i = 1, 2, \dots, n\}$ . The groups of the chosen experts were asked to make sets of pair wise comparisons in terms of linguistic terms. Hence fuzzy matrices  $\tilde{N}^1, \tilde{N}^2, \dots, \tilde{N}^p$ , each corresponding to an expert and with triangular fuzzy numbers are obtained. Fuzzy matrix  $\tilde{N}$  is called the initial direct relation fuzzy matrix of expert. Denote  $\tilde{N}$  as:

$$\tilde{N} = \begin{bmatrix} \mathbf{0} & \tilde{n}_{12} & \cdots & \tilde{n}_{1n} \\ \tilde{n}_{21} & \mathbf{0} & \cdots & \tilde{n}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \tilde{n}_{n1} & \tilde{n}_{n2} & \cdots & \mathbf{0} \end{bmatrix}; k=1, 2, \dots, p. \quad (1)$$

$$\tilde{N}_{ij} = (l_{ij}, m_{ij}, u_{ij}).$$

Without loss of generality, the  $\tilde{N}_{ii}$  ( $i = 1, 2, \dots, n$ ) number  $z = (0, 0, 0)$  when it is necessary ( Lee et al., 2008; Coussement and Poel, 2008b).

*STEP 3: Establishing the structural model*

The linear scale transformation is used here as a normalization formula to transform the criteria scales into comparable scales. Let

$$\tilde{a}_{ij} = \sum_{j=1}^n \tilde{N}_{ij} = (\sum_{j=1}^n l_{ij}, \sum_{j=1}^n m_{ij}, \sum_{j=1}^n r_{ij}) \text{ And } r = \max_{1 \leq i \leq n} (\sum_{j=1}^n r_{ij}) \quad (2)$$

Then, the normalized direct-relation fuzzy matrix, denoted by  $\tilde{E}$ :

$$\tilde{E} = r^{-1} \otimes \tilde{N} \text{ then } \tilde{E} = \begin{bmatrix} \tilde{e}_{11} & \tilde{e}_{12} & \cdots & \tilde{e}_{1n} \\ \tilde{e}_{21} & \tilde{e}_{22} & \cdots & \tilde{e}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \tilde{e}_{m1} & \tilde{e}_{m2} & \cdots & \tilde{e}_{mn} \end{bmatrix}, \text{ where } \tilde{e}_{ij} = \frac{\tilde{n}_{ij}}{r} = \left( \frac{l_{ij}}{r}, \frac{m_{ij}}{r}, \frac{r_{ij}}{r} \right) \quad (3)$$

As that in crisp DEMATEL method, we assume at least one  $i$  such that  $\sum_{j=1}^n \tilde{N}_{ij} < r$  and

$\lim_{k \rightarrow \infty} \tilde{E}^k = [0]_{n \times n}$ . This assumption is well satisfied in practical cases (Lee et al., 2008; Wu and Lee, 2007).

*STEP 4: The total-relation matrix*

The total-relation matrix  $T$  can be acquired by using the following equation, in which the  $I$  is denoted as the identity matrix (Hu et al., 2009).

$$T = \tilde{E} + \tilde{E}^2 + \dots + \tilde{E}^k = \tilde{E} (I + \tilde{E} + \tilde{E}^2 + \dots + \tilde{E}^{k-1})$$

$$= \tilde{E} (I + \tilde{E} + \tilde{E}^2 + \dots + \tilde{E}^{k-1}) (I - \tilde{E})(I - \tilde{E})^{-1} = \tilde{E}(I - \tilde{E})^{-1},$$

when  $\lim_{k \rightarrow \infty} \tilde{E}^k = [0]_{n \times n}$

$$T = \begin{bmatrix} t_{11} & t_{12} & \dots & t_{1n} \\ t_{21} & t_{22} & \dots & t_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ t_{m1} & t_{m2} & \dots & t_{mn} \end{bmatrix}; \text{ where } t_{ij} = (l'_{ij}, m'_{ij}, r'_{ij}) \quad (4)$$

$$[l'_{ij}] = \tilde{E}_l \times (I - \tilde{E}_l)^{-1}$$

$$[m'_{ij}] = \tilde{E}_m \times (I - \tilde{E}_m)^{-1}$$

$$[r'_{ij}] = \tilde{E}_r \times (I - \tilde{E}_r)^{-1}$$

*STEP 5: The sum of rows and columns*

Produce a causal diagram. The sum of rows and the sum of columns are separately denoted as vector  $d''$  and vector  $r''$  through formulas 5. In these equations, vector  $d''$  and vector  $r''$  denote the sum of rows and the sum of columns from the total-relation matrix  $T$  respectively. (Chen and Chen, 2010; Tseng, 2009b).

$$T = [t_{ij}]_{n \times n}, I, J \in \{1, 2, 3, \dots, n\}$$

$$d'' = (d''_1)_{n \times 1} = \left[ \sum_{j=1}^n t_{ij} \right]_{n \times 1}, r'' = (r''_1)_{1 \times n} = \left[ \sum_{j=1}^n t_{ij} \right]_{1 \times n} \quad (5)$$

*STEP 6:* As that of most fuzzy model, we had to covert the final fuzzy data into a crisp value. Here, we suggest the CFCS (Converting Fuzzy data into crisp scores) method proposed by Opricovic and Tzeng (2003) for defuzzification. This method has the advantages of giving a greater crisp value with greater membership function and distinguishing two symmetrical triangular fuzzy numbers with the same mean (Lin, 2010). Let  $\tilde{N} = (l_{ij}, m_{ij}, u_{ij})$ ;  $k=1, 2, \dots, n$  be the positive triangular fuzzy number, and  $\tilde{N}_k^{jdef}$  denote its representing crisp value. Computing  $L = \min(l_k)$ ;  $R = \max(u_k)$ ;  $k=1, 2, \dots, n$ , and  $\Delta = R - L$ , then

$$\tilde{N}_k^{jdef} = L + \Delta \times \frac{(m-L)(\Delta+u-m)^2(R-L)+(u-L)^2(\Delta+m-L)^2}{(\Delta+m-L)(\Delta+u-m)^2(R-L)+(u-L)(\Delta+m-L)^2(\Delta+u-m)} \quad (6)$$

STEP 7: We draw the causal diagram based on the calculations in step 6

STEP 8: Analyzing the results

Assumethat  $\mathbf{d}''_i$  denotes the row sum of  $i$ -th row of matrix  $T$ ; then,  $\mathbf{d}''_i$  shows the sum of influence dispatched from factor  $i$  to the other factors both directly and indirectly .Supposed  $\mathbf{r}''_j$  denotes the column sum of  $j$ -th column of matrix  $T$  .Then,  $\mathbf{r}''_j$  shows the sum of influence that factor  $j$  is receiving from the other factors (Chen-Yi and Gwo-Hshiung, 2007; Tseng, 2009b; Wu and Lee, 2007).

The order of elements from column  $\mathbf{d}''_i$  indicates hierarchy from influencing elements and the order of elements from column  $\mathbf{r}''_j$  indicates hierarchy from influenced elements. The actual place of each element in the final hierarchy is determined by columns  $(\mathbf{d}''_i + \mathbf{r}''_j)$  and  $(\mathbf{d}''_i - \mathbf{r}''_j)$  . If  $(\mathbf{d}''_i - \mathbf{r}''_j)$  is a positive number, it is influencing and if it is negative, certainly, it is an influenced element.  $(\mathbf{d}''_i + \mathbf{r}''_j)$  indicates the sum of density of an element along (longitude axis) regarding being either influencing or influenced. Final hierarchy is gained from the direct and indirect relations of  $(\mathbf{d}''_i + \mathbf{r}''_j)$  and  $(\mathbf{d}''_i - \mathbf{r}''_j)$  in the diagram.

#### FUZZY ANALYTIC HIERARCHICAL PROCESS (AHP)

The AHP was first proposed by Thomas Saaty in 1980. The AHP weighting is mainly determined by the decision makers who conduct the pair wise comparisons, so as to reveal the comparative importance between two criteria. If there are evaluation criteria, then to decide the decision making, the decision makers have to conduces  $C(n,2)=n(n-1)/2$  pair wise comparisons (Li and Huang, 2009; Lin, 2010; Lee et al., 2008).

The goal of MCDM method is to aid decision makers in integrating objective measurements with value judgments that are based not on individual opinions but on collective group ideas. Further, there are situations in which information is incomplete or imprecise or views that are subjective or endowed with linguistic characteristics creating a “fuzzy” decision making environment. The FMCDM approach is designed to minimize such adverse conditions and strengthen the partnership selection process (Chou, 2007; Ding and Liang, 2005; Vaidya and Kumar, 2006).

Traditional evaluation methods usually take the minimum cost or the maximum benefit as their single index of measurement criteria, although, these approaches may not be sufficient for the increasingly complex and diversified decision making environment. Thus, we utilize a FAHP to assess the sustainable development strategies for industry (Chiou et al., 2005). Fuzzy method weighs levels of criteria importance and the determination of weights is the key point in comprehensive evaluation. The propriety of weights subsets will influence the results of the comprehensive evaluation (Hung et al., 2010).

AHP is a powerful method to solve complex decision problems. Any complex problem can be decomposed into several sub-problems using AHP in terms of hierarchical levels where each level represents a set of criteria or attributes relative to each sub-problem (Cheng et al., 2005; Sun et al., 2009). The AHP method is a multi-criteria method of analysis based on an additive

weighting process, in which several relevant attributes are represented through the relative importance (Sun et al., 2009; Hung et al., 2010).

In fuzzy MCDM problems, criteria or attribute values and the relative weights are usually characterized by fuzzy numbers. A fuzzy number is a convex fuzzy set, characterized by a given interval of real numbers, each with a grade of membership between 0 and 1. The most commonly used fuzzy numbers are triangular and trapezoidal fuzzy numbers, whose membership functions are respectively defined as For brevity, triangular and trapezoidal fuzzy numbers are often denoted as  $(a, b, d)$  and  $(a, b, c, d)$  (Wang and Elhag, 2006; Zammori et al., 2009). Human judgment of events may be significantly different based on individuals' subjective perceptivity or personality, even when using the same words (Chiou et al., 2005). Fuzzy linguistic variables are extensions of numerical variables in the sense that they are able to represent the condition of an attribute at a given interval by Taking fuzzy sets as their values (Emre and Ugur, 2009). Triangular fuzzy numbers have been developed to appropriately express linguistic variables (Chiou et al., 2005).

AHP is widely used for multi-criteria decision making and has successfully been applied to many practical problems (Tiryaki and Ahlatcioglu, 2009; Wang et al., 2008). If uncertainty (fuzziness) of human decision making is not taken into account, the results can be misleading. A commonality among terms of expression, such as “very likely”, “probably so”, “not very clear”, “rather dangerous” that are often heard in daily life, is that they all contain some degree of uncertainty (Lee et al., 2008). The concept of fuzziness in traditional AHP directly and without using fuzzy series has been taken into account. In fact, in this method, by using linguistic terms in table 3.1, the concept of fuzziness is applied to determine pair comparison matrices. In this regard, we can refer to models offered by Buckley (1985), Laarhoven & Pedrych (1983), Chang (1992), Lin, 2010, Kahraman et al., 2006).

**TABLE 3.1. NUMERICAL SUM FOR PREFERENCES IN PAIR COMPARISONS**

Linguistic Terms	Numerical Sum
Preference with full and Absolute Importance	9
Preference with very strong importance	7
preference with strong importance	5
Preference with little importance	3
Preference with equal importance	1
For preferences between above linguistic terms	2,4,6,8

A wide study in regard to these techniques can be observed in works of Kahraman (2004).

Some papers published used the fuzzy AHP procedure based on extent analysis method and showed how it can be applied to selection problems (Önüt et al., 2010). In this study, fuzzy AHP is described based on extent analysis method by Chang because this method has been simpler than other fuzzy AHP and similar to the method of classic AHP method.

Extent analysis method of Chang

If  $\mathbf{X} = \{\mathbf{x}_1, \mathbf{x}_2, \dots, \mathbf{x}_n\}$  is the set of objects and  $\mathbf{U} = \{\mathbf{u}_1, \mathbf{u}_2, \dots, \mathbf{u}_m\}$  is wishes, then based on the extent analysis method by Chang, by considering one object, the extent analysis can be



considered for every Wish ( $g_i$ ). Therefore, there is the sum of “m” extent analysis for each object:

$M_{g_i}^1, M_{g_i}^2, \dots, M_{g_i}^m$  where  $i=1,2,\dots,n$

$$\begin{matrix} & w_1 & w_2 & \dots & w_m \\ \begin{matrix} o_1 \\ o_2 \\ \vdots \\ o_n \end{matrix} & \begin{bmatrix} M_{g_1}^1 & M_{g_1}^2 & \dots & M_{g_1}^m \\ M_{g_2}^1 & M_{g_2}^2 & \dots & M_{g_2}^m \\ \vdots & \vdots & \ddots & \vdots \\ M_{g_n}^1 & M_{g_n}^2 & \dots & M_{g_n}^m \end{bmatrix} \end{matrix}$$

Figure 3.1.shows matrices of wish (W)) and (object(O).

Where  $g_i$  is the goal set ( $i = 1, 2, 3, 4, 5, \dots, n$ ) and all the  $M_{g_i}^j$  ( $j = 1, 2, 3, 4, 5, \dots, m$ ) are Triangular Fuzzy Numbers (TFNs).

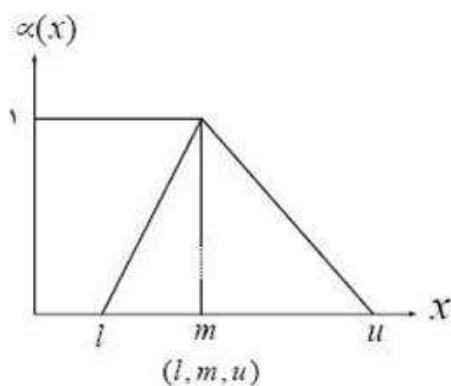


Figure 3.2. Shows a triangular fuzzy number (Yu and Hu, 2010; Celik et al., 2009).

The steps of Chang's analysis can be given as in the following:

*Step 1:* To obtain a fuzzy compound equation for each object:

If  $M_{g_i}^1, M_{g_i}^2, \dots, M_{g_i}^m$  is the sums of  $i^{th}$  object with respect to  $m$  wishes, then the fuzzy compound equation of  $m$  Wishes for  $i^{th}$  Objects is defined as below:

$$S_i = \sum_{j=1}^m M_{g_i}^j \otimes \left[ \sum_{i=1}^n \sum_{j=1}^m M_{g_i}^j \right]^{-1} \quad (1)$$

If  $M_{g_i}^j = (l_{ij}, m_{ij}, u_{ij})$ , then  $\sum_{j=1}^m M_{g_i}^j$  is defined by the fuzzy addition operation of  $m$  extent analysis as below:

$$\sum_{j=1}^m M_{g_i}^j = (l_{i1}, m_{i1}, u_{i1}) \oplus (l_{i2}, m_{i2}, u_{i2}) \oplus \dots \oplus (l_{im}, m_{im}, u_{im}) = \left( \sum_{j=1}^m l_{ij}, \sum_{j=1}^m m_{ij}, \sum_{j=1}^m u_{ij} \right) \\ = (l'_i, m'_i, u'_i) \quad (2)$$

Also to obtain  $\left[ \sum_{i=1}^n \sum_{j=1}^m M_{g_i}^j \right]^{-1}$  by the fuzzy addition operation, we will have:

$$\sum_{i=1}^n \sum_{j=1}^m M_{g_i}^j = \sum_{i=1}^n \left( \sum_{j=1}^m l_{ij}, \sum_{j=1}^m m_{ij}, \sum_{j=1}^m u_{ij} \right) = \left( \sum_{i=1}^n l'_i, \sum_{i=1}^n m'_i, \sum_{i=1}^n u'_i \right) \quad (3)$$

And then compute the inverse of the vector in the equation (3) is then obtained equation 4:

$$\left( \sum_{i=1}^n \sum_{j=1}^m M_{g_i}^j \right)^{-1} = \left( \frac{1}{\sum_{i=1}^n u'_i}, \frac{1}{\sum_{i=1}^n m'_i}, \frac{1}{\sum_{i=1}^n l'_i} \right) \quad (4)$$

There for:

Step 2: Assessment of degree of priority:

The degree of priority  $S_i$  to  $S_k$  is  $S_i = (l_i, m_i, u_i)$  and  $S_k = (l_k, m_k, u_k)$  then the priority of  $S_i$  to  $S_k$  which is indicated by  $V(S_i \geq S_k)$  is described as equation 6:

$$V(S_i \geq S_k) = \sup_{x \geq y} (\min\{\alpha_{S_i}(x), \alpha_{S_k}(y)\}) \quad (6)$$

And the equation is true for triangular fuzzy number:

$$V(S_i \geq S_k) = \alpha_{S_i}(d) = \begin{cases} 1 & \text{if } (m_i \geq m_k) \\ 1 & \text{if } (l_k \geq u_i) \\ \frac{l_k - u_i}{(m_i - u_i) - (m_k - l_k)} & \text{otherwise} \end{cases} \quad (7)$$

Where  $d$  is the highest intersection point  $\alpha_{S_i}$  and sees Figure 3.3)

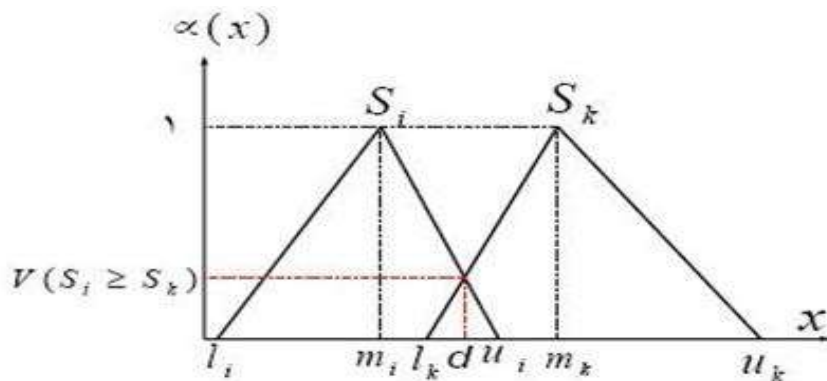


Figure 3.3. Intersection point of  $\alpha_{S_k}$  and  $\alpha_{S_i}$ 

To compare and  $S_k$ ; we need both the values of  $V(S_i \geq S_k)$  and

*Step 3:* The degree possibility for a convex fuzzy number to be greater than  $k$  convex fuzzy numbers  $S_i$  ( $i = 1, 2, 3, 4, 5, \dots, k$ ) can be defined by (Wang et al., 2008)

$$V(S \geq S_1, S_2, \dots, S_k) = V((S \geq S_1), (S \geq S_2), \dots, (S \geq S_k)) \\ = \min(V(S \geq S_1), V(S \geq S_2), \dots, V(S \geq S_k)) = \min V(S \geq S_i) \quad (8)$$

$$i = 1, 2, \dots, k$$

If  $d'(A_1) = \min V(S_i \geq S_k)$  for ( $k = 1, 2, \dots, n$   $k \neq i$ ) then the weight vector is given in equation 9 (It is note worthy that the obtained weights are fuzzy):

$$W' = (d'(A_1), d'(A_2), \dots, d'(A_n)) \quad (9)$$

Where  $A_i$  ( $i = 1, 2, 3, 4, 5, 6, \dots, n$ ) are  $n$  elements.

*Step 4:* Normalization of vector  $\hat{W}$  and obtaining weight vector of normalized weight of  $W$ .

$$W = (d(A_1), d(A_2), \dots, d(A_n)) \quad (10)$$

Algorithm of fuzzy analytic hierarchical process (AHP) in the method of extent analysis of Chang

The general process of algorithm of fuzzy AHP in the method of extent analysis of change is as below:

*Step 1.* Building up a hierarchy for the problem

*Step 2.* Determining pair comparison matrices and judgment operations, in traditional state (absolute), Table 3.1 is used for judgment operations; that is, the corresponding number is entered the pair comparison matrices by linguistic preferences.

But in the fuzzy state, we enter the sum of corresponding number with linguistic preferences in pair comparison matrices by triangular fuzzy numbers (Anagnostopoulos et al., 2007). Table 3.2 can be used in this regard. The fuzzy numbers given here are not equal to regular linguistic comparisons 1 to 9 but they are suitable for Fuzzy AHP and are used.

**TABLE 3.2. CORRESPONDING FUZZY NUMBERS WITH PAIR COMPARISONS PREFERENCES**

Linguistic Terms to Determine Preferences	Triangular Fuzzy Number
Preference or full and absolute importance	$(\frac{5}{2}, 3, \frac{7}{2})$
Preference or very stronger importance	$(2, \frac{5}{2}, 3)$
Preference or stronger importance	$(\frac{3}{2}, 2, \frac{5}{2})$
Preference or little importance	$(1, \frac{3}{2}, 2)$

Preference or nearly equal importance	$\left(\frac{1}{2}, 1, \frac{3}{2}\right)$
Preference or equal importance	$(1, 1, 1)$

It is to be mentioned that all elements on the main diameter of pair comparison matrices are equal to (1, 1, 1) and if the element of row  $i$  and column  $j$  of pair comparison matrix is equal to  $M_{g_i}^j = (l_{ij}, m_{ij}, u_{ij})$ , then element of row  $j$  and column  $i$  of this matrix is equal to:

$$M_{g_i}^j = (M_{g_i}^j)^{-1} = (l_{ij}, m_{ij}, u_{ij})^{-1} = \left(\frac{1}{u_{ij}}, \frac{1}{m_{ij}}, \frac{1}{l_{ij}}\right)$$

### Step 3. Computing relative weights of criteria and options

To compute the relative weight of the options with respect to each criterion and the relative weight of criteria with respect to object, we use the extent analysis method of Chang for each of pair comparison matrices. Therefore, a relative weight vector corresponding to that matrix is obtained for each matrix.

### Step 4. Computing the final weight of the options

The final weight of the options is obtained by modulation of relative weights. The key criteria as mentioned before are  $C_1$  (price),  $C_2$  (Colprocessor),  $C_3$  (capacity of customers (quantity)),  $C_4$  (special features of telecommunications),  $C_5$  (flexibility of the equipment in future),  $C_6$  (the number of customers supported by each rack).

**TABLE 3.3. COMPUTING THE FINAL WEIGHT**

Object	C1	C2	C3	C4	C5	C6
C1	$(1, 1, 1)$	$\left(1, \frac{3}{2}, 2\right)$	$\left(\frac{1}{3}, \frac{2}{5}, \frac{1}{2}\right)$	$\left(2, \frac{5}{2}, 3\right)$	$\left(\frac{2}{7}, \frac{1}{3}, \frac{2}{5}\right)$	$\left(\frac{5}{2}, 3, \frac{7}{2}\right)$
C2	$\left(\frac{1}{2}, \frac{2}{3}, 1\right)$	$(1, 1, 1)$	$\left(\frac{2}{7}, \frac{1}{3}, \frac{2}{5}\right)$	$\left(\frac{5}{2}, \frac{1}{2}, \frac{2}{3}\right)$	$\left(\frac{5}{2}, \frac{1}{2}, \frac{2}{3}\right)$	$\left(\frac{1}{2}, \frac{2}{3}, 1\right)$
C3	$\left(2, \frac{5}{2}, 3\right)$	$\left(\frac{5}{2}, 3, \frac{7}{2}\right)$	$(1, 1, 1)$	$\left(1, \frac{3}{2}, 2\right)$	$\left(1, \frac{3}{2}, 2\right)$	$\left(\frac{3}{2}, 2, \frac{5}{2}\right)$
C4	$\left(\frac{1}{3}, \frac{2}{5}, \frac{1}{2}\right)$	$\left(\frac{3}{2}, 2, \frac{5}{2}\right)$	$\left(\frac{1}{2}, \frac{2}{3}, 1\right)$	$(1, 1, 1)$	$\left(\frac{3}{2}, 2, \frac{5}{2}\right)$	$\left(1, \frac{3}{2}, 2\right)$
C5	$\left(\frac{5}{2}, 3, \frac{7}{2}\right)$	$\left(\frac{3}{2}, 2, \frac{5}{2}\right)$	$\left(\frac{1}{2}, \frac{2}{3}, 1\right)$	$\left(\frac{2}{5}, \frac{1}{2}, \frac{2}{3}\right)$	$(1, 1, 1)$	$\left(\frac{1}{2}, \frac{2}{3}, 1\right)$
C6	$\left(\frac{2}{7}, \frac{1}{3}, \frac{2}{5}\right)$	$\left(1, \frac{3}{2}, 2\right)$	$\left(\frac{2}{5}, \frac{1}{2}, \frac{2}{3}\right)$	$\left(\frac{1}{2}, \frac{2}{3}, 1\right)$	$\left(1, \frac{3}{2}, 2\right)$	$(1, 1, 1)$

$$\sum_{j=1}^6 M_{g_1}^j = (1, 1, 1) \oplus \left(1, \frac{3}{2}, 2\right) \oplus \left(\frac{1}{3}, \frac{2}{5}, \frac{1}{2}\right) \oplus \left(2, \frac{5}{2}, 3\right) \oplus \left(\frac{2}{7}, \frac{1}{3}, \frac{2}{5}\right) \oplus \left(\frac{5}{2}, 3, \frac{7}{2}\right)$$

$$= (7/116, 8/733, 10/4)$$

$$\sum_{j=1}^6 M_{g_2}^j = (3/086, 3/667, 4/733); \sum_{j=1}^6 M_{g_3}^j = (9, 11/5, 14)$$

$$\sum_{j=1}^6 M_{g_4}^j = (5/883, 7/567, 9/5); \sum_{j=1}^6 M_{g_5}^j = (6/4, 7/883, 9/667)$$

$$\sum_{j=1}^6 M_{g_6}^j = (4/286, 5/5, 7/067); \sum_{i=1}^6 \sum_{j=1}^6 M_{g_i}^j = (35/721, 44/8, 55/367)$$

$$\left( \sum_{i=1}^6 \sum_{j=1}^6 M_{g_i}^j \right)^{-1} = \left( \frac{1}{55/367}, \frac{1}{44/8}, \frac{1}{35/721} \right) = (0/018, 0/022, 0/028)$$

$$S_1 = (7/116, 8/773, 10/4) \otimes (0/018, 0/022, 0/028) = (0/128, 0/192, 0/291)$$

$$S_2 = (0/055, 0/081, 0/133); S_3 = (0/162, 0/253, 0/392)$$

$$S_4 = (0/105, 0/166, 0/266); S_5 = (0/115, 0/172, 0/271)$$

$$S_6 = (0/077, 0/121, 0/198)$$

$$V(S_i \geq S_k) = \begin{cases} 1 & m_i \geq m_k \\ 1 & l_k \geq u_i \\ \frac{l_k - u_i}{(m_i - u_i) - (m_k - l_k)} & \end{cases}$$

$$V(S_1 \geq S_2) = 1, V(S_1 \geq S_3) = \frac{(0/162 - 0/291)}{(0/192 - 0/291) - (0/253 - 0/162)} = 0/153$$

$$V(S_1 \geq S_4) = 1, V(S_1 \geq S_5) = 1, V(S_2 \geq S_6) = 1$$

$$V(S_2 \geq S_1) = 0/043, V(S_2 \geq S_3) = 1, V(S_2 \geq S_4) = 0/248; V(S_2 \geq S_5) = 0/165$$

$$V(S_2 \geq S_6) = 0/583, V(S_3 \geq S_1) = 1, V(S_3 \geq S_1, S_2, S_4, S_5, S_6) = 1$$

$$V(S_4 \geq S_1) = 0/841, V(S_4 \geq S_3) = 0/545, V(S_4 \geq S_2) = 1, V(S_4 \geq S_6) = 1$$

$$V(S_4 \geq S_5) = 0/962, V(S_5 \geq S_1) = 0/485, V(S_5 \geq S_2) = 1, V(S_5 \geq S_6) = 1$$

$$V(S_5 \geq S_4) = 1, V(S_5 \geq S_3) = 0/574, V(S_6 \geq S_1) = 0/496, V(S_6 \geq S_2) = 1$$

$$V(S_6 \geq S_3) = 0/214, V(S_6 \geq S_4) = 0/674, V(S_6 \geq S_5) = 0/619$$

Now we obtain preferences of  $S_i$ :

$$\begin{aligned}
 V(S_1 \geq S_2, S_3, S_4, S_5, S_6) \\
 &= \min(V(S_1 \geq S_2), V(S_1 \geq S_3), V(S_1 \geq S_4), V(S_1 \geq S_5), V(S_1 \geq S_6)) \\
 &= \min(1, 0/153, 1, 1, 1) = 0/153
 \end{aligned}$$

$$V(S_2 \geq S_1, S_3, S_4, S_5, S_6) = \min(0/043, 0/248, 0/145, 0/583) = 0/043$$

$$V(S_3 \geq S_1, S_2, S_4, S_5, S_6) = 1$$

$$V(S_4 \geq S_1, S_2, S_3, S_5, S_6) = \min(0/841, 1, 0/545, 0/962, 1) = 0/545$$

$$V(S_5 \geq S_1, S_2, S_3, S_4, S_6) = \min(0/485, 1, 0/574, 1, 1) = 0/485$$

$$V(S_6 \geq S_1, S_2, S_3, S_4, S_5) = \min(0/496, 1, 0/214, 0/674, 0/619) = 0/214$$

$$W' = (0/153, 0/043, 1, 0/545, 0/214)$$

We calculate normalization of fuzzy numbers:

$$W = (0/0627, 0/0176, 0/4098, 0/223, 0/1988, 0/0877)$$

#### APPLICATIONS OF PROPOSED METHOD

Now we use the steps of the procedure to identify the relationship between the critical success factors of agile voice of customers (VOCs) process as follows:

Step 1: Selecting a committee of VOCs experts including 12 managers.

Step 2: Developing the evaluation criteria and designing the fuzzy linguistic scale.

In our case the criteria are the critical success factors of agile VOCs, which were extracted by explanatory factor analysis. In this step also the different degrees of influence of a factor on the other factor are expressed in five linguistic term: “Very High, High, Low, Very Low, and No influence and the corresponding positive triangular fuzzy numbers as mentioned before are shown in Table 4.1.

**TABLE 4.1. THE CORRESPONDENCE BETWEEN THE LINGUISTIC TERMS AND LINGUISTIC VALUES**

<i>Linguistic terms</i>	<i>Linguistic values</i>
No influence (No)	(0, 0, 0.25)
Low influence (L)	(0, 0.25, 0.5)
High influence (H)	(0.25, 0.5, 0.75)
Strongly influence (VH)	(0.5, 0.75, 1.0)

**TABLE 4.2. LINGUISTIC EVALUATION OF CRITERIA OF VOICE OF CUSTOMER (EXAMPLE)**

	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	C <sub>6</sub>
C <sub>1</sub>	--	VL	H	L	H	VH
C <sub>2</sub>	NO	--	H	VL	NO	NO
C <sub>3</sub>	H	VH	--	NO	L	L



$C_4$	L	L	VL	--	L	VL
$C_5$	VH	VL	VL	VL	--	VL
$C_6$	H	NO	NO	VL	VL	--

Step 3: Acquiring the assessments of decision makers. To measure the relationships between the critical success factors;  $C=\{C_i/i=1, 2, \dots, 6\}$  the group of the chosen experts (17 people mentioned in step 1) was asked to make sets of pairwise comparisons in terms of linguistic terms. Hence 17 fuzzy matrices each is corresponding to an expert and with triangular fuzzy numbers as its elements are obtained. For example matrix  $\tilde{N}$  is as follows:

$$\tilde{N} = \begin{bmatrix} (0,0,0) & (0,.25,.5) & (.5,.75,1) & (.25,.5,.75) & (.5,.75,1) & (.75,1,1) \\ (0,0,.25) & (0,0,0) & (.5,.75,1) & (0,.25,.5) & (0,0,.25) & (0,0,.25) \\ (.5,.75,1) & (.75,1,1) & (0,0,0) & (0,0,.25) & (.25,.5,.75) & (.25,.5,.75) \\ (.25,.5,.75) & (.25,.5,.75) & (0,.25,.5) & (0,0,0) & (.25,.5,.75) & (0,.25,.5) \\ (.75,1,1) & (0,.25,.5) & (0,.25,.5) & (0,.25,.5) & (0,0,0) & (0,.25,.5) \\ (.5,.75,1) & (0,0,.25) & (0,0,.25) & (0,.25,.5) & (0,.25,.5) & (0,0,0) \end{bmatrix}$$

step 4: Acquiring the normalized direct-relation fuzzy matrix. Consider a triangular fuzzy number  $(\tilde{a}_{ij})$  according to equations 2 and 3 to calculate each direct-relation fuzzy matrix  $\tilde{E}$  for each matrix. For example for matrix  $\tilde{N}$ , the normalized direct relation fuzzy matrix  $\tilde{E}$  can be calculated by equations 2 and 3 as follows:

$$\tilde{E} = \begin{bmatrix} (0,0,0) & (0,.059,.118) & (.118,.176,.235) & (.059,.118,.176) & (.118,.176,.235) & (.176,.235,.235) \\ (0,0,.059) & (0,0,0) & (.118,.176,.235) & (0,.059,.118) & (0,0,.059) & (0,0,.059) \\ (.118,.176,.235) & (.176,.235,.235) & (0,0,0) & (0,0,.059) & (.059,.118,.176) & (.059,.118,.176) \\ (.059,.118,.176) & (.059,.118,.176) & (0,.059,.118) & (0,0,0) & (.059,.118,.176) & (0,.059,.118) \\ (.176,.235,.235) & (0,.059,.118) & (0,.059,.118) & (0,.059,.118) & (0,0,0) & (0,.059,.118) \\ (.118,.176,.235) & (0,0,.059) & (0,0,.059) & (0,.059,.118) & (0,.059,.118) & (0,0,0) \end{bmatrix}$$

Step 5: The procedure of calculation matrix  $T$  (The total-relation matrix) according to the Equations 4 is as follows:

$$Matrix[L_{IJ}] = \begin{bmatrix} .066 & .026 & .13 & .063 & .137 & 0.195 \\ .017 & .022 & .122 & .001 & .009 & .01 \\ .147 & .183 & .039 & .009 & .079 & .087 \\ .075 & .061 & .016 & .004 & .069 & .014 \\ .188 & .005 & .023 & .011 & .024 & .034 \\ .126 & .003 & .015 & .007 & .016 & .023 \end{bmatrix}, \quad Matrix[M_{IJ}] = \begin{bmatrix} .196 & .173 & .269 & .188 & .285 & .341 \\ .065 & .064 & .206 & .076 & .047 & .047 \\ .293 & .302 & .122 & .077 & .206 & .218 \\ .219 & .183 & .144 & .056 & .189 & .142 \\ .33 & .135 & .154 & .122 & .1 & .168 \\ .24 & .049 & .065 & .1 & .126 & .078 \end{bmatrix}$$

$$Matrix[U_I] = \begin{bmatrix} .64 & .59 & .719 & .569 & .729 & .7 \\ .424 & .293 & .508 & .342 & .367 & .349 \\ .748 & .622 & .482 & .436 & .621 & .598 \\ .642 & .531 & .53 & .333 & .569 & .5 \\ .671 & .471 & .514 & .429 & .41 & .493 \\ .609 & .37 & .409 & .388 & .463 & .338 \end{bmatrix}$$

$[T_{ij}] =$

$$\begin{aligned} & (.066, .196, .64)(.026, .173, .59)(.129, .269, .719)(.063, .188, .569)(.137, .285, .729)(.195, .341, .7) \\ & (.017, .065, .424)(.022, .064, .293)(.123, .206, .508)(.001, .076, .342)(.009, .047, .367)(.01, .047, .349) \\ & (.147, .293, .748)(.183, .302, .622)(.039, .122, .482)(.009, .077, .436)(.079, .206, .621)(.087, .218, .598) \\ & (.075, .219, .642)(.062, .183, .531)(.016, .144, .53)(.004, .056, .333)(.069, .189, .569)(.014, .142, .5) \\ & (.188, .33, .671)(.005, .135, .471)(.023, .154, .514)(.011, .122, .429)(.024, .1, .41)(.034, .168, .493) \\ & (.126, .243, .609)(.003, .049, .37)(.015, .065, .409)(.007, .103, .388)(.016, .126, .463)(.023, .078, .338) \end{aligned}$$

Step 6: After computing the matrix  $T$ , the amounts of  $d'' + r''$  and  $d'' - r''$  are calculated by Equations 5.  $d''$  and  $r''$  are sum of the rows and the sum of the columns of matrix  $T$  respectively. Table 4.3 illustrates the amounts of  $d''$ ,  $r''$ ,  $d'' + r''$  and  $d'' - r''$ .

**TABLE 4.3. COMPUTING SUMS OF  $d''$  AND  $r''$**

	$d''$	$r''$	$d'' + r''$	$d'' - r''$
C1	(0.6166, 1.4518, 3.9463)	(0.6193, 1.346, 3.7338)	(1.2359, 2.7978, 7.6801)	(-0.0027, 0.1058, 0.2125)
C2	(0.1822, 0.5045, 2.2814)	(0.3012, 0.9056, 2.8769)	(0.4834, 1.4101, 5.1583)	(-0.119, -0.4011, -0.5955)
C3	(0.5449, 1.2184, 3.507)	(0.3446, 0.9592, 3.1613)	(0.8895, 2.1776, 6.6683)	(0.2003, 0.2592, 0.3457)
C4	(0.241, 0.9329, 3.1037)	(0.0955, 0.6221, 2.4959)	(0.3365, 1.555, 5.5996)	(0.1455, 0.3108, 0.6078)
C5	(0.2845, 1.008, 2.9877)	(0.335, 0.9531, 3.1581)	(0.6195, 1.9611, 6.1458)	(-0.0505, 0.0549, -0.1704)
C6	(0.1907, 0.6639, 2.5768)	(0.3643, 0.9935, 2.9769)	(0.555, 1.6574, 5.5537)	(-0.1736, -0.3296, -0.4001)

Step 7: Now we use the equation 6 for diffuzification of the amount of ( $d''$ ) and ( $r''$ ), ( $d'' + r''$ ) and ( $d'' - r''$ ) and convert to  $d''^{def}$ ,  $r''^{def}$ ,  $(d'' + r'')^{def}$  and  $(d'' - r'')^{def}$  respectively. These amounts are illustrated in the Table 4.4

**TABLE 4.4. COMPUTING SUMS OF  $d''^{def}$ ,  $r''^{def}$  AND FUZZY AHP**

	$d''$	$r''$	$d'' + r''$	$d'' - r''$	Fuzzy AHP
C1	1.777	1.667	3.446	0.108	0.063
C2	0.808	1.212	2.036	-0.329	0.018
C3	1.557	1.299	2.859	0.265	0.41

C4	1.27	0.93	2.204	0.326	0.223
C5	1.304	1.294	2.601	0.026	0.199
C6	0.984	1.294	2.287	-0.35	0.088

STEP 8: Then we draw the causal 4.1 Analysis of results diagram based on these calculations . Figure 4.1 illustrates the causal diagram of the criteria.

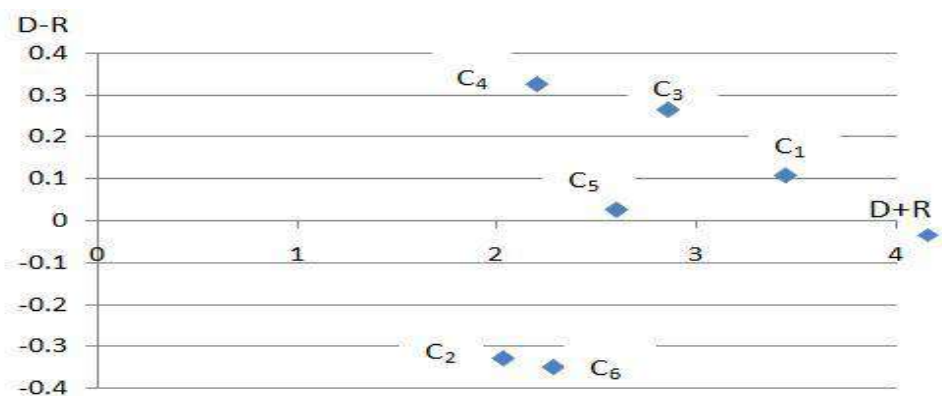


Figure 4.1. Diagram  $d''_i + r''_j$  on axis x and  $d''_i - r''_j$  on axis y.

## DISCUSSIONS

In column  $d''$ , elements  $C_1$ ,  $C_2$  and  $C_3$  accordingly indicate the most influence and in column  $r''$ , elements  $C_1$  and  $C_3$  are accordingly influenced more than other elements of this column. We know that every element in the hierarchy is determined by  $(d''_i + r''_j)$  columns and  $(d''_i - r''_j)$ . In column  $(d''_i + r''_j)$  where the total strength of an element either influencing or influenced are indicated, element  $C_1$  has the highest priority and  $C_3, C_5, C_6, C_4$  and  $C_2$  are accordingly placed from the second to the sixth rank. In column  $(d''_i - r''_j)$ ,  $C_4, C_3, C_1$  and  $C_5$  are influencing elements but  $C_6$  and  $C_2$  are influenced elements because they are negative. In table – the ranking of elements are calculated in the method of Fuzzy AHP where  $C_3, C_4, C_5, C_6, C_1$  and  $C_2$  are accordingly ranked from 1 to 6.  $C_3$  in  $(d''_i + r''_j)$  ranking is the second but in  $(d''_i - r''_j)$  ranking and the method of Fuzzy AHP, this element is placed the first rank. But  $C_2$  is the last in both methods and elements  $C_5$  and  $C_6$  are the third and the fourth in both ranking methods.

## CONCLUSIONS

Fuzzy DEMATEL method as a very useful group decision making tool has been used to transform the complex interactions between the criteria of the problems of practical life into a visible structured model. In this paper this method is proposed and applied to find the cause and effect critical success factors of voice of customer, which have been extracted by the explanatory factor analysis method.

Hence the DEMATEL method can convert the relationship between the causes and effects of criteria into an intelligible structural model of the system. The DEMATEL method has been successfully applied in many fields.

Using multiple fuzzy decision-making in ranking key factors of voice of customer is also effective in the municipalities of Tehran. Fuzzy AHP is one of the fuzzy ranking methods pairwise comparison criteria but Fuzzy DEMATEL was developed to solve very complicated issues of the world and it is used to structuralize the hypothetical information. With this method, it is possible to estimate the quantity of the effects of direct and indirect relations of elements with each other and promote the quality of relations and interrelations of the group. It is also used in group decision making. Fuzzy DEMATEL can be used together with models such as fuzzy QFD. In this model, the calculation can be easily performed by software such as MATLAB, EXCEL, MINITAB and SPSS. In group decision making, this model is preferred to other fuzzy models such as fuzzy AHP.

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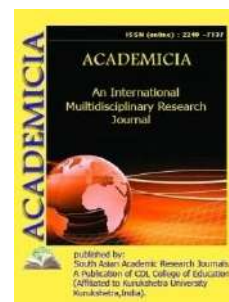
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## METHODOLOGY OF GIVING PROFESSIONAL KNOWLEDGE TO FUTURE TEACHERS

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### ABSTRACT

*Future teachers will be able to work steadily with their activities only if they fully acquire professional knowledge. In this article highlights of methodology of giving professional knowledge to future teachers.*

**KEYWORDS:** *Teacher, Methodology, Professional Knowledge, Education.*

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## INTRODUCTION

In the system of continuous education, which is defined in the "National program of Personnel Training", the orientation of young people to the profession takes a special place. Attention to this is becoming increasingly important in the Republic of Uzbekistan. Its theoretical basis is based on the law "On education" and the "national program of Personnel Training" (1997). Therefore, the prospects of this work from the point of view of implementation decree of the president of the Republic of Uzbekistan "on the strategy of action for further development of the Republic of Uzbekistan" dated February 7, 2017, DP-4947, decree of the president of the Republic of Uzbekistan "on measures for further development of the higher education system" dated April 20, 2017 resolutions DP-5264 of November 29, 2017 "On the establishment of the Ministry of Innovative Development of the Republic of Uzbekistan", DP-5313 January 25, 2018 "On measures to radically improve the system of general secondary, secondary special and vocational education" decree and other relevant normative legal acts in this area.

The above-mentioned issues are reflected in the works of a number of Eastern thinkers, Ismail al-Bukhari, Yusuf Khos Hajib, Abu Nasr Farabi, Abu Rayhon Beruni, Abu Ali ibn Sina, Abdurakhman Jami, Alisher Navoi, Jalaliddin Davani, Abdulla Avloniy, who recognized the world of pedagogical vocational training and professional stability of young people as well as the glorification of the teaching profession in society.

## MATERIALS AND METHODS

Scientists are engaged in problems of preparation of students for professional activity and formation of its stability in higher educational institutions in the direction of pedagogy. In the process of pedagogical higher education, issues of formation of teacher personality in students and increasing social activity of students on the basis of self-management in future teachers and diagnosis of professional formation are discussed. A.Abdullajonova, O.A.Abdulina, A.A.Akbarov, X.A.Abdurakhmanova, S.V.Safonova it was studied in the studies. Pedagogical scientists who studied the professional skills of the teacher H.Abdukarimov, N.Azizkhujaeva, A.Aliyev, A.Ahrorov, A.A.Verbisky, R.H.Juraev, B.R.Juraeva, J.G.Yoldoshev, S.M.Markova, G.M.Maxmutova, L.M.Mitina, A.G.Morozov, U.N.Y.Nishonaliev, M.Ochilov, B.Rakhimov, N.Saidahmedov, V.A.Slasyanin, U.Tolipov, A.RKhodjabayev, A.A.Khalikov, N.Shadiev, A.Haydarova, A.A.Hamidov, F.R.Yuzlikayev pedagogical skills of the teacher, which are considered an important factor in the formation of professional stability of future teachers in the scientific work of yuzlikaevs, the opportunities of the teacher to use modern innovative educational technologies, as well as the outlook of future teachers, ways and methods of further development of the culture of communicative communication are investigated. A.A.Badalev, E.M.Ivanova, E.Gaziev, M.G.Davletshins covered the psychological and psychophysiological aspects of professional education of the teacher's personality. V.Adolf, I.Zimnyaya, A.Karabaeva, N.Kuzmina, N.Muslimov, Sh.Sharipovs studied the problem of the formation of professional competence of the teacher. The analysis of literature shows that the content and definitions of the competency and the competency approach, as well as the professional qualities of the modern teacher, have been extensively studied. However, the system of diagnosis of the process of formation of professional stability of future teachers in higher educational institutions, the content, form, methods and means of innovative co-operation on the formation of professional stability of future teachers have not been sufficiently studied.

In the preparation of future teachers for educational processes on the basis of analysis of the extent to which the students are armed with the knowledge of the teaching profession, as well as on the basis of the requirements of the system for the promotion of the teacher's position in the society, a plan of measures was developed for graduates of pedagogical It was found out that on the eve of the graduation of Higher Education, future teachers will have the following qualities and qualities:

1. Stage of training psychological himself to work in the educational system: to feel himself responsible for giving knowledge to the future teachers and educating them as a competent person. Trust in the pedagogical system to operate in modern conditions within the framework of the requirements for the personality of the modern teacher.
2. Attributes of spiritual maturity: the attainment of the qualities inherent in a harmonious person as a result of the constant increase in the knowledge of future teachers ( humanism, achievement of spiritual maturity, fairness, internal and external culture, pedagogical exertion and etc.)
3. Qualities related to the acquisition of professional secrets: the fact that future teachers have well mastered educational and educational knowledge, as well as the timeliness of their effective use.
4. Educational norms-attributes of work with documents: future teachers know how to work with SES, curriculum, science program, textbooks, manuals, methodological manuals and monographs.
5. Attributes of working with information and telecommunications: the fact that future teachers have the qualities of professional stability so that they can work with the tools used in the process of education and training.
6. Quality of knowledge of languages: future teachers should have a good position in front of their colleagues and be aware of the news by reading foreign literature in its original form.
7. Attributes of management: knowledge of pedagogical control, management of educational and educational process.
8. Quality of scientific activity: understanding of scientific research work, preparation of articles and abstracts, preparation of textbooks, manuals, methodological manuals and monographs.

Future teachers will be able to work steadily with their activities only if they fully acquire professional knowledge. The work to be done for this is reflected below. First of all, in the integration of professional knowledge into the minds of future teachers, it is necessary to fully explain to students the “basic printouts of the state policy in the field of Education”, which are reflected in the law “on education”. Education is declared a priority in the field of social development of the Republic of Uzbekistan. The main print-outs of public policy in the field of education are as follows: the fact that education and training are of a humane, demoralizing nature;

- continuity and consistency of education;

-general secondary, as well as secondary special, compulsory vocational education;

-the direction of secondary special, vocational education: the choice of study in an academic high school or vocational college;



- the fact that the educational system is of a secular character;
- openness of education for all within the framework of state educational standards;
- a single and differentiated approach to the selection of educational programs;
- to be educated and encourage talent;
- harmonization of state and public administration in the educational system in the process in the educational system, the content of which in the state educational standards is defined as follows:

Determines the quality of personnel training, the general requirements for the content of education; the necessary and sufficient level of knowledge of training of Education recipients, as well as the general qualification requirements for graduates of higher education institutions; the size of the educational load; procedures for assessing the activities of educational institutions and the quality of training. Proceeding from this, when preparing future teachers, one should first pay attention to the quality of personnel training. When we arm students with the necessary level of professional knowledge in higher education, we can achieve professional stability only if we form their professional worldview in accordance with the modern requirements. Secondly, from our attainment of the professional stability of the future teachers, it is imperative to fulfill the general requirements for the content of Education. This is reflected in the SES years below: for example, humanitarian and socio-economic, mathematical and natural-scientific, general-military, specialized, additional, provided for the mastering of the blocks of compulsory subjects of the student.

### Analysis

The content of each educational science block is also subject to general requirements in alokhi. Participants in the educational process, which fulfilled these requirements in a timely manner, fully absorb the content of education. For example:

The general requirements for the content of the block of humanities and socio-economic sciences are as follows:

- complement and develop the knowledge acquired on the basis of general secondary and special secondary, vocational education;
- form the scientific and humanitarian worldview, high spirituality and democratic culture, economic, legal and creative thinking on the basis of the idea of national independence and democracy, national and universal values, and socio-political activity;
- ensuring the unity of education with history, philosophy, folk traditions, customs, preservation and enrichment of the culture of the peoples of Uzbekistan, respect for the history and culture of other peoples;
- develop the spirit of humanism, patriotism and internationalism;
- it is necessary to ensure that the process of education and training is directed to the formation of an independent thinking, capable of making decisions, comprehensively developed, harmonious personality.

When we properly organize the work, due to the above – mentioned general requirements for future teachers in the educational process, they become active participants in this process. As a

result, the following qualifications appear in them. These are:

- the worldview is radically changed, acquiring knowledge in a systematic and justifiable way. As a result, as a result of the fact that future teachers understand the actual issues of public policy, they will be able to independently solve social problems;
- students who fulfill the universal requirements for the content of science, first of all, will have a sense of self-confidence, second, there will be a sense of respect for national and spiritual values, there will be a patriotism for the future of our native land;
- students have a holistic scientific imagination and create the opportunity to use it in the future.
- one of the necessary knowledge for future teachers forms a pure human attitude towards personality society and existence. It turns out that the desire to teach the legal and moral criteria of this relationship not only to himself as a student, but also to the younger generations in the future;
- through the proper use of information sources, the ability to work independently with new knowledge and to lead a healthy lifestyle and apply to it is formed. They put this knowledge into operation in fairy tale activities and prepare the ground for a happy activity will serve to ensure professional stability.

Pedagogical sciences form the basis of ensuring the professionalism of future pupils. In the pedagogical sciences, a sense of correspondence with respect to the profession is formed. Increasing the possibility of acquiring pedagogical skills in the direction of future teachers to pedagogical professional activity is one of the important factors. Proceeding from this, we drew attention to the following sources, which serve to ensure the professionalism of future readers in this chapter of our scientific work. These are:

These are: the study of the activities of scientists, who brought the art of speech to a high level. For example; Perikl, Aristotle (384-322) in Central Asia is famous for the name Arastu, Socrates (about 427-347y.y.), Demosfen (384-322), Mark Tully Tsitseron (103-43), Likurg (324 died in the year), Katon (234-145 BC years), Mark Antony (143-87 BC years) to achieve something beautifully explained to readers by teaching their activities.

Eloquence is one of the most ancient art of the word art of the past wherein this art was called preaching in the Muslim East. Accordingly, speech - vowels are interpreted as preachers.

According to historians, such figures as Bahovuddin Valad, Jalaliddin Rumi, Hussein Koshifiy, Muin Voiz, Mohammed Rafik Voiz, Voiz Kazvini, Shirvani, Muhammad Voiz, Quraysh Saidi, Voiz Samarkandiy, Qazi Oshiy, Hussein Voiz Koshifiy, Sahibkiran Amir Temur, Alisher Navoi, Hussein Boykaro, Babur, Mirzo Ulugbek, who were the preachers of the Central Asian preachers treasure of the art of preachers' preaching those who thoroughly mastered and skillfully used it in their activities.

## DISCUSSION

The art of preaching is mainly in three forms: dabilirlik, khatiblik, muzakkirlik. The first of these consisted in a written statement of correspondence in the status of the state and reading it with recitation, the second-reading the sermon before noon prayers on Fridays, the third-commenting on religious, moral, legal issues after the letter at conferences on Fridays, Eid and other solemn

days. They were mainly imams, imams, imams, mudarris. In addition, in the works of great educators and pedagogical scientists, the formation of correspondence and stability to casab is taken as the main criterion by explaining the leading ideas of education to students. For Example: Abdurauf Fitrat. "The road of salvation", Abdulla Avlani "Turkiston Gulistan or morality", Abu Nasr Farabi "The city of virtuous people" Avliyakov N.X., Musaeva N., "New pedagogical technologies", Adizov B.R. Theoretical basis of creative organization of primary education: PED.science doc... diss., Azizkhodjaeva N. "Pedagogical technology and pedagogical skill", Asomova R.S. "The motivation for choosing a profession and its dynamics", Begimkulov U.Sh. Theory and practice of organization and management of information on pedagogical educational processes: PED. science doc...diss., Jamoldinova O.R. Improvement of pedagogical norms of the principles of continuity and continuity in the development of the culture of healthy living of young people: PED. science doc...diss., Yuldashev Q. Scientific and methodological bases of teaching literature in updated pedagogical thought and secondary schools: PED. science doc...diss., Yoldoshev J.G, Usmonov S.A. Fundamentals of pedagogical technology, Mardanov Sh.Q. Pedagogical bases of training and professional development of pedagogical personnel on the basis of educational values: PED. science doc...diss., Musurmonova O. Pedagogical bases of the formation of the spiritual culture of students of the upper classes: PED.science doc...diss., Nishanova Z.T. Psychological basis of the formation of independent creative thinking: Psych.science doc...dis., Reyimav Sh.K. Pedagogical bases of formation of culture of awareness and self-sacrifice in the students of the higher educational institution.: PED. Science can,...diss., Ruzieva D. Scientific and pedagogical bases of formation of national pride in the students of higher educational institution: PED. science doc...diss., Tulenova G.J. The role of the spiritual factor in increasing the social activity of young people (socio-philosophical analysis): Philo. science. doc...diss., Sharipov Sh.S. Theory and practice of ensuring the continuity of professional creativity of students: PED. science doc...diss., Sharipova D. Nauchnie osnovi hygienicheskogo vospitaniya obuchayutshixsya osnovi: Authoref. ...diss., Shodmonova Sh.S. Formation and development of the thinking of independence in the students of the higher educational institution (on the example of the direction of vocational education): PED. science doc...diss. – Egamberdieva N.M. Theory and practice of personal and professional socialization of students on the basis of cultural-humanitarian approach (pedagogy on the example of higher educational institutions): PED. science doc...diss.

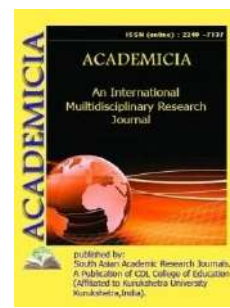
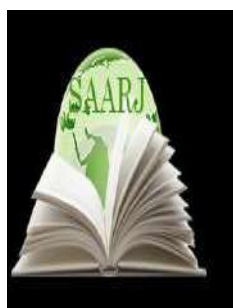
## CONCLUSION

The above information shows that the profession of teacher and the people involved in it, not only today, but also several centuries ago, in the processes of directing young people to the profession, they relied on the methodology of the formation of professional stability skills in it. In place of the conclusion, we can say that from the above-mentioned sources, we can give the following definition given to the methodology that we can use as a methodological basis in the formation of professional stability of future teachers.

Methodology (from the words method and...logic) is a system of organizing the theoretical and practical activities of the researcher, the principles and methods of restoration, as well as the doctrine of such a system. Methodology is also described as a doctrine about methods or gross-common cognition method. The methodology teaches the way to approach the techniques and the realities as a whole. Teaches a certain part of reality, some aspect, some state of its development.

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## **MODERN ICT IN ENGLISH LANGUAGE TEACHING**

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### **ABSTRACT**

*The modern stage of society development is characterized by the process of informatization, the use of information as a public product that provides for the intensification and intellectualization of the main spheres of human activity, acceleration of the scientific and technical process and the democratization of society. A person who is proficient and effective in technology and information has a different, new style of thinking, and approaches the assessment of the problem and the organization of their activities in a different way. This article discusses modern*

*information and communication technologies (ICT) and the possibility of their application in teaching English.*

**KEYWORDS:** *Information And Communication Technologies (ICT), Computer, Internet, Multimedia Presentation, English Language Teaching.*

## INTRODUCTION

Modernization of the content of education at the present stage of development of society is not least associated with innovative processes in the organization of foreign language teaching. In recent years, the question of the use of new information and communication technologies (ICTs) in secondary higher education institutions has been raised more frequently. These are not only new technical tools, but also new forms and methods of teaching, a new approach to the learning process.

ICT is a term of the beginning of the twenty-first century, the term of the new information society that humanity is building. Information technologies - "a system of methods and methods for collecting, accumulating, storing, searching, transmitting, processing and issuing information using computers and computer communication lines."

It is impossible to imagine a modern higher education institution without new information technologies, because the modern level of the educational process involves the use of computer technologies in higher education institution. The use of information technologies in the classroom is one of the modern means of implementing a person-centered approach to teaching English in higher education institutions. The modern lesson involves a new level of knowledge development, development of cognitive interests, intellectual and creative abilities.

The use of ICT in the educational process contributes to:

- improving the quality of training;
- Effective organization of active cognitive activity of students and formation of a high level of motivation;
- Formation of information and technical culture of students and sustainable interest in educational activities;
- Development of students' independence;
- The possibility of visual and dynamic presentation of information using images and sound (text, graphics, audio and video information, animation);
- Access to information resources that attract scientific and cultural information.

One of the goals of teaching a foreign language in secondary higher education institutions, along with educational, educational and developmental, is the formation of foreign language communicative competence. It includes the ability and readiness of students to use a foreign language in various communication situations in accordance with the norms of this language, when working with foreign language information. The task of the teacher is to create conditions for practical language acquisition for each student, to choose such teaching methods that would allow the student to show their activity, their creativity.



Teaching English at the modern level is impossible without the use of information technology. The use of ICT is an important factor in increasing the motivation of students to learn a foreign language, making lessons more rich, productive and interesting, developing all types of communicative competence of students through educational and extracurricular activities on the subject. The use of information technology is very relevant today. Modern education places increasing demands on the teacher to learn a foreign language at higher education institution, focusing on the communicative competence of students in all its components.

Modern information technologies offer great opportunities to expand the educational framework for each higher education institution subject, and a foreign language is no exception. Learning English today is a creative process. In the study of English, the multimedia potential of new information technologies is used, which shows the high efficiency of using the didactic capabilities of computer technologies.

The use of ICT contributes to the effective solution of the following didactic tasks of teaching English:

- Formation of skills for reading foreign texts;
- Improvement of listening comprehension skills;
- improving the skills of reading;
- improving the ability to build monologue and Dialogic statements;
- Improvement of writing skills in the preparation of various types of essays, retellings, essays;
- adding vocabulary to the vocabulary of modern foreign languages;
- Formation of a stable motivation for foreign-language activities with the help of operational materials on the Internet, e-mail, search engine results.

The computer best "fits" into the structure of the educational process, most fully meets the didactic requirements and brings the process of learning English as close as possible to the real conditions. Computers can perceive new information, process it in a certain way and make decisions, can remember the necessary data, reproduce moving images, and control the operation of such technical training tools as speech synthesizers, video recorders, and tape recorders.

The computer also provides comprehensive control of the educational process. Control, as we know, is an integral part of the educational process and serves as a feedback between the student and the teacher. When using a computer to control the quality of students' knowledge, a more objective assessment is also achieved.

Another advantage of the computer is the ability to accumulate statistical information during the educational process. Analyzing statistical data (the number of errors, correct and incorrect answers, requests for help, time spent on the implementation of individual knowledge, etc.), the teacher judges the degree and quality of knowledge formation in students.

One more factor should be noted: the computer removes such a negative psychological factor as "phobia". During traditional classroom classes, various factors (pronunciation defects, fear of making mistakes, inability to formulate their thoughts aloud, etc.) do not allow many students to show their real knowledge. Being "alone" with the display, the student, as a rule, does not feel constrained and tries to show the maximum of their knowledge.

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Computers also create favorable opportunities for organizing independent work of students in English lessons. Students can use the computer to study individual topics, as well as to self-control their knowledge.

Multimedia presentation is a didactic tool for organizing the educational process, the expediency of which in the educational process is due to the specific possibilities of presenting information: multi-channel, visual, integrality, modeling of the studied processes and phenomena, interactivity, game form.

One of the obvious advantages of an English lesson using a multimedia presentation is its visibility. The use of visualization is all the more important because higher education institutions usually lack the necessary set of tables, diagrams, reproductions, and illustrations.

Multi-media presentations allow you to focus students' attention on significant points of the information presented and create visual effective samples in the form of illustrations, diagrams, diagrams, graphic compositions, etc. The presentation allows you to influence several types of memory at once: visual, auditory, emotional, and in some cases motor. Increased interactivity leads to more intensive participation in the learning process of the learner, which contributes to improving the efficiency of perception and memorization of educational material.

The advantages of implementing Internet technologies in the process of teaching English are currently not in doubt. The use of Internet technologies provides a unique opportunity to connect to any point of the world using search engines. Learning already goes beyond the classroom and takes on limitless features.

The most widely used features of the Internet when teaching English are used for:

- e-mail correspondence with peers from the countries of the language being studied;
- Participation in testing, competitions, and Olympiads;
- distance learning courses;
- Participation in telecommunications interregional, national, and international projects.

Internet information resources contain text, audio and visual material on various topics in different languages. Educational Internet resources (IR) are created exclusively for educational purposes.

An interactive whiteboard is a valuable tool for teaching the entire class. This is a visual resource that helps you present new material in a fun way, and is a valuable tool for explaining abstract ideas and concepts. You can easily change information and move objects on the Board.

The introduction of lessons using an interactive whiteboard into the teacher's work has made not only the lessons more interesting and exciting, but also the preparation for them. Students' interest in the subject increases. The perception of the lesson is sharpened: video, sound, graphics, animation. The positive aspect of such lessons is that the students themselves are actively involved in the preparation process. Training programs are an indispensable tool for activating and fixing thematic lexical units, as they allow for their repeated repetition, accompanied by the presentation of images, increase the motivation of students and involve involuntary attention in the process of memorization. To test students' comprehension of lexical units and grammatical material, you can use simple presentations made in the form of riddles or

multiple-choice tests, in which the slides of tasks and correct answers alternate (used during speech charging when working with students in front).

The use of ICT expands the teacher's ability to choose materials and forms of educational activity, increases the effectiveness of the lesson, makes it bright and exciting, informative and emotionally rich.

Thus, multimedia products can be a powerful motivational factor and attract students to learning. At the same time, the role of the teacher will not become less significant. No amount of cutting-edge technology can replace the teacher in the classroom. The most important thing in the lesson is live communication. The role of the teacher in the educational process is the leading one, so the mechanism of using information technologies in learning a foreign language will require increased efforts of the teacher. Effective use of ICT directly depends on the information culture and computer literacy of the teacher. The teacher cannot and should not lag behind the achievements of science and technology, he is called to ensure that technical capabilities serve the development of the human soul. Therefore, every teacher must constantly look for new ways to conduct the lesson, strive to make each lesson more interesting and exciting, so that the lesson material will remain in the memory of students for a long time. One way to achieve this goal is to use ICT in the preparation and delivery of lessons.

The possibilities of using computer technology are limitless. They facilitate the work of the teacher and arouse great interest among students, offer simple and convenient tools for solving a wide range of tasks, and provide students with an additional incentive to learn a foreign language.

The use of information technologies gives an impetus to the development of new forms and content of traditional activities of students, which leads to their implementation at a higher level. The results of the use of ICT are-improving the quality of education, high cognitive activity of students, individualization of learning, development of creative approach in the performance of educational tasks. Today, information and communication technologies can be considered a new way of transferring knowledge, which corresponds to a qualitatively new content of learning and development of the child.

## CONCLUSION

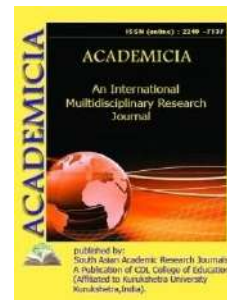
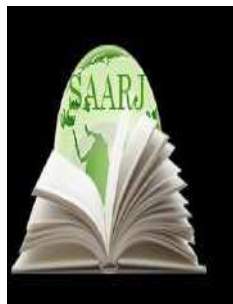
The use of new ICTs helps to implement a personal-oriented approach to learning, contribute to the individualization and differentiation of learning, taking into account the abilities of children, their level of learning, the intensification of independent work of students, increase cognitive activity and motivation, increase the volume of tasks completed, the ability to show creativity.

The introduction of ICT contributes to achieving the main goal of modernizing education - improving the quality of education, increasing the availability of education, ensuring the harmonious development of a person who is oriented in the information space, is attached to the information and communication capabilities of modern technologies and has an information culture.

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## INNOVATIVE TECHNIQUES FOR ESP PAIR WORK

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### ABSTRACT

*Innovative ideas in the field of technology have simplified the work and helped our rapid development. These ideas contribute to the creation of innovative technologies over time. In order to create this innovative idea, it is necessary to have the knowledge, which is fundamental in this process. Thus we get the scheme: knowledge idea technology. Not all classroom activities are designed for pair work. The best time to use pair work is during oral activities, as these activities allow students to get more speaking time than they would in a class setting.*

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**KEYWORDS:** *Simplify, To Contribute, Idiomatic And The Prepositions, Your Outlook, Receive And Transmit.*

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## INTRODUCTION

One should say that English is not an easy language to learn. There is a big problem of spelling, of the large number of exceptions to any rule. This language is very idiomatic and the prepositions are terrible. English is one of those languages which may seem easy in the beginning, but then the bridge between basic knowledge and mastery takes a long time to cross. If you cross this bridge, it will give you great satisfaction. You will be able to speak to people from other countries, to read foreign authors in the original, which makes your outlook wider. To know English today is absolutely necessary for every educated man, for every good specialist.

Innovative ideas in the field of technology have simplified the work and helped our rapid development. These ideas contribute to the creation of innovative technologies over time. In order to create this innovative idea, it is necessary to have the knowledge, which is fundamental in this process. Thus we get the scheme: knowledge idea technology. To date, innovative technologies are traditionally divided into two segments: information technologies (technologies of automated information processing) and communication technologies (technologies for storage and transmission of information). For example, with the help of communication technologies, people can receive and transmit various contents, being in different corners of our world. International relations, including education, business negotiations and much more are now possible faster and more efficiently. If we recall the communication innovations in the field of education, first of all, it should be emphasized that people can enter higher education institutions and study remotely regardless of their location. Furthermore, every qualified pedagogue teaches something new and useful.

Communication with representatives of other countries contributes to our self-development. All this eventually promotes the creation of qualified unique staff.

Information technologies allow:

- To automate certain labor-intensive operations;
- Automate and optimize production planning;
- Optimize individual business processes (for example, customer relations, asset management, document management, management decision making), taking into account the specifics of various branches of economic activity.

## MATERIALS AND METHODS

Information technology is used for large data processing systems, computing on a personal computer, in science and education, in management, computer-aided design and the creation of systems with artificial intelligence. Information technologies are the modern technological systems of immense strategic importance (political, defense, economic, social and cultural), which led to the formation of a new concept of the world order - "who owns the information, he owns the world." The spread of information and communication technologies play an important role in structural changes in all the areas of our life. For someone, it will be difficult to learn these technologies. Workers who will not be able to study will have to give way to the

younger generation. Thus we are faced with a problem because, in order to use innovations in technologies and develop it, it is necessary to have a qualified youth. First and foremost there is the question of education. Anyway, only education can create a developed generation that will continue to strive for new knowledge and will meet the requirements of innovative technologies. In addition, I am convinced that innovative ideas in technologies have created a completely new life, which poses new challenges for our country. How we will cope with these tasks depends on the future of our country.

The first mistake many teachers make when assigning pair work is to let students choose their pairs. While that may be fun for those in the class who are already friends, your job as the teacher is to assess each student's strengths and weaknesses and put them with someone they can work with well. In other words: you make the pairs. If you know that two students are particularly good at conjugation, it might be interesting to put them together so that they have a real challenge. If one student is exceptionally shy, don't stick them with the class loudmouth; they'll only be over shadowed. The best way to set up pair work in the classroom is to allow no expectations amongst students that they'll be picking their own partners.—We're going to go about this activity in pairs!

For example: Sasha with Kevin, Lucy with Mary. By making it obvious that you'll be the one deciding who works with whom, no one will get upset or try to fuss. Once the pairs have been established, it's time for your most important role: monitoring pair work. While most pair work should finish with a group discussion or individual evaluation, the purpose of the pair work is lost if you aren't listening and gently correcting. While you should be wary of over-correcting and silencing a student, do wander the room, listening for errors that you know a student can correct him or herself. Then you can gently remind the student how to properly use that language. This serves two purposes: not only does it reinforce correct use of English, but it also ensures that students know you're listening. This way, they're sure to give the pair work activity their all. Not all classroom activities are designed for pair work. The best time to use pair work is during oral activities, as these activities allow students to get more speaking time than they would in a class setting. But you can't just ask students to talk to each other for two minutes—you need a bit more structure than that!

## DISCUSSION

Here are 7 great ESL pair work activities that you can use in a variety of ways to get your students talking.

### 1. Investigative Journalist.

Investigative journalist is a classic pair work activity for a reason: it works! It can be used in a variety of scenarios and tailored according to specific grammar or vocabulary points that you've been reviewing in class. The basis of investigative journalist is for students to interview one another in pairs and present their findings. It can be used for groups at all levels from beginning to advanced, as long as you tailor it to their levels. Beginners may do a simple version, asking their partners about their family structure, favorite colors and foods, pets and hobbies. Intermediate students could use investigative journalist to practice past tense structures by asking about their interlocutor's childhood. Advanced students might benefit from a murder mystery version of the game, where each student is assigned a character to play and the game concludes with the murderer being succeed out as a result of the questions.



Have fun with this game, and remember: if you give your students the tools to succeed, they'll surprise you!

## 2. Debate.

Debate is another classic that can incorporate pair or group work, depending on the size of your class. Create groups and assign each group or pair a side of an argument. Use pair work time to allow students to develop their argument and conclude with a class-wide debate. Debate is made even more interesting when you present students with authentic materials to use as support for their claims.

## 3. What's your secret?

What's your secret? Does a pair work activity that truly involves the whole class? In this game, which is a play on investigative journalism, each student writes a secret down on a piece of paper, things like: "I play the clarinet", or "I have a twin". The papers are placed in a hat and each student draws one: that's where the game begins. What's your secret? Can either be played by allowing students to mill about the classroom freely or by setting up a speed dating scenario, where each pair has 1 minute to speak before rotating. Students may ask one another yes/no questions they may not ask directly if what's on the piece of paper is true about them or not. Students then must to whom the secret they drew belongs.

## 4. It's Your Turn: Teach a Class!

Teach a class! Is a fun activity for advanced EFL students? In this activity, you assign each pair a grammar, vocabulary or culture point that they'll have to teach to the class. The pair works together to prepare activities and lesson plans and teaches the point to the class. Unlike many of these other activities, the conclusion portion of this activity is built right in: when the pair teaches the class, the teacher should play the role of the student, but you may evaluate the lesson at the end and feel free to correct any mistakes the - teachers' make!

## 5. Following Directions.

Following directions is an interesting game that offers a change from classroom routine. In this game, each student in the pair draws a picture, keeping their paper shielded from the eyes of their partner. Ideally, pictures should be fairly geometric. Once the picture is complete, they explain to their partner, using words only, how to replicate the image. For example, if a student has drawn the stereotypical square house with a triangle roof, he might say: -Draw a square in the middle of the paper that's about a third of the size of the paper. Draw an equilateral triangle on top of the square, using the top side of the square as the bottom side of the triangle. The goal of this game is for each partner to replicate the other's drawing going by these spoken directions.

## 6. Games! Yes, No

Many pair work activities can feel like games, but sometimes it's fun to introduce some real games into the mix. Yes, no is a game where the only two words that students aren't allowed to say are yes and no. Pair students off and play. When a student loses, he or she is out and the winning partner is paired with another winning partner. In this way, you can create a tournament of yes, no. Other versions of the game also forbid - maybe and - Consider these versions when the game is lasting too long or students need an extra challenge.



## 7. Games! Who?

Who is a version of 20 questions that focuses entirely on people? Students draw the name of a famous person out of a hat (you'll need to prepare these slips in advance!) and their partner tries to who's on the paper by asking a series of yes/no questions. Like yes, no, who can be turned into a tournament-style game.

Concluding a Pair Work Activity Remember: a pair work activity isn't a lesson in and of itself. There should be a brief introduction, letting students know what you expect them to do during the activity. There should be especially conclusion. Be sure to budget it into your class time or the pair work activity will be useless. During your conclusion, you should gather the information gleaned during the activity and go through it as a group. This will allow you to correct errors and it'll also allow students to learn from their peers. Many pair work activities also benefit from being followed up by an individual activity such as a written response, worksheet for homework or short oral presentation to the group presenting the student's findings. Once you've mastered the art of pair work, your students will be speaking up (and correctly!) before you know it!

Oh, and One More Thing...

Another way to truly engage your students with English is to use fluently. Fluently takes real-world videos-like music videos, cartoons, documentaries and more-and turns them into personalized language learning lessons for you and your students. It's got a huge collection of authentic

English videos that people in the English-speaking world actually watch on the regular. There are tons of great choices there when you're looking for songs for in-class activities. You'll find music videos, musical numbers from cinema and theater, kids' sing-alongs, commercial jingles and much, much more.

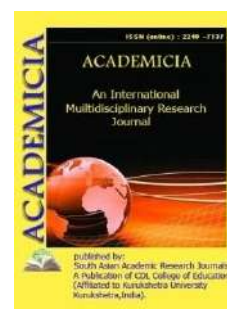
## CONCLUSION

On Fluently, all the videos are sorted by level and are carefully annotated for students. Words come with example sentences and definitions. Students will be able to add them to their own vocabulary lists, and even see how the words are used in other videos. For example, if a student taps on the word - brought they'll see this: Plus, these great videos are all accompanied by interactive features and active learning tools for students, like multimedia flashcards and fun games like - fill in the blank. It's perfect for in-class activities, group projects and solo homework assignments. Not to mention, it's guaranteed to get your students excited about English! There is the closest of links between language dominance and economic, technological, and cultural power, too, and this will become increasingly as the history of English is told. A strong power-base, of whatever kind, no language can make progress as an international medium of communication. Language has no independent existence, living in some sort of mystical space apart from the people who speak it. Language exists only in the brains and mouths and ears and hands and eyes of its users. When they succeed on the international stage their language succeeds. When they fail, their language fails.

Students are also encouraged to learn material in greater depth than they might otherwise have done, and to think of creative ways to convince the teacher that they have mastered the required material.

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## **ABOUT SOME USEFUL AND POISONOUS PLANTS OF THE FAMILY APIACEAE L**

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**ABSTRACT**

*In this article highlights of about some useful and poisonous plants of the family a piaceae L. The resinous substance in the roots of these plants, cyclotoxin, has a significant effect on the centers of excitation of the spinal cord of animals, that is, on respiration, heart rate and blood pressure. From plants of the Apiaceae L. family, especially from the root of the plant, cattle are particularly affected. We know from history that the great ancient Greek philosopher Socrates died of poisoning from this plant. From ancient times in Athens, people sentenced to death were ordered to drink poisonous drinks made from this plant.*

**KEYWORDS:** Plant, Family Apiaceae L., Jizzakh Region.

**INTRODUCTION**

One of the largest families of dicotyledonous plants is the *Ferula* L. family, which belongs to the *Apiaceae* L. family. We can find about 3,500 plant species in 300 genera. Of these, 420 species belonging to 93 genera are found in Central Asia. In Uzbekistan, there are more than 40 species of plants and about 20 species in the Jizzakh region.

Representatives of this family are important medicinal, fodder, honey plants, edible and poisonous plants. In some species of this plant, Estrogen, one of the most important substances, can be found. Estrogen preparations are used for many purposes in medicine and animal husbandry.

## MATERIALS AND METHODS

The glue extracted from the roots and stems of these plants has been used by different peoples for different purposes, in the treatment of various diseases. It is possible to make 100 tons of glue from the roots of some species of *Ferula* L., for example, *F. foetida*, *F. diversivittata* and *F. kohistanica*. It is even possible to export this glue to foreign countries. We know that pinoferol and tefestrol can be obtained from the *F. kohistanica* and *F. tenuisepta* series of plant species.

We need to pay more attention to the conservation and rational use of this family of plants, obtaining high-quality raw materials from certain plant species, and growing seeds in nature for use.

The most common member of the family *Apiaceae* L. is widespread in the northern hemisphere, tropical and subtropical countries. There are both useful and poisonous species of plants of the family *Apiaceae* L. Especially for livestock, plant poisoning can be observed in the early stages of vegetation and during dew.

It is clear that in some families of members of the *Apiaceae* L. family there are poisonous species, including *Ferula* L., *Aethusa* L., *Chaerophyllum* L., *Oenanthe* L., *Astrantia* L., *Sium* L., *Cicuta* L., *Muretia* Boiss., *Prangos* Lindl., *Conium* L. Some species even contain alkaloids. These species are toxic not only to humans but also to livestock.

In particular, *C. virosa* L. belonging to the *Cicuta* L. and *S. latifolium* belonging to *Sium* family can be found in some parts of Central Asia, and many plant species can be found in Europe. The resinous substance in the roots of these plants, cyclotoxin, has a significant effect on the centers of excitation of the spinal cord of animals, that is, on respiration, heart rate and blood pressure. From plants of the *Apiaceae* L. family, especially from the root of the plant, cattle are particularly affected. We know that species having a narcotic effect of the genus *Ch. temulum*, which belongs to the family *Chaerophyllum* L., are found in the Crimea and the Caucasus. They stimulate the mucous membranes in the digestive tract of cattle, pigs and lambs.

Some members of the *Prangos* Lindl. family are poisonous to cattle, pigs and lambs when they are just starting to grow. At this time, it is very harmful to the sight of the horses, it can even lead to blindness, but its hay is harmless.

In addition, the resinous enantotoxin in plant species *Y. aquatica* (L.) Poir. in the family *Oenanthe* L. is present in all parts of the plant, especially in the root system.

The essential oils in the fruits of *Heracleum spondylium* L. and *Heracleum lehmannianum* Bunge of plant species of the *Heracleum* L. family have an unpleasant odor and are known to burn the skin.

In addition, the thorns of the plant *Caucalis daucoides* L. are found among the milk thistles, which greatly injure the oral cavity and digestive organs of all livestock. *Anthriscus vulgaris* Pers., *Sium cisarroides* (DC) and many other species of plants are poisonous.

## DISCUSSION

Let's look at some poisonous plants belonging to the genus *Conium maculatum* L., i.e. spotted rust and *Ferula* L.

Of the *Apiaceae* L. family, spotted conium or rust may be an example. This plant is also called stinky grass, in Tajik - dogdar, shavkaron. This plant is a biennial herbaceous plant and its scientific name is *Conium maculatum* L. The word "conium" is derived from the word "conao" and means dizziness.

In all irrigated lands, along waterways and in abandoned lands, this herb can be found as a weed. The leaves of this biennial herb with a spike-like root are trimmed three times in a triangular shape, the canopy is up to ten long and short, the shape is radiant. The leaves are triangularly trimmed three times. This plant blooms for 3 months, ie in May-July, and bears seeds in July-August. During flowering, this plant can be distinguished from other plants. For example, the height, the formation of umbels and their white color, and umbels can be compared to wild carrots. The stem of this plant is much stronger. Therefore, the stems of this plant will stand up until the end of autumn. We often see this plant in the deserts of Central Asia and in the Tien Shan Pamirs.

Among the toxins, alkaloids, concein, conhydrin, conin, methylconin and pseudoconhydrins can be found in the plant *Conium maculatum* L. Several scientists of the Institute of Plant Chemistry named after Academician S.Y.Yunusov, for example, professor S.Akramov and his students have isolated more than a dozen alkaloids from plants.

Alkaloids in the poisonous plant *Conium maculatum* L., quickly act on the center of the nervous system and paralyze nerves. The world-famous scientist Abu Ali Ibn Sina also called this plant "deadly poison" in his own language. The juice of *Conium maculatum* L. also has sedative properties. From ancient times, the plant has been used in folk medicine for the treatment of various diseases. It is also very useful in the treatment of common cough, breast cancer, gastrointestinal pain, uterine fibroids, epilepsy and external rheumatism. In a number of countries, including India, the plant is used in the treatment of skin diseases, and in Tajikistan, the root decoction is used in the treatment of cardiovascular diseases and several gastrointestinal diseases. It is also used as a hemostatic agent. The people of Tajikistan also use this plant as a means of promoting health. Decoction of the seeds of the plant is very useful in relieving pain, rheumatism and muscle injuries. People should be careful when using *Conium maculatum* L. Poisoning with this plant can cause drowsiness in people, salivation, dizziness, thirst and vomiting, as well as cases of blurred vision. In severe cases, the disease can even lead to death.

In addition, the fruits of this plant are poisonous too and contain up to 1% of alkaloids. The roots are the most poisonous part in the spring. The seeds of the plant contain 0.7% to 2% of alkaloids, as well as up to 1% of conium alkaloids. The content of alkaloids in the leaves of this plant is 0.1%, in the stem - 0.12%, and in the roots - 0.15%. During the flowering and fruiting of plants, the amount of alkaloids is high. In addition to alkaloids, such poisonous plants contain essential oils, flavanoids, a number of additives, vitamin C, provitamin A. The most famous poisonous

plant is *Conium maculatum* L. We know from history that the great ancient Greek philosopher Socrates died of poisoning from this plant. From ancient times in Athens, people sentenced to death were ordered to drink poisonous drinks made from this plant.

In scientific medicine, the extract and ointment of the plant *Conium maculatum* L. are also used for analgesia of the skin. Oncologists also use the plant *Conium maculatum* L. in the treatment of cancer. In folk medicine, it is known that the use of the flower is useful when the eye hurts, applying gruel from the plant to the stomach stops bleeding from the intestines, and applying to the forehead stops bleeding from the nose. Since ancient times, rural doctors soaked the plant in boiling water, even boiled it in milk, put it in bags, chopped the leaves of the plant, mixed with honey and applied to all open wounds on the body. A liquid made from flowers, that is, a mixture of a 10-12% solution of vodka, is widely used as a sedative in the nervous systems.

The plant *Ferula communis*, belonging to the family *Ferula* L., is poisonous until flowering, the next growing season is non-toxic. Livestock love and eat this plant. However, goats and sheep are often poisoned, and signs of poisoning are always visible a week after grazing. In this case, the first from small cattle goats and sheep are poisoned. Signs of poisoning include nasal discharge and nosebleeds in animals, bleeding from the intestines, and even a mixture of purulent blood in the feces of the animal.

The reason for the toxicity of plants, for example, *F. communis*, is associated with ferula alkaloid, ethyl 4-oxumaric acetic acid, umbelliferin. All of these substances are antagonists of vitamin A and play an important role in the function of the liver, the disruption of blood clotting in the body. The clinical manifestations of these diseases are tachycardia, as well as bleeding from the coronary arteries and intestines (Kurmukov et al. 1994)

The surface of this plant is also poisonous. According to MF Infante in 1965 about poisoning cattle and goats that consumed the plant, *F. communis* poisoning disrupts the activity of 2,4,5,7 and 9 coagulation factors in the body, and the following clinical signs of poisoning are observed characterized by increased bleeding, anemia, hematuria and intestinal bleeding.

In the study of some species of *F. marmarica* plants distributed in Egypt, it was observed that their toxic properties poison all agricultural animals (Kamel, Bayonumi, 1972). An emulsion made from this plant causes symptoms similar to dukumarin. In an experiment conducted under the skin of mice, a solution of the plant in alcohol was treated with benzene, and the rest was prepared in the form of an emulsion with olive oil.

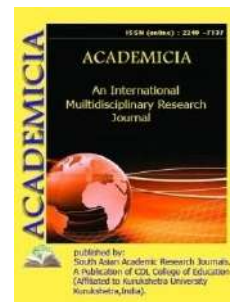
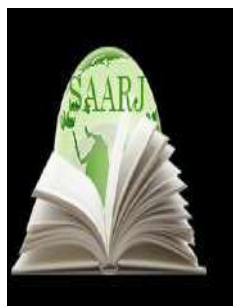
## CONCLUSION

In conclusion, we can say that we can meet both beneficial and harmful species of any plant, so we need to know the characteristics of all plants. Only then can we use this plant. Otherwise, the plant can become a poison for the body. Instead of treatment, it may cause serious diseases. Studying the properties of plants means that all living organisms receive the “healing” that they need.

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## ABOUT TEACHING STUDENTS AN IMPROVED METHOD OF APPLYING A BLOCK-BASED ENCRYPTION ALGORITHM BASED ON THE FEISTEL NETWORK

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### ABSTRACT

*This article discusses one of the most effective ways to provide information protection is the Feistel network-based block encryption algorithm, its features and structure. There is a simplified and easier-to-understand version of teaching computer science and information technology in general secondary schools.*

**KEYWORDS:** *Feistel's Cipher, Cryptography, Cipher, Key*

### INTRODUCTION

Effective organization of data exchange in information and communication systems is of great practical importance in the conditions of informatization and mobilization of society. The rapid

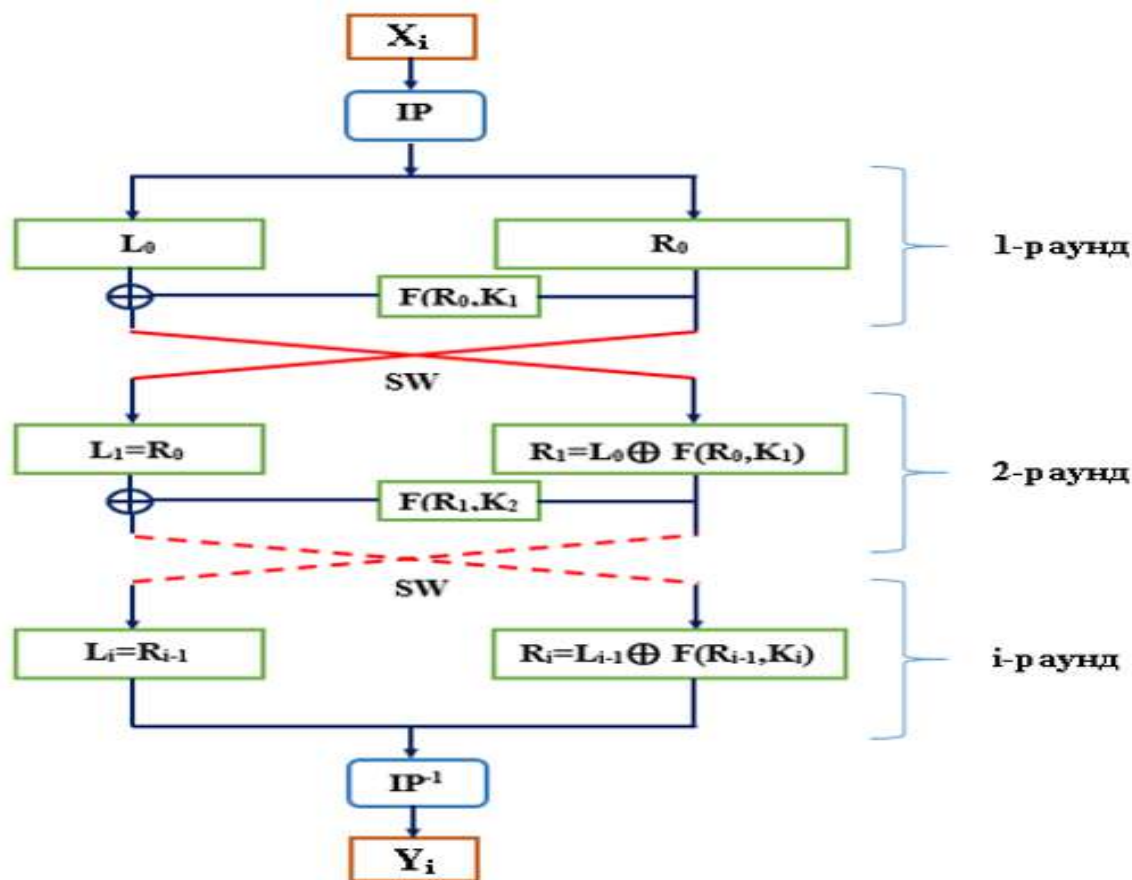


development of information and communication technology has led to the emergence of various information services available to the population. One of the urgent issues is the provision of information protection, especially in banking and other payment systems, systems where rapid and reliable exchange of important information related to the interests of the state and society is required. One of the most effective ways to ensure information protection is the use of cryptographic algorithms.

Today, the left and right part of the data block that must be encrypted is the block vectors, and the encryption process, called the Feistel network, is based on a functional device-algorithms that allow the gradual implementation of the same types of accents with different keys on them – are widely used to illustrate standard algorithms such as FEAL, LOCI, Khufu, Khafre Blowfish, Focus, CAST, DES, ГОСТ 28147-89[2]. These algorithms are among the algorithms that involve complex encryption processes and are somewhat difficult for students to understand.

In this work, however, we will focus on a simplified variant of the block-based encryption algorithm based on the Feistel network, which is somewhat easier to understand by students. Its features and structure is like the standard encryption algorithm of the DES (Data Encryption standard), but has much smaller parameters [1]. Therefore, it will be more expedient to use it in teaching the process of data encryption to students.

The DES standard encryption algorithm was published in 1977 by the US “National Standards Office”. In 1980, the National Institute of Standards and Technology of the United States adopted it as the standard for the use of an encryption algorithm to protect non-confidential but important data from unauthorized individuals and legal entities in the public and Commercial Finance Sector [2]. The structure of the algorithm is shown in Figure 1, where each input block ( $X_i$ ) uses a 12-bit initial text block and each round uses a 10-bit part Key ( $K_i$ ), while at the output a 12-bit block ( $Y_i$ ) of encrypted text is generated. In reverse decryption to this process, a 12-bit encrypted data block is also used as the initial data and a 10-bit part Key used for encryption, resulting in a 12-bit open text block being generated.



The algorithm includes the following: initial replacement (IP), complex function ( $F(R_{i-1}, K_i)$ ), in which two left ( $L_i$ ) and right ( $R_i$ ) parts are exchanged for the Place (SW), and a replacement ( $IP^{-1}$ ), which is reversed to the initial replacement after the  $i$ -round.

This 12-bit  $X$ -incoming block is divided into left ( $L_0$ ) and right ( $R_0$ ) bits, each of which consists of 6 bits after the initial replacement of the IP. The right part passes through a complex function ( $F(R_{i-1}, K_i)$ ) and 2 modules ( $0 \oplus 0 = 0$ ,  $0 \oplus 1 = 1$ ,  $1 \oplus 0 = 1$  ва  $1 \oplus 1 = 0$ ), in the first round, 6 bits of the left ( $L_1$ ) and the right ( $R_1$ ) are formed from the part blocks. This process continues until round- $i$ , then the finally phase of the algorithm, that is, the reverse displacement ( $IP^{-1}$ ), is executed, and finally an output cryptographic part Block ( $Y_i$ ) of 12 bits is generated.

Now we will consider in detail the elements of the encryption process, which are presented in Figure 1.

Algorithmmga as the initial data comes from a 12-bit block of Open Text, and in relation to it, the initial replacement given by the IP function listed in Table 1 is used.

**1-TABLE IP STARTING POSITION REPLACEMENT.**

12	2	5	8	3	9	10	7	4	11	1	6
----	---	---	---	---	---	----	---	---	----	---	---

All bits of the Open Text retain their value when they are replaced. At the convergence stage of the algorithm, the reverse displacement is performed (Table 2).

**2-TABLE  $IP^{-1}$  REVERSE SEAT REPLACEMENT.**

4	8	12	1	6	9	3	10	11	5	2	7
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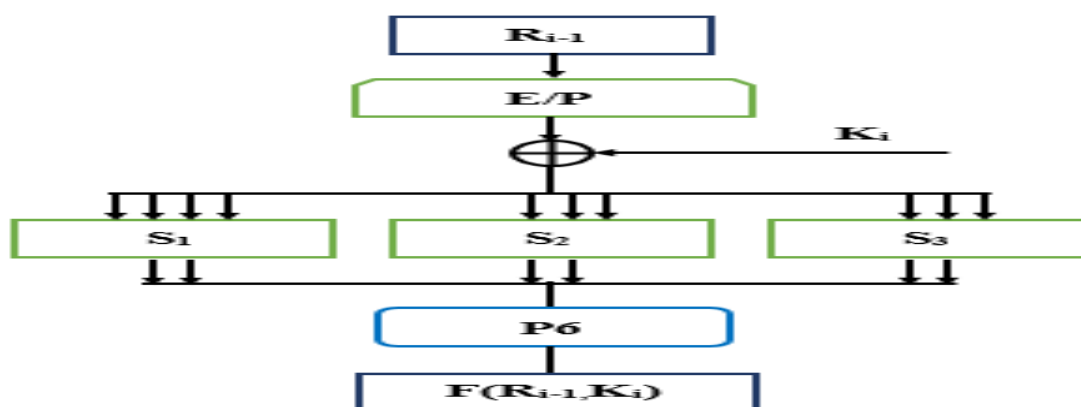
Finally, this outgoing 12 bit cipher will be the section block of the text.

Encryption is a complex function of the algorithm. In this part of the algorithm, namely  $F(R_i, K_i)$ - the complex function includes the following: replacement of the position with an extension (E/P), addition of the part Key ( $K_i$ ), transition from blocks ( $C_1$ ,  $S_2$  and  $S_3$ ), replacement and displacement (P6) processes (Figure 2).

The 6 bit information in the incoming right part ( $R_i$ ) is converted into 3 bits by replacing the position with the extension listed in Table 10, that is, as a result of the double writing of some (1, 2, 4 and 6 bits).

**3-TABLE EXTENSION SEAT REPLACEMENT SCHEDULE**

E/P									
2	4	1	6	3	5	4	2	6	1

**2-picture. Complex function of encryption algorithm.**

After that, the 10-bit round part key to this 10-bit extended data ( $K_1$  in 1-round,  $K_2$  in 2-round and etc.) 2 is added on the module. And the 10 bits of data generated by the insertion result, respectively, are divided into one four and two three-bit blocks, each of which, respectively, passes through the  $S_1$ -block,  $S_2$ -block and  $S_3$ -block, and at the output from each block, two bits are visible. The results are presented in tables 4, 5 and 6, in which the incoming bits of the block  $a_1$ ,  $a_2$ ,  $a_3$ ,  $a_4$  are made according to the following principle.

$S_1$ -блокдаги  $a_1$  ва  $a_4$  лар сатр,  $a_2$  ва  $a_3$  лар эса устун битларини белгилайди. Масалан, кириш 1010 бити бўлсин, у ҳолда 10 сатр ва 01 устун бўлади ва жадвалдаги улар кесишган жойда 2 рақамни кўриш мумкин, бу эса блокдан 10 (иккилик санок системасида) чиқишини англатади.

$a_1$  and  $a_4$  lines in the  $S_1$  block,  $a_2$  and  $a_3$  define the column bits. For example, let the input be a 1010 bit, then it will be 10 lines and 01 column and in the table they intersect, you can see the 2 number in the square, which means the output of 10 (in the counting system 2) from the block.

**4-TABLE  $S_1$ -BLOCK $F(R_{I-1}, K_I)$ TABLE OF EXCHANGES**

$\begin{matrix} a2a3 \\ a1a4 \end{matrix}$	00	01	10	11
00	2	3	2	1
01	3	1	3	2
10	1	2	1	3
11	3	1	2	1

**5-TABLE  $S_2$ -BLOCK $F(R_{I-1}, K_I)$ TABLE OF EXCHANGES**

$\begin{matrix} a1a3 \\ a2 \end{matrix}$	00	01	10	11
0	2	1	3	2
1	3	2	1	3

**6-TABLE  $S_3$ -BLOCK $F(R_{I-1}, K_I)$ TABLE OF EXCHANGES**

$\begin{matrix} a1a3 \\ a2 \end{matrix}$	00	01	10	11
0	1	2	2	3
1	2	1	3	2

In  $S_2$ ,  $S_3$ -blocks are slightly different, in which  $a2$  is the row, while  $a1$  and  $a3$  – determines whether the column corresponds. The resulting six-bit message passes through the substitution process, and at the output the result of the complex function is generated  $F(R_{I-1}, K_i)$  (Table 7).

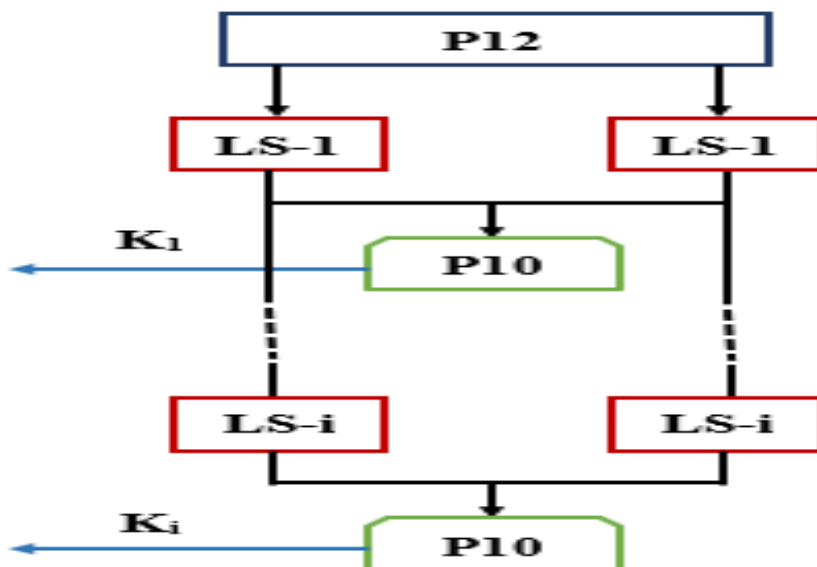
**7-TABLE REPLACEMENT SCHEDULE**

P6					
2	3	6	4	1	5

Calculation of the keys of the encryption algorithm. The 12 bit key used in this algorithm should also be present in the message sender and the recipient of the message. Using this key, at certain stages of the encryption and decryption process, 10-bit partial keys consisting of several cycles are created (Figure 3).

Initially, the replacement of key bits locations is performed as follows. If 12 bitkey( $K_1, K_2, K_3, K_4, K_5, K_6, K_7, K_8, K_9, K_{10}, K_{11}, K_{12}$ ) if expressed in appearance, the P12 replacement can be done with the following formula.

$$P12(K_1, K_2, K_3, K_4, K_5, K_6, K_7, K_8, K_9, K_{10}, K_{11}, K_{12}) = (K_9, K_6, K_8, K_{12}, K_4, K_1, K_{10}, K_3, K_{11}, K_7, K_2, K_5).$$



3-picture. Algorithm for creating partial keys.

R12 replacement result can be expressed in the form shown in Table 8.

**8-TABLE REPLACEMENT SCHEDULE**

P12											
9	6	8	12	4	1	10	3	11	7	2	5

The numbers in this table indicate the location of the key bits. After that, for the first and subsequent six bits, 1 cyclic siljish (LS – 1) is performed on the chap, which is often called a separate conversion. Then, using Table 9, 10 bits are selected and the R10 replacement is applied. As a result, the partkey  $K_1$  is generated.

**9-TABLE REPLACEMENT SCHEDULE**

P10									
4	9	2	6	3	10	5	8	1	7

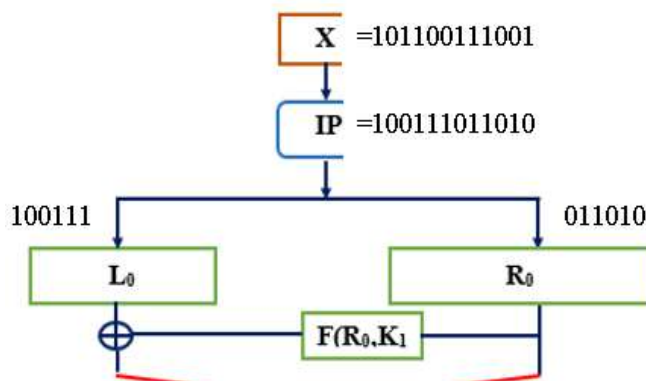
Then, by returning to the two 6-bit strings obtained as a result of the application of the LS-1 function and performing the cyclic silencing of the two-position chap (LS-2) with each of them, a  $K_2$  part key is generated, supporting the displacement of the R10 to the result obtained. Then continue this process, you can generate up to six part keys.

Function-changer.  $F(R_{i-1}, K_i)$  function only change six left bits. Therefore, the next action of the encryption algorithm is the use of the SW function, and in the subsequent use of the  $F(R_{i-1}, K_i)$  function, it replaces the left and right part bits to work with the other six bits. In the use of  $F(R_{i-1}, K_i)$  in subsequent rounds of the function, parts E/P, S1, S2, S3 and P6 remain unchanged, just as in the first round, only the part in turn is used instead of the key.

We will consider this encryption process in detail through the example below.

Example. Two-round encryption algorithm let  $M_1=101100111001$  block of Open Text come as initial data, and whether the implementation of the encryption process using  $K=100110101011$  key is required. It is done as follows:

After the arrival of the Open Text block, 100111011010 is generated as a result of the initial replacement performed by the IP (Table 1) function. Then the 12-bit Block is divided into two equal 6-bit fragments.



We look at the issue of determining the result of the complex function  $F(R_0, K_1)$  of the right part Block(011010) bits.

By performing the extension position switching (Table 3) action on the incoming 6 bit data, we get 10 bits at the output.

E/P									
2	4	1	6	3	5	4	2	6	1
1	0	0	0	1	1	0	1	0	0

After that, the insertion procedure is performed on the 1 module on the ten-bit  $K_2$  part Key and the extended incoming data. The  $K_1$  part key expression, which is defined in the section calculating the keys of the encryption algorithm, will be as follows:

$$E/P \oplus K_1 = 1000110100 \oplus 0011011011 = 1011101111$$

The result of the addition is divided into one four bits and two three-bit blocks, each of which, respectively, passes through  $1011 \rightarrow S_1$ ,  $101 \rightarrow S_2$  and  $111 \rightarrow S_3$  blocks.

The first  $S_1$  block is 01chiquadi. Because the block incoming  $a_1=1$ ,  $a_2=0$ ,  $a_3=1$ ,  $a_4=1$  bits 01 in the column and 11 in the intersection of the bar replacement block (Table 4) 1, which means 01 output from the block.

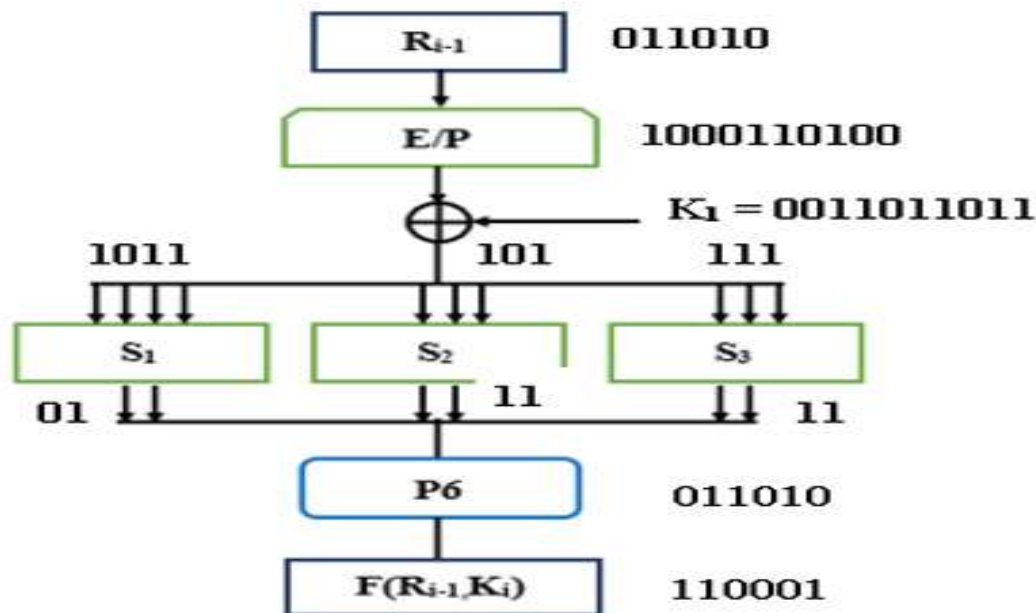
$a_2 a_3$				
$a_1 a_4$	00	01	10	11
00	2	3	2	1
01	3	1	3	2
10	1	2	1	3
11	3	1	2	1



In the same order,  $S_2=2 \rightarrow 10$  and  $S_3=2 \rightarrow 10$  are determined and the six bits formed (011010) are replaced according to Table 7.

P6					
2	3	6	4	1	5
1	1	0	0	0	1

Formed bits  $F(R_0, K_1)=110001$  it will be visible.



At the end of the first round, the values of the left ( $L_1$ ) and right ( $R_1$ ) part blocks that enter the second round are determined as follows and the first round is completed:

$$L_1 = R_0 = 011010;$$

$$R_1 = L_0 \oplus F(R_0, K_1) = 100111 \oplus 110001 = 010110$$

In the second round, too, in this order, only the encryption process is performed using the  $K_2$  key, and the following result is obtained:

$$L_2 = R_1 = 010110;$$

$$R_2 = L_1 \oplus F(R_1, K_2) = 011010 \oplus 110001 = 101011$$

After the second round, all the twelve (010110101011) bits of the Open Text pass through the reverse ( $IP^{-1}$ ) displacement process, which is the convergence phase of the algorithm, resulting in the output  $M_1$  of the openmatn block  $Y_1$ .

4	8	12	1	6	9	3	10	11	5	2	7
1	0	1	0	0	1	0	0	1	1	1	1

$$Y = 101001001111$$

Algorithm for creating keys of the encryption algorithm: initially, the displacement of key bits  $K=1001101011$  is performed as follows:

P12											
9	6	8	12	4	1	10	3	11	7	2	5
1	0	0	1	1	1	0	0	1	1	0	1

Then, for the first and second six bits separately, the operation of 1 cycle siljish (LS-1) is performed on the chap.

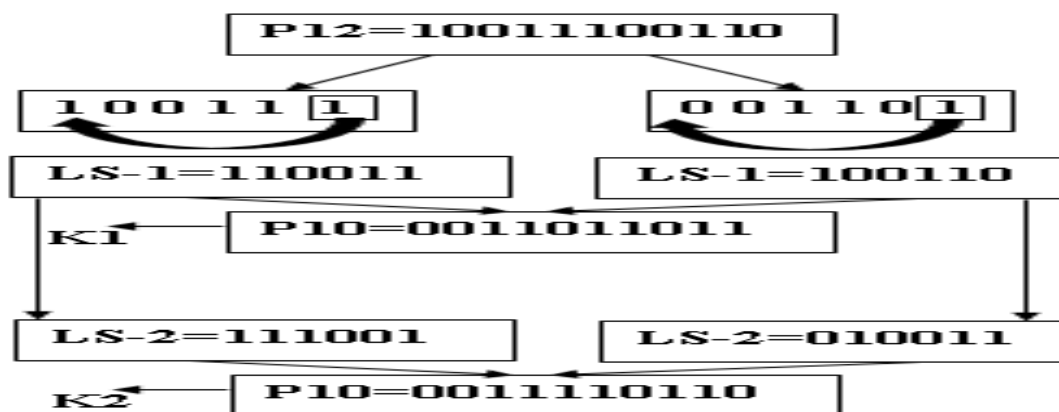
First	110011
Second	100110

With the use of Table 9, 10 bits are selected and the R10 position change is applied.

P10									
4	9	2	6	3	10	5	8	1	7
0	0	1	1	0	1	1	0	1	1

For the first round  $K_1 = 0011011011$  part key is generated.

The second part is applied to the two 6 bits obtained as a result of the use of the LS-1 function to form a key, a cyclic silge action is applied to a separate place left (LS-2). The resulting value P10 passes through the displacement and  $K_2 = 0011110110$  part Key is obtained.



In this algorithm, after six cycles of silencing, the part keys are repeated.

In conclusion, it can be noted that the use of the proposed simplified algorithm allows to form a holistic picture of complex encryption algorithms in students in the process of teaching the science of Informatics and Information Technology in general secondary schools.

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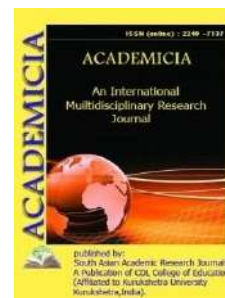
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# ACADEMICIA

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### MAN IS THE MAIN SUBSTANTIAL ELEMENT OF MORAL LIFE

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#### ABSTRACT

*In the article, man and his units are considered to be the creators and carriers of moral culture. There can be no moral life without a man. Therefore, attention is drawn to the fact that man and his units are the core of moral life, the main substantial element of moral culture that makes up the system, the creator, and carrier of moral culture from generation to generation. The article aims to identify and substantiate the objects of the formation of moral culture, the implementation of moral education processes.*

**KEYWORDS:** *Man, Morality, Moral Culture, Substance, Moral Life, Moral Education.*

#### 1. INTRODUCTION

Ethical culture is a part of moral life created by processing to regulate social relations and educate people. It is the substance, that is, the basis of moral life. Substantial elements that make up moral culture as a substance consist of: firstly, man as a moral culture, secondly, the moral needs of human beings, thirdly, the moral consciousness that arises from the need to understand moral needs and includes moral goals, plans, etc., fourthly, a view of human creative activity is moral creativity, which is based on moral understanding and takes place in parallel with it, fifthly, the results of moral creativity are the teachings, the manners of behavior, the moral customs and institutions, sixthly, the application of the results of moral creativity in life.

#### 2. MATERIALS AND METHODS

From the wholeness of the substantial elements that make up moral culture as a substance, a moral way of life, individual moral relations, moral tendencies, and behavior are formed. Hence, the six components of moral culture that make up the above system are the core, that is, the central part of moral life.

Moral lifestyle, individual moral relations, moral tendencies, and behavior occur depending on the level of this central part of moral life. In this system, the first and main substantial element of moral culture is the subject of human moral life, the second substantial element is the moral need and interest in the forms of moral life, the motive for its development and application, the gnoseological basis of moral consciousness, the creative existence of moral life. Also, the functions of the next mode of existence of moral life are the results of moral creativity, the source, and means of moral life.

Moral creativity and the use of its results in life are manifested in two stages of human moral activity.

Hence, the quality of moral life depends on the scale and level of moral culture. With the change of moral culture, moral life also changes and develops. But moral culture is the basis of the existence and development of society - an element of a whole cultural being. Because one of the four aspects of cultural existence, that is, part of it, is spiritual culture. And one of the six components of spiritual culture is moral culture. Moral culture is required in all spheres of social life and is based on their substantiality.

Therefore, just as the whole has a predominance over parts and elements in general, moral culture is determined, firstly, by the basic cultural being of the existence and development of society, and secondly, by the levels of spiritual culture. Because cultural being is the core of society as a whole, including moral life. Moral culture is the manifestation of this cultural being in moral life. The priority of cultural existence in moral life is that it is manifested through moral culture.

### 3. DISCUSSION AND RESULTS

We now turn to the analysis of the main substantial element that makes up the system of moral culture. In this regard, we consider it necessary to cite the following points emphasized by scientists in the research work of B.Sh. Mamarasulov: "in all societies and at all stages of human development, at the heart of social change, man, radically different from other living beings in his consciousness and thinking, and performing purposeful activities is a subject of social life, " [1,12].

The word "man" means "Adam" in Arabic. The concept of "Adam" is also an Arabic word, meaning a living being who can think, speak, and work, and therefore is superior to all other creatures [2,520].

"From Adam and Eve, written in the book "Vatantuyg'usi", there must have been no one who did not love and was not loved. There must be no writer or poet who wrote about love. Man has two worlds. One is the material world, the other is spirituality. This is the main difference." [3,54]

In our opinion, spirituality is also divided into two: the positive spirituality that embraces humanity and the negative spirituality that embraces evil. "Humanity, - says S. Norkuziev, - is a moral norm, which means the work done within the boundaries of humanity, a virtue that suits man, adorns him, glorifies the person, a humane attitude to life and the fate of mankind" [4,40]. In our view, humanity has a broader meaning than this. It encompasses all moral virtues as positive norms, and these moral norms revolve around "that the human duty of man on earth is to do good". The second part of human spirituality — the part that adapts vices to itself — is

regarded in science as negative norms, and they revolve around evil. Since the main substantial element of moral life, including moral culture, is a man and his units, in this regard we have relied on the following philosophical ideas of E.T. Kalkanov: "Man and his units. They are the creators and descenders of the subjects of the emergence of cultural existence. They are also subjects of patriotism. The manifestation of the human body as a biocultural phenomenon and, consequently, its subordination to social relations and its manifestation as a peculiar civilized physical force serve as the biocultural volitional ground of patriotism. If a biocultural organism is the first side of a person, the social psyche and ability to function are the second side of it.

Patriotism is one of the aspects of the social psyche and ability to function. Therefore, since man is the creator and carrier of cultural being from generation to generation, it does not happen without patriotism" [5,12].

President Sh.M.Mirziyoev - "Another issue that does not lose its relevance and importance for us is the task of educating our children as independent-minded, true patriots with modern knowledge and professions, strong life position" [6,103].

So, we conclude based on the inductive method: patriotism is one of the moral civilizations. Morality, on the other hand, is part of the socio-cultural part of human beings. Hence, the biocultural and socio-cultural aspects expressed humanly are the basis for the manifestation of man as a moral being.

According to the concept of dialectical understanding of history, man is a biosocial cultural phenomenon. If we interpret man in a biological sense, then this concept is equated with the concept of man in anatomy. In the human body, aspects such as metabolism, tissues, sex, instincts, hereditary traits, conditioned reflex, nervous system are biological phenomena. The human body is a biological species and a unique phenomenon in space.

The human body consists of physical strength and biological spirit, which are semi-transformed in the system of socio-cultural norms. Because the animal assimilates the ready products of nature, and man changes events (or phenomena) as well as himself as a result of social relations. This is a purely cultural process in which the structure of the human body has changed. For example, the law of natural selection was lost as a man began walking on two legs. Hence, man is also biologically a semi-cultural phenomenon.

That human is bio culture is realized in the scale of socio-cultural, including moral processes. And that human is bio culture serves as the biological basis of his sociality, morality.

Man must first be biologically healthy and mature. Such a person becomes a healthy-minded and spiritually pure person if he is formed in a system of healthy social relations. Therefore, during the years of independence, our country has focused on the issue of human health when naming many years. In particular, 2010 was declared the Year of harmoniously developed generation, 2014 the Year of Healthy Child, and 2016 the Year of Healthy Mother and Child. As long as the nation and its representatives are not biologically healthy as individuals, it will also be difficult to think of a fully spiritual individual and population. That is why I.A. Karimov said, "When I say healthy generation, personally, I understand, first of all, that a healthy generation is not only physically strong but also spiritually, mentally healthy, whole-faith, educated, spiritually strong, brave and courageous, patriotic generation" [7,94]



The upbringing of young people as competent people capable of taking on the burdens of the time and their education are recognized as issues of strategic importance. All conditions have been created for them to receive a thorough education under the requirements of the time, to acquire a profession, to find a worthy place in society. After all, "National spirituality is an intellectual and spiritual power that reflects the unique features, traditions, customs, values, and mentality of the nation reflects its" itself, defines its identity and it is the inner potential that drives it to development." [8,164] Human spirituality is formed only during education and becomes a driving force.

Aspects of human language, beliefs, profession, etiquette are socio-cultural aspects. The fact that man is a moral being is the first aspect of social culture. One of the manifestations of human bioculture is that the sexual division between husband and wife, the age division, the kinship ties (e.g., the relationship between parents and children) serves as the biological basis for being a moral being. Conversely, these biocultural aspects of man are manifested through socio-cultural aspects - connections, for example, the husband and wife maintain their status in society and the family, that parents maintain their status in the system of relations with children and apply under social norms. The status and responsibilities of masculinity are also ethical cultural processes.

Gender-related manners are also historical. The fact that matriarchal and patriarchal lifestyles have given rise to specific moral requirements is clear evidence of this. As thinkers point out, the first slavery is the slavery of women. From this period, patriarchy, that is, the priorities of the rights of the male and accordingly, moral demands have arisen. Proof of this is the fact that in ancient India, at the funeral of a Brahman, both his slaves and his wives were added to the burial rite in the verse that they would "serve".

Humanity is the core, the main part, the essence of morality. True humanity began in the transition from a primitive herd state to a hereditary system and dates back to the days when a family was made up of a couple instead of a blood family (i.e., a brother, a sister is a husband and a wife to each other at the same time).

In the period of the emergence of socio-class structures, the way of life and moral order of the nobility, priests, and the intelligentsia also emerged.

There is also a hedonistic approach to the science of aesthetics. Hedonism means to enjoy in the Greek language. In "Philosophy: an encyclopedic dictionary," it is said, "it is the pursuit of an idea and a way of life that underlies the idea that enjoyment should be the essence of human life." [9,235] Today, a model of hedonistic moral culture is being put forward in the West, and as V. Jadan says: "A group subject of hedonistic moral culture included mainly aristocrats because their lifestyle was at a level that allowed them to develop their intellectual abilities. Besides, this group included peasants with intellectual potential, who were involved in creative activities by the aristocracy" [10,56].

#### 4. CONCLUSIONS

Man and his units are the creators and carriers of moral culture. Without them, moral life will not happen. That is why man and his units are the core of moral life - the main substantial element that makes up the system of moral culture. "Our main asset," said I.A. Karimov, "and our mainstay on the path to build a developed state is man." He is a highly qualified and highly spiritual person" [11,25-26].

Moral culture is essentially reflected in the socio-economic, political, and spiritual development of a society. The main goal of moral culture is to lead a person to the truth, to bring him up as a perfect person. At the same time, moral culture comes into direct contact with social life. Development of moral culture, to study the experiences of the peoples of the world in this field and application in various spheres of social life prevent ideas such as egocentrism, individualism. After all, moral culture contributes to the upbringing of young people who find their place and identity in life, able to withstand the requirements of modern times and ideological struggles, have mastered a particular science or profession and are constantly researching to improve their skills in this field, are progressive-minded and have high spirituality and national ideology.

If we analyze the morality of man and his units in terms of the dialectic of generality, specificity, and individuality, the macro-units of human beings share the commonality of nation and humanity, and in this, we see the superiority of the moral mentality over the micro-units of human beings — family and labor communities and the spiritual image of the individual. "Civil society," says B.U. Rakhmonov, "legally and objectively regulates the delicate and vital situations of a self-organized person based on law, if morals and values cannot regulate them" [12,15]

The common side and foundation common to all human beings is rationality. Raising morality in the individual happens through the processing of the mind. Commonality is substantive. Commonality is manifested in particular through individuality, so the role of the middle link - the family and work communities (including kindergartens and secondary schools) - is of primary importance in the formation of man as a moral being.

In Article 5 of the Law of the Republic of Uzbekistan "On State Youth Policy" adopted on September 14, 2016: "The main directions of the state policy on youth are as follows: ensuring the rights, freedoms and legitimate interests of young people; protecting the lives and health of young people; promoting the spiritual, intellectual, physical and moral development of young people; ensuring open and quality education for young people; employment of young people and creating conditions for their employment;

to educate young people in the spirit of patriotism, citizenship, tolerance, respect for the law, national and universal values, to have a strong belief in life, being able to resist harmful influences and religious currents "[13] therefore, the main activities on moral education should be focused on family and labor communities, especially kindergartens and general secondary schools. This covers the individual to a certain extent: at least, the raising of the moral image of the individual takes place at the level of the requirements of society. That is why W. Humboldt said, "Where there is a small moral image, there is no great man" [14,106].

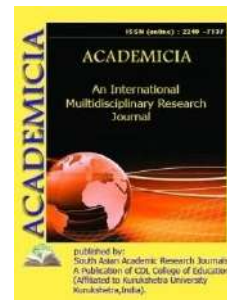
As noted by President Sh. Mirziyoyev - "We will mobilize all the forces and capabilities of our state and society for the development and happiness of our young people as independent thinkers, with high intellectual and spiritual potential, who are not inferior to their peers in any field around the world" [15,56]. The time itself requires the practical work of characteristics of great ancestors such as courage, bravery, fearlessness, patience, kindness, tolerance, humanity, compassion, thoughtfulness and gentleness, and constant adherence to it.

In short, human beings are the creator of moral culture, the nucleus of society, including moral life, and the bearer of it from generation to generation. That is why man and his units are the main substantial element that makes up the system of moral culture of society as well. The

fulfillment of the law of the social basis of man and his units concerning all spheres of social life is explained by the fulfillment of the law of his defining role as a moral subject in the moral life.

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## USING THE AREA METHOD IN SOLVING PROBLEMS

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### ABSTRACT

*In this article considered the basic techniques solutions geometric problems with the help of the area of. With this method is shown proof of theorem Pythagoras, Cheva theorems, Erdos – Mordell inequality. Considered a few problems in which are used different formula to calculate the area of the triangle. This article discusses problems for which the area method is used.*

**KEYWORDS:** Triangle, Area, Area Of A Triangle, Reception, Polygon, Parallelogram, Cercal, Radius.

### INTRODUCTION

In the solution of various tasks is often useful to consider any subsidiary the item is not present the formulation of the problem. The area method in studying geometric and algebraic theorems helps to comprehend the concise language of mathematical formulas, to see what is hidden behind analytical calculations. Geometric illustrations in some cases allow students to independently come to the right conclusions, make their discoveries. They give visibility distracted by the concept and formulas, give accelerated methods for solving problems and reliable means of control, instill a taste for elegant and concise solutions without stereotyped and long conversions, without unnecessary entries. All this increases the activity and interest of

students in mathematics, develops ingenuity, resourcefulness, helps to find diverse and original methods of evidence and solutions to problems, simple memorization of formulas.

Example: When learning abbreviation formulas:

a) square difference:  $a^2 - b^2 = (a - b)(a + b)$

b) squared amount:  $(a + b)^2 = a^2 + 2ab + b^2$

c) squared difference:  $(a - b)^2 = a^2 - 2ab + b^2$

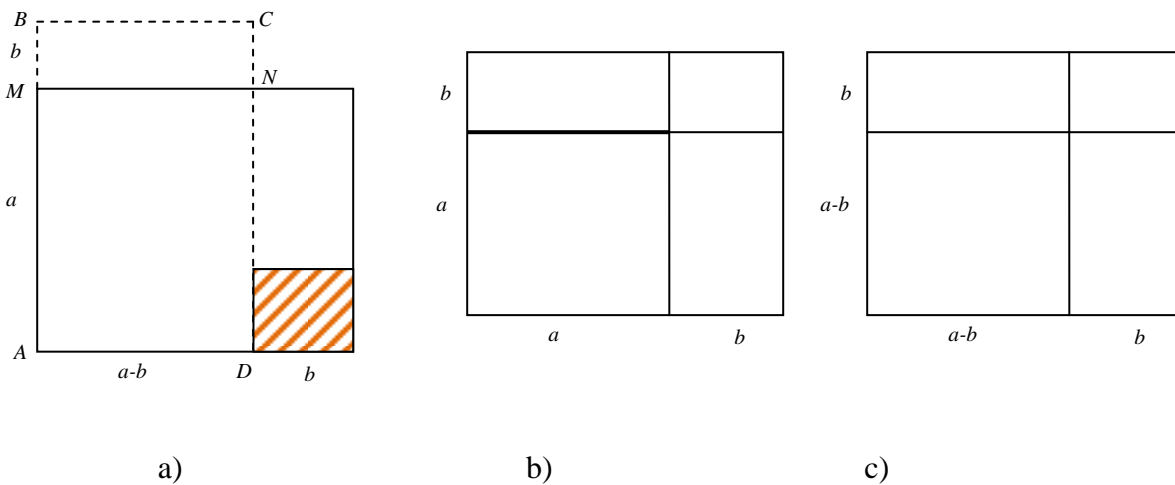


figure – 1.

Let  $a > b > 0$ . In the case of a) method areas convinces in justice formula the difference of squares. Not painted figure transform in the rectangle so, as shown in (fig. 1. a) then we get:

$$S_{ABCD} = S_{AMND} + S_{MBCN}$$

$$(a + b)(a - b) = a(a - b) + b(a - b) = a^2 - b^2$$

In the case of b) method areas adequate formula the square of the amount of  $(a + b)^2 = a^2 + 2ab + b^2$  (fig. 1 b), and therefore allows students self – open its. Here are necessary skills for a given method areas be algebraic expressions.

### LITERATURE REVIEW

Extensive use of algebraic machine up to date geometry, on the hand, expanded the possibility of students in the decision of geometric tasks on the other hand, active application of analytical methods in geometry often was the cause damage to the formation of traditional, purely geometric, and skills students.

Method areas in the training mathematics (including with decision problems) is considered in the dissertation research V.A. Dalinger, T.A. Ivanova,

Z.G. Murtazin, S.S. Vardanyan, R.M. Kitaeva, G.T. Saranzev and other. In these works attention was paid to the study of the method of geometric transformations, coordinate, vector methods. During this period connection between the algebra and geometry installed in the main by using analytical methods for solving the geometric tasks.

In the conditions of acceleration of scientific and technical progress on the basis of information technology geometric knowledge needed to every thinking person. At one time academician A.D. Alexandrov wrote about it: "All appliances permeated geometry and begins with the geometry, for everywhere, where need slightest the accuracy of the size and shape, where need structural mutual location parts – there effective geometry". Geometry today all the more acts as a method of knowledge and the way of thinking. Geometry – is the basis. In addition, it is the material embodiment of embodiment of characters expressing all the perfect, sublime. It gives us a high satisfaction of mathematical accuracy.

## METHODOLOGY

We will analyze the basic techniques for solving geometric problems using area.

Reception 1. If the Polygon cut in the number of polygons, the amount of space is equal to the area of the original Polygon. The most famous the use of this reception is one of the many proof of theorem Pythagoras.

Example 1. (Pythagorean theorem). Prove that the sum of squares the lengths of cathetuses rectangular Triangle is equal to the square of the length of hypotenuse.

Solution. Let  $a, b$  – length cathetuses,  $c$  – the length of hypotenuse. We prove that the sum of the squares with sides  $a$  and  $b$  is equal to the square area with side  $c$ . Consider this a square from party  $a + b$  and cut it in two ways, as shown in figure 2. In the first case of this a square breaks up 4 of rectangular Triangle with cathets  $a$  and  $b$  and two square from party  $a$  and  $b$ , and in the second – by 4 rectangular Triangle with cathets  $a$  and  $b$  and square from party  $c$ .

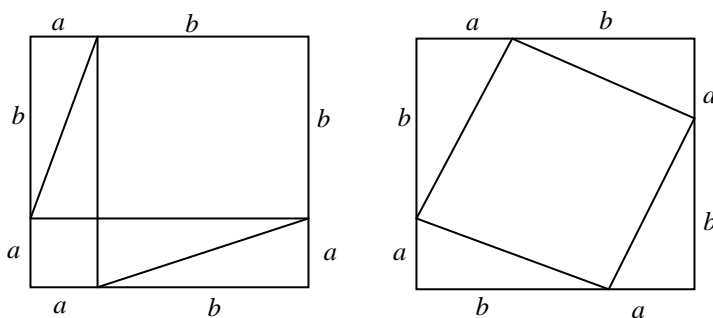


figure 2.

Example 2. Given  $a$  Triangle  $ABC$ . Let  $s$  – it area,  $j$  – angle  $ACB$ , and  $l$  – length bisectric spend from vertex  $C$ .

a) Prove that the 
$$S \geq l^2 \operatorname{tg} \frac{j}{2}$$

b) For which triangles  $ABC$  equality holds?

Solution. We denote by  $a$  and  $b$  side  $BC$  and  $AC$  triangle  $ABC$



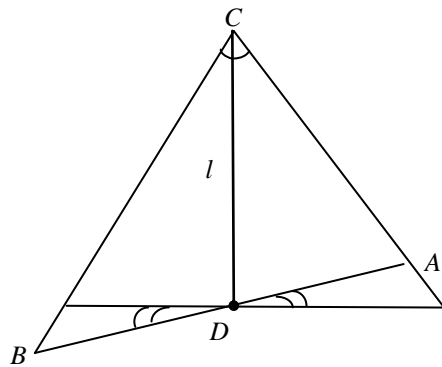


figure 3.

then

$$l^2 \tan^2 \frac{\gamma}{2} = \frac{4a^2 b^2}{(a+b)^2} \cos^2 \frac{\gamma}{2} \cdot \frac{\sin \frac{\gamma}{2}}{\cos \frac{\gamma}{2}} = \frac{4ab}{a^2 + b^2 + 2ab} \cdot \frac{1}{2} ab \cdot 2 \sin \frac{\gamma}{2} \cdot \cos \frac{\gamma}{2} \leq$$

$$\leq \frac{4ab}{2ab + 2ab} \cdot \frac{1}{2} ab \sin \gamma = S$$

It is obvious that equality is carried out if and only if  $a^2 + b^2 = 2ab$ , that is, if and only if  $a = b$ .

Example 3. Polygon described around the circle the radius of  $r$ , cut arbitrarily on the triangles. Prove that the amount of radii inscribed circles of these triangles more  $r$ .

Solution. We denote the radii inscribed circles received triangles  $r_1, r_2, \dots, r_n$ , their perimeters  $p_1, p_2, \dots, p_n$ , area – through  $s_1, s_2, \dots, s_n$ . Area and the perimeter of the original Polygon we denote by  $s$  and  $p$ .

Since the  $p_i < p$ , ( $i = 1, 2, \dots, n$ )

$$r_1 + \dots + r_n = \frac{2s_1}{p_1} + \dots + \frac{2s_n}{p_n} > \frac{2s_1}{p} + \dots + \frac{2s_n}{p} = \frac{2s}{p} = r.$$

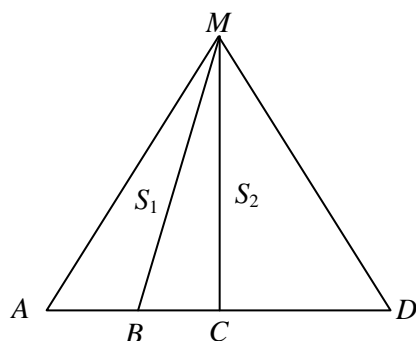
Example 4. From the point of  $O$ , lying in the right Triangle  $ABC$ , omitted perpendiculars  $OA_1, OB_1, OC_1$  on the sides  $BC, AC, AB$  respectively. Prove that the amount of  $OA_1 + OB_1 + OC_1$  does not depend on the provisions of the point of  $O$  and is equal to the height of the triangle.

Solution. Let the side length of triangle  $ABC$  be  $a$ , and the length of the height be  $h$ . It's clear that

$$S_{ABC} = S_{BCO} + S_{ACO} + S_{ABO}, \quad \text{that is} \quad \frac{1}{2}ah = \frac{1}{2}aOA_1 + \frac{1}{2}aOB_1 + \frac{1}{2}aOC_1. \quad \text{Therefore}$$

$$h = OA_1 + OB_1 + OC_1.$$

Reception 2. The ratio of the lengths of segments can be replaced on the ratio of the areas of triangles.



If segments  $AB$  and  $CD$  lie on the same line not passing through the point  $M$  and  $S_1$  and  $S_2$  - the area of triangles  $MAB$  and  $MCD$  respectively

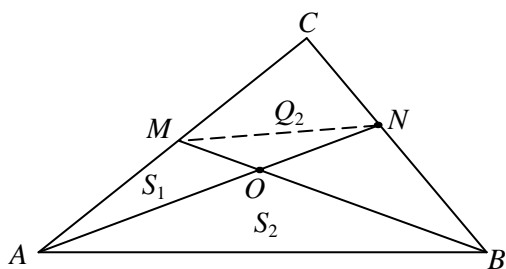
(figure 4), then

$$\frac{S_1}{S_2} = \frac{AB}{CD} \quad (*)$$

figure 4.

Example 5. In the triangle  $ABC$  on the side of  $AC$  taken point  $M$ , and on the side of  $BC$  - point  $N$ . Segments  $BM$  and  $AN$  intersect at the point  $O$  (figure 5). Get the area of the triangle  $CMN$ , if the area of triangles  $AOM$ ,  $AOB$  and  $BON$  respectively  $S_1$ ,  $S_2$ ,  $S_3$ .

Solution. Let  $S_{MON} = Q_1$ ,  $S_{CMN} = Q_2$ . Of (\*) it follows that  $\frac{S_1}{Q_1} = \frac{AO}{ON} = \frac{S_2}{S_3}$ , where



$$Q_1 = \frac{S_1 S_3}{S_2}. \quad \text{Similarly}$$

$$\frac{Q_2}{Q_1 + S_3} = \frac{CN}{NB} = \frac{Q_2 + Q_1 + S_1}{S_2 + S_3}, \quad \text{where}$$

$$Q_2 = \frac{Q_1^2 + Q_1 S_1 + Q_1 S_2 + S_1 S_3}{S_2 - S_1}. \quad \text{Substituting the}$$

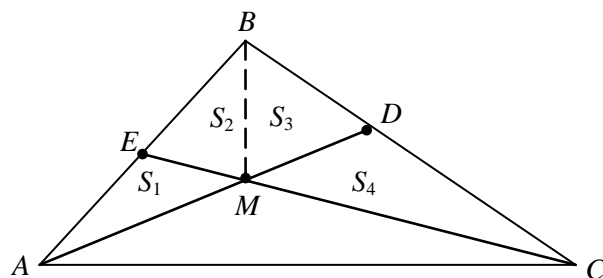
figure 5.

last formula found the value of  $Q_1$ , we obtain the  $Q_2$ .

$$Q_2 = \frac{S_1 S_3 (S_2 + S_1)(S_2 + S_3)}{S_2 (S_2^2 - S_1 S_3)}$$

Example 6. In the triangle  $ABC$  on the side of  $BC$  selected point of  $D$  so that  $BD : CD = 1 : 2$ . What respect to the median  $CE$  divides the line segment of  $AD$ ?

Solution. Solutions based on the comparison of the areas triangles. Let  $M$  – the intersection point of  $AD$  and  $CE$  (fig. 6). We denote



$S_1, S_2, S_3, S_4$  area triangles  $AEM, EMB, MBD, CMD$  respectively. Using the formula of (\*), we obtain

$$S_1 = S_2, S_4 = 2S_3, S_{ABD} = 2S_1 + S_3 = \frac{1}{3}S_{ABC}$$

$$S_{EBC} = 3S_3 + S_1 = \frac{1}{2}S_{ABC}. \text{ From the}$$

figure 6.

$S_{ABC} = 3(2S_1 + S_3) = 2(3S_3 + S_1)$ , or  $3S_3 = 4S_1$ . Now is easy to find the desired ratio:

$$AM : MD = S_{ABM} : S_{BMD} = 3 : 2$$

Example 7. (Theorem Cheva). On the sides  $AB, BC, CA$  triangle  $ABC$  taken point  $C, A, B$  respectively. Prove that the direct  $AA_1, BB_1, CC_1$  intersect at one point if and only if

$$\frac{AB_1}{B_1C} \cdot \frac{CA_1}{A_1B} \cdot \frac{BC_1}{C_1A} = 1$$

Solution. Let the first direct  $AA_1, BB_1, CC_1$  intersect at the point  $O$ . As in previous problem, we obtain

$$\frac{CA_1}{A_1B} = \frac{S_{ACO}}{S_{ABO}}, \frac{BC_1}{C_1A} = \frac{S_{BCO}}{S_{ACO}} \quad \text{and} \quad \frac{AB_1}{B_1C} = \frac{S_{ABO}}{S_{BCO}}.$$

Multiplying these equalities, we obtain

$$\frac{AB_1}{B_1C} \cdot \frac{CA_1}{A_1B} \cdot \frac{BC_1}{C_1A} = 1$$

We now assume that

$$\frac{AB_1}{B_1C} \cdot \frac{CA_1}{A_1B} \cdot \frac{BC_1}{C_1A} = 1$$

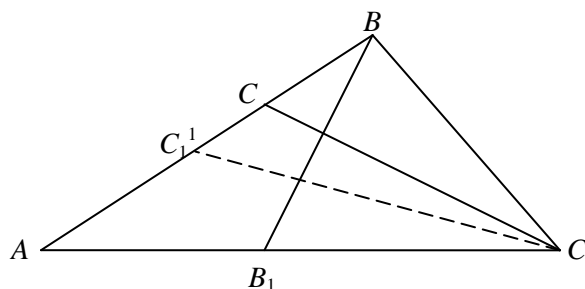
and let  $O$  – point of intersection of segments  $AA_1$  and  $BB_1$ . We denote by  $C_1^1$  point of intersection of direct  $OC$  segment  $AB$  (figure 7). Then, as we just have proved

$$\frac{AB_1}{B_1C} \cdot \frac{CA_1}{A_1B} \cdot \frac{BC_1^1}{C_1A} = 1 = \frac{AB_1}{B_1C} \cdot \frac{CA_1}{A_1B} \cdot \frac{BC_1}{C_1A}$$

Consequently, the  $\frac{BC_1^1}{C_1^1A} = \frac{BC_1}{C_1A}$ . It remains to note that as the point  $X$  moves on the segment  $AB$

(not leaving for its limits), then the value of  $\frac{BX}{XA}$  changes monotonously, and therefore

$C_1^1 = C$ , that is, the lines  $AA_1$ ,  $BB_1$  and intersect at one point.



This wonderful theorem deserves to make some comments. Readers know that all the medians of a triangle intersect at one point, as well as the angle bisectors, and the heights. It is not surprising that all of these facts – consequences of some more general theorem.

figure 7.

Reception 3. Different formulas for the area allow you to get the ratio between the sides,

height, perimeter, etc.

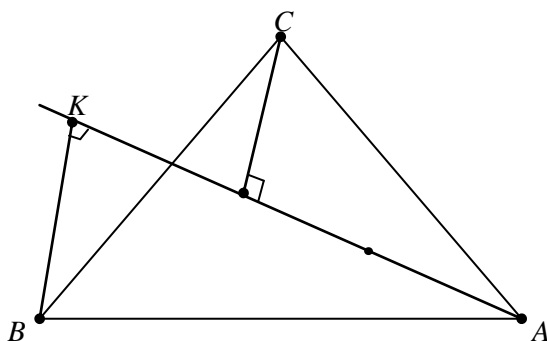
Example 8. The lengths of the sides of the triangle form an arithmetic progression. Prove that the radius of the circumscribed circle of this triangle is  $\frac{1}{3}$  of one of the heights.

Solution. Let the lengths of the sides  $a, b, c$  form an arithmetic progression. Then the semi-perimeter  $p$  is  $\frac{3}{2}b$ . Since  $\frac{1}{2}h_b \cdot b = S = r \cdot p$ , we get  $r = \frac{b}{3}$ .

Example 9. Inside the  $ABC$  triangle, the point  $M$  is taken. We denote the distances from the point  $M$  to the vertices  $A, B, C$  by  $R_a, R_b, R_c$ , and the distances from the point  $M$  to the sides  $BC, CA, AB$  – by  $d_a, d_b, d_c$  respectively.

- Prove that  $a \cdot R_a \geq c \cdot d_c + b \cdot d_b$
- (Erdos – Mordell inequality) Prove that

$$R_a + R_b + R_c \geq 2(d_a + d_b + d_c)$$



Solution. a) We omit from points  $B$  and  $C$  the perpendiculars  $BK$  and  $CL$  to the line  $MA$  (fig. 8). Let  $a_1 = BK$ ,  $a_2 = CL$ . Clearly  $a_1 + a_2 \leq a$ . Therefore

$$\begin{aligned} \frac{1}{2}aR_a &\geq \frac{1}{2}a_1 \cdot R_a + \frac{1}{2}a_2 R_2 = S_{ABM} + S_{ACM} = \\ &= \frac{1}{2}bd_b + \frac{1}{2}cd_c \end{aligned}$$

Note that in the proofs we used only the fact that

the point  $M$  lies inside the angle

figure 8.

 $BAC$ , and not that the point  $M$  lies inside the triangle.

b) Applying the inequality of paragraph a) to the point, symmetric  $M$  relatively bisector angle  $A$ , we obtain the inequality

$$R_a \geq \frac{c}{a}d_b + \frac{b}{a}d_c,$$

Similarly

$$R_b \geq \frac{c}{b}d_a + \frac{a}{b}d_c \quad \text{and} \quad R_c \geq \frac{a}{c}R_b + \frac{b}{c}R_a$$

Folding these inequality, we obtain

$$R_a + R_b + R_c \geq \left(\frac{b}{c} + \frac{c}{b}\right)d_a + \left(\frac{a}{c} + \frac{c}{a}\right)d_b + \left(\frac{b}{a} + \frac{a}{b}\right)d_c \geq 2(d_a + d_b + d_c), \text{ since the}$$

$$\frac{x}{y} + \frac{y}{x} \geq 2.$$

Reception 4. If through the point of  $E$  lying within the parallelogram  $ABCD$ , carried out direct parallel to the parties and smashing it on four parallelogram, then parallelograms adjacent to the top of  $B$  and  $D$ , are equal if and only if the point  $E$  lies on the diagonal  $AC$ .

Example 10. Through the point  $M$  lying within parallelogram  $ABCD$ , carried out direct  $PR$  and  $QS$  parallel to the sides  $BC$  and  $AB$  (point of  $P, Q, R, S$  the sides  $AB, BC, CD, DA$  respectively). Prove that the direct  $BS, PD$  and  $MC$  intersect at one point (fig. 9).

Solution. Through the point of  $N$  intersection of direct  $BC$  and  $CM$  carry out direct  $Q_1S_1$  and

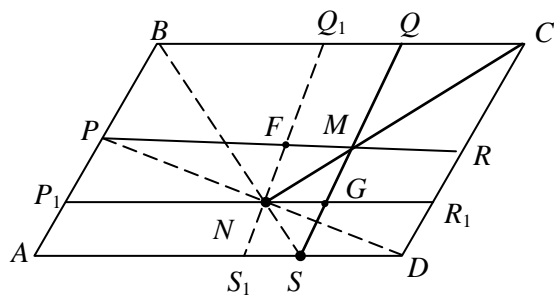


figure 9

ie  $S_{NQ_1QG} = S_{NFRP_1}$ . Point  $N$  lies on the diagonal  $BS$  parallelogram  $ABQS$ , so  $S_{AP_1NS} = S_{NQ_1QG} = S_{NFRP_1}$ . Consequently, the point of  $N$  is on the diagonal  $PD$  parallelogram  $APRD$ .

$P_1R_1$ , parallel direct  $QS$  and  $PR$  (point of  $P_1, Q_1, R_1, S_1$  lie on the parties  $AB, BC, CD, DA$  respectively). We denote the point of intersection of direct  $PR$  and  $Q_1S_1$ ,  $P_1R_1$  and  $QS$  through  $F$  and  $G$ . As the point  $M$  lies on the diagonal  $NC$  parallelogram  $NQ_1CR_1$ ,  $S_{FQ_1QM} = S_{MRR_1G}$

## CONCLUSION

Study of the methods of mathematics, it is important and methodological respect, as is an opportunity for disclosure of the content of the method and allocation of components of the method of.

Methods of mathematics in the process of learning on the one hand act as the purpose of the study, and on the other, as a means the study of mathematical material. The a method can become one of the means of the study of mathematics only if the students are able to use it in the solution of practical problems. This means that in the process of the formation of the method of mathematics, students will inevitably face the need to solve the two tasks. The first is that the students captured party method, and the second is to learning the application of the method.

Solution of the first tasks assumes the assimilation of students assimilation of the activity components of the method, without reliance on which activity components cannot be implemented. The second task can be solved provided that students learn the epistemological components of the method associated with the establishment of new properties of the studied abject, types of tasks, their features, learn how to choose a method that is appropriate to use when solving a particular problem: therefore, teaching a method is learning how to choose a method.

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## **DYNAMICS OF SALINITY OF THE AGRICULTURAL SOILS IN THE CONDITIONS OF ARAL SEA**

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### **ABSTRACT**

*The following article deals with the study of the dynamics of salinization of agricultural soils in the conditions of the Aral Sea. We have studied the interaction of salts and vegetation cover with the salinity of the Southern Aral Sea, the distribution of salt, the systemic effect on the salinity of the soil of the Aral Sea. The collected research results were analyzed.*

**KEYWORDS:** *Aral Sea, Soil, Salinity, Ecosystem, Model, Aerosol, Condensation, Transformation.*

### **INTRODUCTION**

A great attention is being paid on studying the interrelationships between climate and ecosystems around the world, including assessing the impact of climate change and environmental transformations on natural resources and agriculture, developing and improving climate change adaptation measures, preventing environmental change and mitigating biodiversity. It is also important to model climate mathematically and environmental changes globally, assess the impact of salt-dust migration from the dried bottom of large water bodies on the environment and ecosystems, and develop methods to prevent and mitigate the negative effects of meteorological factors. In our country, certain positive results are being achieved in mitigating the effects of the drying up of the Aral Sea and improving the ecological, socio-economic conditions of the Aral Sea region. The Action Strategy for the further development of the Republic of Uzbekistan for 2017-2021 sets important tasks to take "Systemic measures to mitigate the negative impact of global climate change and the drying up of the Aral Sea on the development of agriculture and human activities" [1]. In this regard, scientific research was

aimed to conduct at studying the sensitivity of agro-climatic resources to changes in hydro-regime, the reduction of vegetation cover in the Aral Sea region and other environmental changes is of great importance.

At different times with the study of agricultural issues and the state of the environment in the Aral Sea region, foreign scientists Yu. Shuttser, S. Brooke, P.P. Miklin, Dj. F.Kreto, F.Papa, T. Ressler et al. Most of the scientific research in this area is carried out in Russia (L.S.Berg, A.S.Kes, L.K.Blinov, I.P.Gerasimov, A.A.Grigorev, V.B.Lipatov, B.G.Vager, Z.M.Utina, N.M.Bogdanova, V.P.Kostyuchenko, P.O.Zavyalov, N.M.Novikova) [3], Kazakhstan (M.A.Orlova, O.E.Semenov, O. S.Galaeva, I.V.Kaipov) and scientists of Uzbekistan (A.A.Rafikov, G.A.Tolkacheva, S.K.Kabulov, I.V.Rubanov, V.A.Dukhovny, V.E.Chub, F.Kh.Khikmatov, E.I.Chembarisov, O.I.Subbotina, S.G.Chanysheva, R.M.Razzakov and others) [4]. As a result of their research, the dynamics of changes in the Aral region and Aral Sea geoecosystems were studied, soil composition was studied and mapped, the distribution of salts from the dried seabed, the dynamics of phytocenoses were analyzed, hydrological and hydrochemical processes were identified, the thermochalin structure and biotic status of the Aral Sea were studied.

## RESEARCH METHODS

Systematic modeling methods using mathematical physics methods, numerical methods, mathematical statistical methods, atmospheric physics, soil physics, meteorology, climatology, hydrology, ecology and geobotany methods were used.

A necessary attribute of systematic research is to show a clear logical and structural basis of the research, a set of systematic methods and tools aimed at solving complex problems, as well as the terminology used. For this purpose, research is organized on the basis of the concept of systematic modeling of complex ecometeorological processes. [5]

### Research work and results analysis:

An important plan in the concept of systematic modeling of a complex ecological-meteorological process (CEMP) is that we assume modeling as a research process in general. There are two aspects in the modeling of CEMP systems: design and research aspects. In terms of design, systematic modeling consists of creating a SM model and the means to implement it in a machine. The research aspect involves identifying the laws of SM performance using a structured model, understanding, generalizing, and interpreting the results of computational experiments in terms of physical reality. The optimal organization of the computational process is the concentration of all additional functions in the information-statistical block (ISB) through the creation of special unified modules. This prevents duplication of homogeneous structural units in model applications. Creating a control block (CB) is not only a possible but also a necessary element of CEMP modeling. Thus, CEMP the machine model is a software system that can be divided into three categories: model blocks (MB), ISB, and CB The computational data obtained during the implementation of the CEMP machine model usually do not have accurate information about process dynamics and their interrelationships. Therefore, additional processing of output data is required to determine the CEMP elements and the operating patterns of the system as a whole. Identified laws need to be formalized, which helps to classify the types of relationships that are mathematically expressed. As a system of equations, the formalized structure of the CEMP gives a more complete understanding of the object of study, its

characteristics and development trends. In addition, in order to make predictions, it is necessary to simulate and formalize the results of modeling. We are debating the CEMP analytical model of the formalized structure of the CEMP as a set of equations, which is an analytical view of the most important interrelationships between the processes of the CEMP, obtained during the implementation of the machine model. The simulation model of CEMP is constructed not only in terms of numbers, but also for forecasting. The structural table of the CEMP machine model reflects the set of factors in the future and is called the forecast model of the CEMP [5].

The analysis of the results of research on the processes of CEMP allowed me to identify and distinguish important relationships in the analysis of correlation and regression, their quantitative assessment, analytical expression. In our opinion, the most important link in the CEMP is the 24 repetitive recursive links that determine both the dynamics of the dynamics and the systemic interactions between the factors. In general, the dynamics of the system of CEMP factors under study is characterized by accelerated transformation in the first and fourth decades of modeling with significant changes in the first and second decades of modeling. The transformation of the components of system factors took place mainly on the basis of exponential laws. For retrospective, modeling the dynamics of the island's water-salt regime will lose its monotony and will not be studied in general. The model of the eastern part of the island in 2009 is repeated for non-traditional periods. After the construction of the pits, the partial flooding leads to the depletion of the water basin, which means that in the PS, the salt accumulation regime and, consequently, the resulting changes in the chain. Due to the lack of monitoring results for the eastern part of the island for 2006-2017 (input data for models 1 and 2) we have proposed the following for forecasting the current period and 2030:

- The surface area of the water area changed from 2005 to 2030;
- Salinity also varies linearly from 2005 to 2030 up to 10 g / l [5];

Due to the diversity of the mechanisms of salinity of the ecological transformation system to the salinity of the soil, it was studied separately for post-arid (PA) and Kubla-Aral. The salinity of the PA is influenced by the structure of the Aral Sea, the distribution of salts and vegetation, the system of all factors, the salinity of the South Aral Sea, the distribution of salts and the vegetation cover.

The systemic effect of salt dispersion from vegetation cover (VC) and PA on salinity of Kubla Aral Sea soils is characterized by an increase in the opposite effect of these two factors (**Table 1**). One of the basic laws of spatial-periodic dynamics of soil salinity will be the intensification of the process over time and by zone

**TABLE 1 DYNAMICS OF SOIL SALINIZATION WITH SALINE AEROSOL AND VC**

Parameters	By the period of decades			
	966- 1975	1976-1985	1986-1995	1996-2005
Precipitation (mm / year)	120	1 22	13 9	144
Precipitation mineralization (mg / dm <sup>3</sup> )	43	7 9	23 7	1072
Increase in soil salinity due to precipitation	17,1	3	10	514,

mineralization (g / m3)		2	9,7	6
Dry aerosol drop (DAD kg / ha / year)	93	4 98	13 68	1931
Increase in soil salinity due to dry aerosol fall (g / m3)	31	1 66	45 6	644
Salinity of soil under the influence of saline aerosol (% per year)	0,012	0 ,05	0,1 3	0,18
Absorption of salts by the roots of the arrow system (kg / ha)	-8	- 26	-45	-68
Protection of ammunition from DAD (kg / ha / year)	-1,9	- 32,4	- 154	-252
Effect of VC on evaporation of salt from soil (kg / ha)	-100	- 225	- 362	-465
Effect of VC on soil salinity (% per year)	- 0,006	- 0,015	- 0,031	- 0,043
Systemic effects (% / year)	0,006	0 ,035	0,1	0,13 7

As can be seen from the table, the system of all factors affects the air temperature. The presence of marine conditions in the coastal areas of the factors is conditioned by the effect of maximum cooling in the first decade.

Table 2 shows the forecast results of CEPT for 2030 with the help of MIDACS. The eastern part of the country will be completed by 2022.

**TABLE 2. THE IMPACT OF FACTORS ON CLIMATIC CHARACTERISTICS AND SALINITY OF THE SOIL ALONG THE KUBLA ARAL SEA IN 2030**

Factors-Object	$\Delta t_o$ January	$\Delta t_o$ July	$\Delta V$ July	$\Delta R$	$\Delta MR$	$\Delta S$
1. Aral Sea	+0,0 05	- 0,01	+0, 028			
2. Saline aerosol	- 0,12	- 3,07		+9, 4	+3 80	+0, 58
3. Plants		-0,7	+2, 6			- 0,17
Systemic effect	- 0,115	- 3,78	+2, 628	+9, 4	+3 80	0,4 1

Note:  $\Delta t_o$  January - January temperature increase;  $\Delta t_o$  July - increase in air temperature;  $\Delta V$  - percentage increase in specific gravity (%);  $\Delta R$  - growth of annual rainfall (mm);  $\Delta MR$  - precipitation mineralization growth (mg / dm<sup>3</sup>);  $\Delta S$  is the percentage of soil salinity (%).

In 1970-2000, the total ecological transformations of the Aral Sea decreased by 36.4 thousand km<sup>2</sup>, the vegetation decreased by 8% and the salinity increased by 25 million tons / year. These changes will lead to an increase in air temperature by 1.1 ° C, a decrease in relative humidity by

4.1%, an increase in annual precipitation by 9 mm and an increase in soil salinity by 0.05%. The further reduction of the sea area will affect the climate of the sea, ie by 2030 the only dominant factor in the system of factors will be the rise of salt and the degradation of vegetation. In 2030, the amount of salt will increase to 69 million tons per year tons will lead to a decrease in air temperature by 0.9 ° C compared to 2000. In 2030, precipitation is expected to increase by 11.9% due to the presence of clouds in the north (up to 1 km), while the number of cloudy days without precipitation is expected to increase. This is explained by the peculiarity of the distribution of saline aerosols in the post-dry land of the Mediterranean: the accumulation of numerical nuclei in condensation up to a height of 1 km does not exceed the critical value, above which the concentration of particles exceeds the critical value.

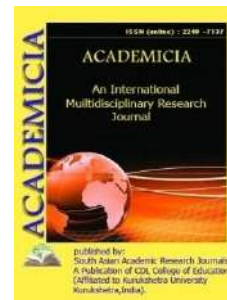
## CONCLUSION

The results of the study are as follows:

1. The interactivity of the components of the ecosystem and the interdependence of their transformation requires the systematic conduct of ecological research, the creation of a separate model system for the description of ecological processes by mathematical modeling.
2. At a salt aerosol concentration of 400 mgk / m<sup>3</sup>, the condensation level in some cases leads to an increase in precipitation up to 1.6 mm, at higher concentrations the aerosol effect changes in the opposite direction - no precipitation and thus the number of cloudy day increases.
3. The drying up of the Aral Sea and the consequent loss of its regional salt-absorbing role are of great importance in the salinity of soils in the Aral Sea region. To assess this role, it is necessary to conduct a comprehensive study of groundwater and surface water flow systems in the Amudarya basin, taking into account the dynamics of water quality.

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## **EFFECT OF MINERAL FERTILIZERS ON THE CHEMICAL COMPOSITION OF SOYA SEEDS**

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### **ABSTRACT**

*The content of the following article is devoted to the study of the effect of mineral fertilizers on the chemical composition of soybean seeds. At the same time, the productivity and grain quality indicators of different varieties of soybean were analyzed. The effect of fertilizer norms on the amount of organic matter in soybean seeds was studied as well and analyzed research results were collected.*

**KEYWORDS:** *Soybean Plant, Chemical Composition of Seeds, Carbohydrates, Protein, Oil, Mineral And Local Fertilizers.*

### **INTRODUCTION**

In recent years, special attention has been paid to the placement and cultivation of non-traditional agricultural crops in the country. In particular, in 2017, for the first time in the country, soybeans were planted on more than 12,000 hectares, 14,000 tons of soybeans were grown, and more than 2,000 tons of soybean oil and 10,000 tons of high-nutrient soybean meal were delivered to poultry farms. [1]

In the developed world of China, with a population of more than a billion people, Japan, Korea and other countries where arable land is extremely scarce, the protein needs of the population are met mainly by soybean protein.

Another feature of this plant is that it belongs to the legume family and provides 55-60 kg of pure nitrogen in the soil. Today in our country the issue of restoring or maintaining soil fertility



is an actual issue. There is no need to apply large amounts of mineral fertilizers to the field during the growing season, as the plant itself is able to absorb and use nitrogen from the air.

In terms of crop area, it ranks 4th in world agriculture after wheat, rice and corn. Gross grain yield will reach 220.64 million tons. While Brazil, the U.S.A. and Argentina are the leading exporters of soybeans, the main buyer countries are our neighboring neighbors China, Korea and other Asian countries.

The Action Strategy for the further development of the Republic of Uzbekistan sets the tasks of "Development of industries, modernization and diversification of industry, the use of energy-efficient methods in practice, ensuring food security, production of competitive and export-oriented import-substituting products"<sup>1</sup>. In this regard, research aimed at the production of quality high-strength edible oils using vegetable oils for the preparation of margarine products is important.

It is necessary to provide the population with nutritious food, solve protein deficiencies, increase vegetable oil production, improve seed quality and soil fertility. To solve these problems, it is necessary to create and improve new varieties of soybean crops and cultivation technology. Farms will be able to grow soybeans on a regular basis, meet the current demand for food, and at the same time meet the needs of future generations: new environmental technologies will be introduced, productivity will increase, human health will increase, and rural people will be provided with safe, nutritious food and the social and economic situation of the farm will improve. A drastic change in food production is required. Food security has become an economic, social and political problem as the population grows and so does the demand for food. As a result of measures taken to address this problem, the cultivation of grain from autumn crops on irrigated lands amounted to 1372.7 thousand hectares. In this regard, special attention is paid to the supply of plant protein. The supply of plant protein is solved in different ways. One of these methods is to plant more multi-protein crops, among which soybean crops are distinguished by the amount and quality of protein. Soybeans are an oily and leguminous crop that plays an important role in agriculture. According to the FAO in 2013, soybeans were planted on 111.0 million hectares of land. Soybeans contain 30-52% protein, 17-27% fat and 20% carbonated water. The high prevalence of soybean in the world is related to the quality of grain and protein. The amount and proportion of protein, fat and other important organic and mineral substances in the grain allow it to be used in various industries. Soybeans are used to make butter, margarine, cheese, milk, flour, confectionery and canned food. Soybean oil makes up 40% of the vegetable oil produced in the world. [2] The main problem in the development of soybean grain is the low productivity of existing varieties, and rapid nausea, rapid loss of its properties are under the adverse conditions. Due to this, the creation of new varieties of shade is considered one of the most pressing issues. Soy products belong to the group of exported products. More than 1 million soybeans are exported from China every year. It is necessary to expand the area under soybeans in the state economy. The area under shade crops on earth is constantly expanding. Exporting soybeans are Brazil, Argentina and other Latin American countries [2,3].

## RESEARCH METHODS

Laboratory and field experiments, morphological, phenological, biometric, statistical and modern methods were used in the research.

The methods of N.M.Karmanenko and O.F.Kazantseva were used to determine the effect of fertilizer norms on the amount of carbohydrates in soybeans.

The reliability of the research results is characterized by the use of modern methods, the publication of the results in scientific publications, statistical analysis of data, as well as the validation of practical results by authorized government agencies and statistically reliable materials collected during field research.

### **Research results and their analysis:**

The experiments were carried out in the fields of the Scientific Elite State Farm of the Grain, Rice and Legume Selection and Seed Research Station of Uzbekistan. The scientific elite state farm is located in the southeastern part of Tashkent region, 15 km from Tashkent, on the left bank of the Chirchik River, on the Greenwich scale at 69° 18' East longitude and 41° 20' North latitude. The soil layers are swamp-type soils that are characteristic of the oasis. There are also mixtures of large and small stones and sand in different depth layers. These soils resulted from typical excess moisture conditions on the left 6 banks of the river. The pH of soil solutions is 6.8-7.3 units, and the mechanical composition is heavy clay. Soybean selection was carried out on the basis of recommendations developed by the State Variety Testing Commission of Agricultural Crops and UzShITI, field experimental methods [3,4]. The planting area for each variety in the collection nursery is 1.8 m<sup>2</sup>. (without repetition). 5 plants were taken for analysis. In the selection nursery, the sown area for each variety is 3.6 m<sup>2</sup> (without repetition). 5 plants were taken for analysis. In the control nursery, the planting area for each variety was 25 m<sup>2</sup> and planted in pairs according to the standard method. The sowing area was 50 m<sup>2</sup> for each variety of the variety selection nursery and was carried out in 4 rounds. For all saplings, regionalized middle-ripe "Uzbek-2" and late-ripe "Uzbek-6" varieties of shade were planted. Sowing rate is 60 kg per 1 ha, row spacing is 60 cm, and plant spacing is 10 cm, 2 seeds in each nest. Agrotechnical measures in the experimental areas were carried out on the basis of recommendations of scientists of the Institute for the cultivation of legumes in Uzbekistan. , potassium) phosphorus and potassium fertilizers were sown manually in small pieces, (100% phosphorus, 50% potassium from the annual norm before planting), the remaining 50% potassium mineral fertilizer was given during the flowering phase of the plant. In 2012-2014 years 215, 238 and 100 varieties were studied over the years in the collection nursery, which consists of varieties of the world collection. For control comparison, regionalized varieties "Uzbek-2" and "Uzbek-6" were planted after every 10 samples. In this nursery were divided into early, middle and late ripening varieties of shade. In 2012-2014, 204 varieties of soybean were planted in the nursery. Phenological observations were carried out on the basis of recommendations developed by UzShITI, and according to the results obtained, 30 varieties of seedlings were selected from the breeding nursery. In the control nursery 2012-2014 years, 113 samples were placed in an area of 25 m<sup>2</sup> and studied by zoning varieties "Uzbek-2" and "Uzbekistan-6". Phenological observations were made during the growing season of the plant, morphological and biological parameters were evaluated, and 25 cultivar specimens were isolated. In 2016-2018, 32 varieties were tested in the nursery. The Uzbek-2 shade variety was planted for control. The yield and grain quality of the selected samples are given in the table below.

**TABLE 1 YIELD AND GRAIN QUALITY INDICATORS OF DIFFERENT VARIETIES OF SOYBEAN**

Varietyname	Origination	Grain yield s / ha	Protein %	Oil %
Uzbek-2	Uzbekistan	27,5	42,0	21,0
464170	USA	32,0	33,5	13,6
7213	Uzbekistan	33,5	33,1	17,5
K-15	USA	33,8	41,8	19,2
3926	Primorsk	33,0	34,5	12,3
9177	Russsia	35,6	34,6	18,1
K-2	USA	31,2	44, 2	18,6
5382	PRCh	33,	1 38,2	14,0

These varieties can be used in targeted selection and production in terms of yield, protein and fat content. Among the varieties selected for yield, the variety marked with the catalog number 9177 stood out. In terms of protein content, it was found that the K-2 variety differed from the standard variety. The varieties selected for the standard variety in terms of fat content could not be matched. It is necessary to find a solution to the problem of increasing the fat content of soybean varieties.

Now let's look at the amount of carbohydrates in the seeds of Uzbek 2 and Uzbek 6 varieties.

The chemical composition of soybean seeds is greatly influenced by external factors. Of these, the effect of mineral fertilizers in particular is much stronger. When the amount of fatty acids in soybeans is analyzed, it appears that soybean oil in general is of high quality. This can be seen from the following information. Carbohydrates in soybeans can be up to 22%. The amount of insoluble carbonated water in the cereal extracted from soybean oil is 17%, soluble 21%. The amount of carbohydrates in the fat extracted from shrot: sucrose-5.7; raffinosa-4.1; staxiosis-4.6; arabinan 1.0; rabinogalactan-8-10 and sour polysaccharides-5-7%. Soy products also contain minerals. Their quantity varies by product type. Carbohydrates are one of the most common organic compounds in the plant kingdom and are important in life. They make up 80-90% of the plant component. Carbohydrates are the main product of the process of photosynthesis. When these plants are broken down in the process of respiration, a lot of energy is released. This energy is expended in various synthesis reactions that take place in living organisms. Compounds in which carbohydrates play an important role in vital processes are particularly important in the formation of proteins, nucleic acids, and fats. Most carbohydrates accumulate in plants as a reserve substance. In order to determine the effect of fertilizer norms on the amount of carbohydrates in soybean varieties, a field experiment was conducted. The field experiment consisted of 6 variants and was performed in 2 repetitions: 1 variant without fertilizer; Different doses of mineral fertilizers were applied in 2-3-4-5 options and 60 tons of manure in 6 options. Fertilizer norms and distribution by phases are shown in **Table 2**. Work was carried out on Uzbek-2 and Uzbek-6 varieties of soybeans. The following mineral fertilizers were used in the experiment:  $\text{NH}_4\text{NO}_3$ -ammonium nitrate, containing 34.6% nitrogen,  $\text{Ca}(\text{H}_2\text{PO}_4)_2$  2 granular superphosphate, containing 20.0%  $\text{P}_2\text{O}_5$ , Potassium salt, containing 40%  $\text{K}_2\text{O}$ . Manure was used as an organic fertilizer. Plant samples at 3–4 true leaves, flowering, pods, and ripening phases were taken for analysis on variants and repetitions. Studies have shown that different agrophons have different effects on the amount of carbohydrates in the soybean leaf and legume. The results

of the analysis are presented in Table 2, where there was a significant difference in the amount of carbohydrates between the variants as a result of the increase in fertilizer norms. In the 3rd-4th leaf phase, the lowest result was 5.9% in the fertilizer-free (control) variant. Fertilizer norms were  $N_{60}P_{120}K_{90}$ ,  $N_{60}P_{120}K_{120}$ , and the amount of carbohydrates in options 2 and 3 were (6.1-6.9%). Fertilizer norms were higher in  $N_{60}P_{120}K_{90}$ ,  $N_{60}P_{120}K_{120}$  in 4 and 5 variants (7.9-7.8%). The highest result (8.4%) was observed in 6 variants with 60 tons of manure per hectare. amount (4.3-5.0%). High results (5.6-5.7%) were observed in variants 4 and 5, where fertilizer norms were  $N_{60}P_{120}K_{90}$ ,  $N_{60}P_{120}K_{120}$ . The highest result was in 6 variants (6.25%) where 60 tons of local fertilizer was applied per hectare.

**TABLE 2 TO THE AMOUNT OF CARBOHYDRATES IN SOYBEAN SEED SEFFECT OF FERTILIZER NORMS**

Variety	Version	Seed content Repetition			x	S	s	M	C	M	S
Uzbek -2	1	,7	,8	,7	,73	,040	,07	,028	,479	,603	,845
	2	,9	,7	,9	,83	,070	,11	,046	,972	,805	,200
	3	,1	,3	,1	,16	,070	,12	,048	,986	,808	,136
	4	,6	,8	,8	,73	,070	,12	,049	,812	,739	,040
	5	,5	,9	,9	,76	,132	,23	,093	,960	,200	,701
	6	,0	,5	,5	,33	,16	,29	,118	,480	,420	,920
Uzbek -6	1	,7	,8	,7	,76	,040	,07	,028	,479	,605	,849
	2	,8	,6	,9	,76	,091	,15	,064	,743	,120	,579
	3	,9	,7	,9	,83	,070	,12	,049	,786	,729	,024
	4	,5	,2	,5	,4	,1	,17	,070	,331	,951	,351
	5	,7	,7	,4	,6	,1	,17	,070	,276	,929	,315
	6	,0	,4	,4	,26	,13	,23	,095	,832	,156	,634

**Note:** X - arithmetic mean Sx - mean arithmetic error, Ms - its error, S - standard deviation, Cv - coefficient of variation, Msv - its error, Sx% - relative error

The sharp decrease in the amount of carbohydrates in the flowering phase can be explained by the fact that as a result of plant growth, the carbohydrates in the leaves are transferred to the yield elements. The amount of carbohydrates in legumes also varies significantly according to the options. The lowest carbohydrate content was in the fertilizer-free (control) option (3.5%). Fertilizer norms were  $N_0P_{90}K_{60}$   $N_{30}P_{90}K_{60}$ , and the amount of carbohydrates in options 2 and 3 was (4.2-5.5%). High results were observed in variants 4 and 5 with fertilizer norms  $N_{60}P_{120}K_{90}$ ,  $N_{60}P_{120}K_{120}$  (6.0-6.3%). The highest result was in 6 variants (6.7%) given 60 tons of local fertilizer. There is no significant difference between the amount of carbohydrates in the Uzbek-2 and Uzbek-6 varieties of shade in the 3-4th leaf and flowering phase. The seeds of the soybean plant contain 4 to 15%. Different agrophones have different effects on the amount of carbohydrates in the soybean seed. The results of the analysis are presented in Table 2. The lowest result is 4.7% in the fertilizer-free (control) option. The amount of carbohydrates in variants 2 and 3 of Uzbek-2 and Uzbek-6 varieties with fertilizer norms  $N_0P_{90}K_{60}$ ,  $N_{30}P_{90}K_{60}$  is Uzbek-2 (5.8-6.1%) in Uzbek-6 variety (5.7-6.8%) forms. High results were observed in 4 and 5 variants of fertilizer norms  $N_{60}P_{120}K_{90}$ ,  $N_{60}P_{120}K_{120}$  Uzbek-2 variety (6.3-7.7%) and Uzbek-6 variety (7.4-7.6%). The highest results are in Uzbek-2 and Uzbek-6 varieties (8.3%) in 6 variants using local fertilizers. There is no significant difference in the amount of carbohydrates in soybean varieties Uzbek-2 and Uzbek-6 seeds. Based on the results obtained, the following conclusions were drawn:

1. Under the influence of fertilizer norms, the amount of carbohydrates in soybeans increases. The minimum amount of carbohydrates in the period of 3-4 leaves was 5.9% in the Uzbek-2 variety and 5.8% in the Uzbek-6 variety without fertilizer (control). The high yield results were 7.9-7.8% in Uzbek-2 variety and 7.0-7.6% in Uzbek-6 variety in variants 4 and 5 with  $N_{60}P_{120}K_{90}$ ,  $N_{60}P_{120}K_{120}$ . The highest result was 8.4% in Uzbek-2 variety and 7.8% in Uzbek-6 variety in 6 variants with 60 tons of local fertilizer per hectare.
2. Different agrophones have different effects on the amount of carbohydrates in soybean seeds. The lowest result is 4.7% in Uzbek-2 and Uzbek-6 seeds without fertilizer (control). High results are 6.7-7.7% in Uzbek-2 seeds and 7.4-7.6% in Uzbek-6 seeds in variants 4 and 5, where fertilizer norms are  $N_{60}P_{120}K_{90}$ ,  $N_{60}P_{120}K_{120}$ . The highest result is 8.3% in Uzbek-2 and Uzbek-6 seeds in 6 variants using local fertilizers. There is no significant difference in the amount of carbohydrates in soybean varieties Uzbek-2 and Uzbek-6 seeds.
3. There was no significant difference in the amount of carbohydrates between Uzbek 2 and Uzbek 6 varieties.

### CONCLUSIONS:

1. Soybean collection was studied, samples of varieties that meet important economic characteristics were transferred to the next research nursery, and samples were selected for State sanitary control transmission.
2. Variety samples on soybean ripening were selected and a primary source for selection work was created.
3. Variety samples for high soybean yields were identified and considered as a source for further selection work.

4. Among the soybean varieties, a variety with a higher protein content than the control was selected.

5. It was found that the K-2 variety differs from the standard variety in terms of protein content.

6. It was found that different agrophons have different effects on the amount of carbohydrates in the leaves and legumes of soybeans.

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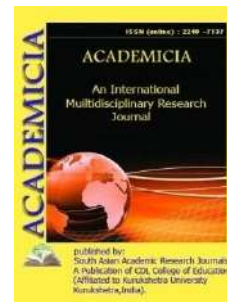
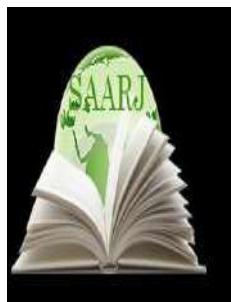
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## INTERPRETATION OF LEXICAL AND SEMANTIC FEATURES OF UZBEK-TAJIK WORDS IN JAMAL KAMAL'S POEM "UZBEK LANGUAGE"

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### ABSTRACT

*The following article deals with the lexical and semantic features of Uzbek-Tajik words on the example of the analysis of the Uzbek language by Jamal Kamal. The work of Jamal Kamal and his role in Uzbek literature are presented as well.*

**KEYWORDS:** *Jamal Kamal, "Uzbek Language", Uzbek-Tajik, Lexico-Semantic Features.*

### INTRODUCTION

As we get acquainted with the works of JamolKamol, who has a special place in the Uzbek literary environment with his unique poetry, excellent translated works, marvelous lines in Uzbek literature, his unique images, the best and most charming words of Persian-Tajik language in his poetry. We can see there have been cultural and social ties between peoples for centuries, so there are interlingua communication and assimilation between languages as well.

The lexemes learned from Tajik to Uzbek are also interconnected as a result of centuries of coexistence of the two peoples, long-standing socio-political, cultural, literary and linguistic relations, which help to express some subtle semantics depending on the speech situation.

The book "Lexicology of the Uzbek language" created in collaboration with several scholars. The section "Vocabulary of the Uzbek language according to the scope of consumption" written by G. Muhammadjanova also contains the following views in this regard:

"... some words from the Tajik language have been acquired as a result of socio-political, literary, cultural and linguistic relations, and they are widely used, mainly in the unlimited

lexical layer of the Uzbek language. For example, Tajik words such as river, tree, iron, bread, flower, city, friend, lamp, and brick are among them. As a result, during the course of historical development, even some Persian-Tajik words (iron, bread, city, flower, below) ousted ancient Turkic words (utyuk, ekmak, kala, agach, chechak, tubanda) from the general or neutral lexicon, and some of them in modern Uzbek only stylistically limited vocabulary is included. [6, 9 p]

It seems that linguistic laws, like social laws, are manifested in a peculiar way. From this point of view, general and specific laws can be observed in the development of language. General laws refer to linguistic phenomena, processes that are specific to all languages.

The communicative and expressive functions of language are due to the uneven development of language level the rapidly change lexical layer relative to other linguistic layers because of constant motion. (5, 54-p)

**The main part.** In linguistics, specific linguistic factors include the specific rules of each specific language. For example, each language (even in languages belonging to the same language family) has its own phonetic, lexical level, grammatical structure, and stylistic style. Hence, these two types (factors) require each other, including commonalities.

Words also acquire a different semaphore over time or, for some reason, condition, or situation, losing their semantic semantics.

In the example of Jamal Kamal's poem "Uzbek language" in the process of studying the lexical and semantic features of the language of his poems, it is observed that many Persian-Tajik lexemes in the Uzbek literary language are mastered, manifested in different semaphores, depending on the speech situation:

**Dilbarimsanshujahonda,**  
**dilraboo`zbektilim.**  
 Ham go`zalsan, ham asal,  
 Ohanraboo`zbektilim.(1. 33)  
 You are my heart in this world  
 My charming Uzbek language  
 You are both beautiful, and honey  
 Marvelous Uzbek language.

“Dilbar”- is a Persian word that expresses the heart, attracts, attracts, pleases, fascinates, attracts. Out of the 5 semas mentioned in the annotated dictionary, the pleasant sema of the word “dilbar” prevails in the Uzbek language.

In the process of studying the word **charming** in linguistics, there is also a hierarchy of beautiful-beautiful-pleasant-charming-charming. As for the fact that the charming lexeme is at the top in this ranking, we see that the poet used the best, most weighty, burdensome lexeme in relation to the mother tongue.

In the dictionary "Farhangizabonitochiki" our word is interpreted as follows:

1.“Dilbar”- pleasant, charms someone;

## 2. “Yor” - beloved;

There are also “dilbarak, dilbari” expressions of the “dilbar” lexeme in the Tajik language, each of which has a spiritual connection, as well as a subtle semantic difference.

That is, in the lexeme of “dilbarak”, the meaning of the form is “dilbar”, and in the lexeme of “dilbari”, the meanings of “dilrabo, maftunsozi, zebo, khushroi, rano” are reflected in the main semantics. In the literature, the use of the charming lexeme in relation to beloved is common:

Goodbye, darling, I'm going to the heart ...

In mystical terms, the lexeme “dilbar” is also used to refer to the beloved that makes the language self-evident. The social situation in society has always been reflected in language. It is natural that the development, evolution, rise and decline of society are all reflected in linguistics, because language is a phenomenon of social consciousness. The only word that exists in our language expresses different semantics depending on the situation in the speech structure. Our subconscious views are expressed through a lexeme that accurately expresses our mental state.

If we pay attention to the psycho-linguistic state of the poet's lyrics, the language is the soul, the life-giving force, the life-giving ring that nourishes the soul. It has a charming melody and charm. The soul finds peace in its tone and brilliance. The Uzbek language has such power. The poet's use of the charming diagnosis in the verse in relation to the mother tongue is a fitting metaphor, as if he were looking at a ring.

After all, RasulKhamzatov's famous poem "Christ is my soul is my mother tongue" is used in the literature. Nothing can give life to my dead soul, and the very idea that my mother tongue is my resurrection means that my mother tongue is as precious to me as my soul. In Turkish poetry, the teacher Navai, who suffered and conquered the world of humanity with the power of words with only one pen, says the following:

The word is pure in the body of the dead,

The stain of the soul is the loss of words between the bodies. (A. Navai, “Hayratulabror”)

Focusing on the analysis of a single charming lexeme in different linguistic layers in the Morphemic Dictionary of the Uzbek Language, edited by Rakhmatullaev, we observed that it is divided into components as a language “bar”. (7)

### Heart.

1. Circulatory system, heart.
2. Inside, included between something
3. Inner, mind, spirit.
4. Thought, thought
5. Inclination, desire, passion
6. Sweetheart, friend, lover.
7. Courage, bravery, courage

If the “**bar**” is used in the sense of a pronoun, the two independent semas combine to form a joint lexeme in a syntactic (compositional) way. [2, 141 p.]

In the second verse, the lexeme “dilirabo”, which is gradually evolving in relation to the Uzbek language, is also borrowed from the Persian-Tajik language and expresses the captivating, “diltortar”, charming semantics. “Dilirabo” melody can be combined with “dilirabo” landscape lexemes. In the poem, “dilirabo” is combined with a lexeme of language, dominated by metaphorically engaging, charming semantics.

It is said: Persian is like a sugar,

The Arabic-speaking word duhar (priceless)

You are sugar, you are pearl

**Priceless** Uzbek language.

The “durri” used in the byte is a “guhar” -isophalic compound, and we see the mutual harmony of both the Persian and Arabic linguistic layers:

“Dur” is a pearl, a pearl, a large type of pearl, the best in a figurative sense. In the portable poetic sense, valuable, meaningful, deeply meaningful words, light, light semaphores lead.

“Ore” –is a precious stone, pearl, carved diamond, ore. Used in a poetic layer in a rare, priceless sense.

As for Mazi, the old Uzbek literary language in the Navai period is also mentioned in the chapter “Word definition” of “Hayratul-abror”.

So`z **guharig`a**erurangasharaf

Kim bo`laolmasangagav**hars**adaf

Tilbuchamanningvara qilolasi

So`z duridinbo`lubonjolasi

It's an honor to speak up

Who can't be a pearl?

The tongue is the leaf tulip

The word pearl is its estimation.

We see that in Jamal Kamal’s work there are references to the linguistic layer that gives the literary breath of the past. In Navai's “Khamsa”, which proved the great power of the great Turkish language, the word is likened to the words “guhar” and “gavhar”.

The fact that the poet uses the terms Persian as sweet as sugar, Arabic as “dur”, as precious as a pearl, and the Uzbek language as sugar and “guharsan” in a meaningful way reveals the contextual meaning in linguistics.

After all, the poet himself describes such a union and unity as follows:

How many words did you get from Persian?

How much is Chun arabian,

Enough its Turkish agility

Marvelous, Uzbek language.

In the interpretation of the “**Serjilva**” **marvelous** lexeme, we know that the -ser suffix is plural in Persian, and in dark horses it is a quality-forming prefix denoting plurality, abundance. In the poetic layer, it serves to express the glittering, glittering, playful metaphorical semaphores.

We know that the definite material, formal nomenclature of the external is determined by the state of speech, by the origin and possibilities of the speaker (author of the speech). Nomema, i.e., external meaning, form speech condition, is determined by the situation and does not affect the essence of the lexeme. The essence of a lexeme is revealed through its inner side, that is, through the semema and, accordingly, the way in which the lexeme interacts with other language units. But nomema is of great importance in speech, especially in poetic speech. In poetic speech great attention is paid to the nomema and its occurrence. Because the meaning of a word occurs in a particular text and speech context, it is understood clearly and unambiguously. The meaning of the word does not have diversity, commonality, as a semema that exists only in the form of chance. In different texts and contexts, many words can have many meanings, hints of meaning, as the occurrence of a single lexeme. At the same time, these meaning paints are different speech-methodological manifestations of a semema, if it is realized through a semema. Semema can manifest several different events in speech. This, in turn, depends on which word it is linked to, and its position in the text.

Language is divine in the world,

The word is divine again,

Reflected in your words,

The God is beautiful, myUzbek language.

In any linguistic unit the relation to the concept to which semema is related in the sense of the word is preserved, but at the same time there is no abrupt change in the relation of nouns, expressions, and function semantics in semantics:

God - lord, ruler-master.

1. According to the religious concept, in particular, according to Islam, the supreme divine power that created and governs the whole being, the universe; the basis of belief of any religion (synonymous with the word “Allah” in Muslims).

2. The supreme ruler of some part of the universe in polytheism.

The semema of God is dominated by the nomema- Lord meaning, which represents a simple meaning. So, the words of the Uzbek language glorified by the poet reflect the beauty of God. Those words are so powerful. It glorifies the beauty that captures the human heart, the embodiment of true power.

Senjahondanbahramand,

Sendinjahonbahramand

**Bahramandlik**qomating

Etdiraso ,o`zbektilim.

You enjoy the **world**,

**Enjoy** your **world**,

**Enjoying** made you beautiful,

My Uzbek language.

“Jahon” – world, universe, the earth and all that is in it, globe. In the poetic layer, it means all the peoples of the world, all humanity.

“Bahramand” -lucky; partner; beneficiary; enjoyable.

The exclusion of some semantics, which differ in certain semantic subtleties in the semantic structure of the word, and, conversely, the reinforcement of some, the difference between the semantically connected concept and the semantically connected concept, is called the semantic mobile event. The figurative meaning of a word is also referred to in linguistics by terms such as figurative meaning, occasional usage, and metaphorical usage.

The figurative meaning of the word is formed mainly by the partial exclusion of noun semantics in the semantics due to the requirements of the situation, and by strengthening the satellite and expression semantics for a specific purpose. The more the lexical meaning, that is, the semantics of the noun, is removed, the more the semantic and semantic semantics of the word are strengthened. In particular, in the above byte, in the lexeme of enjoyment, the semaphore of benefit is excluded, and the sema of enjoyment is preferred. You are liked by the whole world. All is enjoyed; this pleasure is enhanced by the sema that has made your body upright. In speech terms, noun semantics can also be called dominant semantics, and occurs in speech. Such a linguistic phenomenon occurs in H. Nematov, R. Rasulov's book "Fundamentals of Uzbek systemic lexicology" and speech is interpreted as **transferred meanings**. In linguistics, this type of figurative meaning in words is called a metaphor - a figurative meaning formed on the basis of analogy. Artistic style, as the most common method of creating such a portable meaning, is one of the most basic factors in the art of speech. The formation of a portable meaning in speech on the basis of the semantics contained in the semantics is inherent in almost all words that do not have an unambiguous nature of a term.

You are our honor,

Fountain of life,

If you wouldn't exist

We wouldn't be happy

My Uzbek language.

**Happiness** is destiny; share, contribution:

1. A spiritual and moral concept that manifests itself as a person's complete satisfaction with the results of his activities, achievements in life, satisfaction with the way of life, the achievement of a certain goal, the realization of dreams and hopes.
2. A state of complete satisfaction and helplessness in life.

In many cases, the word unfortunate has a metaphorical meaning with its black quality.



1. Dark is the darkest of all things; cauldron, coal-colored; opposite white.

2. Dark, without light, without light. Contrast light.

Portable is generally a negative sign, meaning bad.

Apparently, semema arises through verbal and figurative (metaphorical) meanings and occurs as a specific meaning of a word in a particular context.

As the scope of the use of verbal metaphorical meaning expands, the metaphorical meaning may move away from the semantics, and the metaphorical meaning may have its own specific noun semantics. At the same time, the figurative meaning can be detached from the semema, which is the basis and source for itself, and develop towards an independent semema in the lexeme. Such a development can be a source of study of semantic development in lexemes taken separately from historical (diachronic) linguistics, rather than systemic lexicology. [8] This process cannot be explained or explained on the basis of system analysis. For example, in the explanatory dictionary of the Uzbek language [3] 12 types of meanings of the black lexeme are noted. All of these types of meanings have a common meaning. The use of the word happiness in our poem is taken for analysis and helps to understand which sema of it is brighter, that is, consistent with its meaning without light, without light.

As a simple black color, the negative side grows as a result of the acquisition of figurativeness towards the semantics of lightlessness. In turn, the black lexeme exaggerates the meaning of verse-specific negativity:

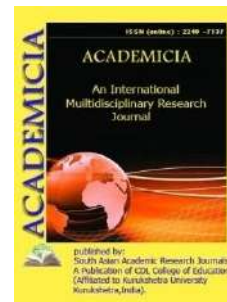
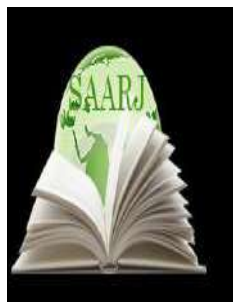
## CONCLUSION

In conclusion, it can be said that JamolKamol's poetry, which is characterized by its simplicity has a unique style, that is, the rhythm of Uzbek-Tajik words harmonization and the expressive beauty of the two languages as well.

It follows that the fact that in the language of the poet's work each sema acquires a dyed style shows the richness of the lexical layer of the language and the richness of its essence.

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## BASIC TECHNIQUES FOR PAINTING FABRICS

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### ABSTRACT

*The article discusses the basic techniques of painting fabrics. Today's fabric painting techniques are traditional techniques rethought and redesigned in accordance with the dictates of the time, greatly simplified and enriched at the same time. A huge variety of colors and accessories allow even beginners to paint for the manufacture of clothing and interior. Moving from simple to complex, you can master various techniques and learn how to combine them correctly to achieve maximum decorative effect.*

**KEYWORDS:** Reception, Painting of Fabrics, Paints, Decorative, Batik.

### INTRODUCTION

Drawing with paints on paper, we dip the brush into the paint, draw along the paper and get a clear line. If you repeat the same thing on the fabric, the result will be unpredictable - the smear will spread, turning into a shapeless blot. The fabric dictates its conditions, and, obeying them, we are forced to look for ways to keep the paint in the outlines given to us (contours).

All methods of painting fabrics in one way or another solve the problem of subjecting the fabric to the creative imagination of the artist. Wax, paraffin, salt and a whole arsenal of techniques are called upon to help.

Today's fabric painting techniques are traditional techniques rethought and redesigned in accordance with the dictates of the time, greatly simplified and enriched at the same time. A huge variety of colors and accessories allow even beginners to paint for the manufacture of clothing and interior. Moving from simple to complex, you can master various techniques and learn how to combine them correctly to achieve maximum decorative effect.

The technique of cold batik arose at the beginning of the 20th century, and today it is the most common and favorite painting technique. Its distinctive feature is the presence of characteristic contour lines that perform the function of separating different color spots and additionally carry a graphical load. Contour lines can be either white or colored, performed by a special reserve composition, which is an adhesive mixture based on natural rubber and gasoline, and applied using special glass tubes.

To work on a cold batik, you will need the following materials and tools: fabrics, paints, brushes, frames (preferably sliding, collapsible), buttons, hooks and the main tool for a cold batik - a glass tube, with which a contour line from a backup composition is applied.

The reserve is sold in specialized stores for artists and can be both domestic and imported, both colorless and colored. But it can be cooked at home. The main recipe for the reserve: 200 grams of rubber glue, 200-250 grams of gasoline. 20 grams of paraffin. To prepare the reserve, you will need metal dishes with a volume of about 1 liter, a wide metal bowl or pan for a water bath and a spoon for stirring the mixture. The glue is squeezed out of the tube into the dish, gasoline is added - all this is mixed, then grated or planed paraffin is poured and mixed again. The dishes with the mixture are placed in a large bowl of hot water so that the water level in the bowl reaches the level of the gasoline-glue mixture in a smaller bowl, this will help the mixture warm up faster. But water should not get into smaller dishes. Heat the mixture over low heat with constant stirring until the paraffin is completely dissolved. The availability of the reserve is determined by the appearance of a large number of small bubbles. It can be used after complete cooling. There are other recipes in the literature where beeswax and rosin are included in the components, but for many years this is most often used.

Before starting the painting, it is necessary to develop a preliminary sketch of the composition, then all the contours of the drawing on whatman paper in full size of the painting. Next, you need to transfer the pattern to the fabric. If the fabric is transparent, then the task is simplified - it is enough to put it under the fabric stretched over the frame and transfer it with a pencil. It is advisable to use colored pencils for fabric, they are easily removed from the fabric, unlike simple pencils. If the fabric is opaque, you can use carbon paper (special in sewing stores), it stains less, does not leave greasy stains.

The fabric on the frame should be tight. The thin end of the glass tube is lowered into the container with a reserve, and through the wide end the solution is collected, you can use a rubber bulb, or you can carefully do this with your lips, like with a straw for a cocktail.

Applying a reserve is the most critical stage of work in a cold batik. Hold the tube in your hand as you would a pencil. The movement of the hand should be smooth and continuous, during stops the tube should immediately be lifted end up. A napkin should always be at hand to wipe drops on the tip of the tube - this prevents the appearance of thickenings. Spaces and dashed lines are not allowed. The quality of the lines is a matter of time and experience. The line should soak the fabric completely to its full thickness. The integrity of the contours is easy to check after

drying by looking at them in the light. After doing the work, the tube is washed several times with gasoline, by pulling it inward.

You can start painting after the reserve has completely dried. Paints work on the principle of: light to dark. It must be remembered that a faint color can be made more intense, and dark is very difficult to lighten. Having finished painting, the fabric is removed from the frame and designed according to your desire and taste.

Hot batik technique involves the use of hot molten wax or paraffin. Modern hot batik is rooted in traditional methods of decorating fabrics in the Middle East and Southeast Asia. And today, on the islands of Indonesia, batik is a craft that is practiced by entire villages.

In a classic batik, the pattern is applied to the fabric with molten wax, then the fabric is immersed in the tub with the lightest paint, dried, again covered with hot wax and painted in the tub with darker paint - this is repeated as many times as the colors require for the ornament. The last color - the background color - should be the darkest. Melted wax is applied using brushes or special devices - *chian-tings* (*changings*).

Modern hot batik is less laborious, but retained all the characteristic features of traditional batik.

For work you will need: fabric, frames, white household candles or pharmaceutical paraffin, two metal containers, aniline dyes, brushes for aniline dyes, newspapers, an iron.

The fabric is pulled onto the frame in the same way as in a cold batik. Paraffin is melted in a water bath. To do this, a white household candle is placed in a small bowl, which is placed in a large bowl with hot water. A water bath allows for a long time to maintain the temperature of the molten paraffin relatively even. It is not recommended to melt paraffin in another way, for example, by heating a bowl with a candle on a stove. In this case, the paraffin heats up too much, smokes, and when applied to the fabric spreads shapeless spots. It should not be forgotten that paraffin is flammable and may catch fire when exposed to open flames.

An example of a simple batik. Color spots are applied to the fabric stretched over the frame so that they flow smoothly into one another. To do this, the border between them is wetted with water. Then the fabric is dried and a paraffin pattern is applied with a wide brush. The nature of the pattern may be arbitrary. The main thing is that each smear of paraffin overlaps several color spots, then the flow of color into color will be emphasized in the finished painting. However, a sense of proportion must be maintained. After solidification of the paraffin, the entire fabric is covered in black. After drying, paraffin is removed by ironing the fabric through newspapers.

Having mastered the technique of hot batik, you can perform work of varying degrees of complexity, as well as combine the techniques characteristic of cold batik and free painting in one work with hot batik.

It is possible that the nodular batik is one of the first, very primitive ways to create a pattern on the fabric. More precisely, this is not even a painting technique, but a method of dyeing a fabric, in which a pattern arises from the binding of individual sections of fabric with knots.

A peculiar pattern occurs on the fabric due to the fact that the paint does not penetrate those areas of the fabric that are connected in a knot or wrapped in a cord.

For work you will need: fabric (silk, cotton, linen, woolen, knitwear), aniline or vegetable paints, durable thick threads, dishes for diluting paints and stains, detergents, paint fixers, household gloves.

Before dyeing, the fabric is folded in a certain way, in accordance with the conceived pattern, tied with strong threads or cords according to a certain pattern. Further immersed in a container with dye. After staining and washing in running water, the nodules are untied. The result is a pattern of the same color, but with transitions from light shades to more saturated, since the paint penetrates differently in bandaged and non-bandaged areas. Leastly stained are those areas that were tied with cords or knotted, they retain their original color. Fragments free from any dressing are painted with maximum saturation. The remaining parts are stained to varying degrees, resulting in a kind of color transitions that form unique patterns.

To obtain a multi-color pattern, the operation with dressing and dyeing of the fabric is repeated. This procedure can be repeated several times, depending on the result that you want to get in the end. One thing to remember is that each subsequent color should be darker than the previous one.

After dyeing, the fabric is rinsed, fixed in a solution of water with the addition of vinegar or other means, carefully untie the knots, then thoroughly washing and drying, smoothing in a wet state. The result is always original, unique, since it is simply impossible to fold and tie the fabric twice in exactly the same way.

The term "free painting" means several methods of painting fabrics, united by a general principle - the paint freely spreads over the fabric. The free painting can include watercolor technique, similar to the work of watercolor on wet paper.

The technique of free painting is the best suited for beginners. Having mastered then cold and hot batik, you can return to free painting on a qualitatively different level, having the opportunity to combine different techniques in one work. The materials used are the same as for cold batik, with the exception of the backup composition. In free painting there are several methods - free painting in saline, with starchy thickening and the "dry brush" method.

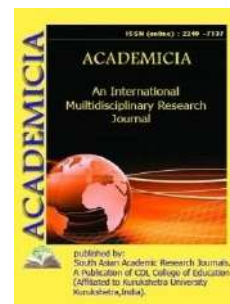
It is necessary to paint the fabric quickly, literally "in one go", including both thoughts and skill. The best material for free painting is all kinds of silk. In ancient times, silk was valued not only for its excellent external qualities. There was a deep belief in its beneficial effects on human health.

The technology of free painting consists in the fact that all kinds of fabrics are subject to very weak redundancy by various thickeners, as a result, the paint spreads over the fabric, it becomes possible to make drawings with free strokes, correct the shape found, saturate with light, without leaving any boundaries. In a word, ample opportunities for artistic creation. As a rule, a decorative composition is based on images and associations and carries not a plot, but an emotional burden. The fact is that different images evoke different associations in us. The square seems to us heavy and steady, the circle - harmonious, complete, balanced. We consider orange to be cheerful and warm, and blue to cold and calm. Creating a decorative composition, each expresses his creative individuality and conveys his vision of the world through the beauty of forms and lines and the harmony of color. There is a whole arsenal of techniques - symmetry, asymmetry, static, dynamic, dominant (compositional center), color saturation, color tone, color harmony.

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## **MOTIVATION OF STUDENTS TO DO SPORTS AS PART OF PHYSICAL EDUCATION CLASSES**

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### **ABSTRACT**

*This article discusses the methods of motivating students to play sports as part of training. The purpose of this article is to show students the importance of motivation and sports in their lives, and how much motivation is important for sports.*

**KEYWORDS:** Sports; Physical Education; Motivation; Student.

### **INTRODUCTION**

From the moment of birth, people are subject to physical stress, and such stress is an integral part of our life. Slightly less than half of our body (40%) consists of muscles that every day support you and me in our daily routine. The concept of things, body balance control, breathing, head turns, etc. all this is done thanks to muscle mass.

Since ancient times, people have adapted to high loads, hunting, construction, agriculture, etc. But in the age of technology, sport, unfortunately, has faded into the background, because now the main thing is knowledge, not a well-developed body. Many routine tasks, such as raising large beams in construction, plowing vast areas of land, etc., fell into the hands of technology, people's lives have become easier and better, but still many lack physical exertion. Due to the lack of stress, people have health problems: the functioning of organs and systems deteriorates, the motor apparatus loses its functions, the body becomes decrepit, weakened and becomes more vulnerable to diseases.

Sport, like body training, is necessary for people, because it is not only a “pumping” of the body, but also emotional unloading, and as you know: a good body condition affects the functioning of the brain. No wonder they say: “The body is our temple.” Training helps us improve many of our life metrics.

Relevance. Health in our life plays a too big role, and if you do not monitor your health from the early years of our lives, you can pay bitterly. This article encourages you to start monitoring your health, and the sooner the better.

In all educational institutions, sport is an integral part, and is included in the curriculum of students. When training activities can not put training in the background. Simply put, the brain is physically in the body. And if the body is decrepit or sick, then how, in this case, can the brain be healthy, as an integral part of the body? The answer suggests itself. However, it is important not to go to extremes. Therefore, for good learning, students need physical activity.

Nevertheless, academic institutions put education much higher than physical education classes, because educational organizations are needed for this. Nothing can be done with this, students should give all their best in the classroom, and also go in for sports in their free time.

“Physical culture” as a subject in institutions of higher professional education should perform: educational, social, developmental and educational functions.

The implementation of these functions occurs through the solution of some problems:

- Gain experience in the creative use of physical culture and sports to achieve life and professional goals.
- providing general and professionally-applied physical fitness that determines the psychophysical readiness of students for their future profession;
- the formation of a motivational-value attitude of students to physical education, installation on a healthy lifestyle, physical self-improvement and self-education, the need for regular physical exercises and sports;
- mastery of the scientific and practical foundations of a healthy lifestyle and physical education;
- mastery of the system of practical skills and abilities that ensure the preservation and strengthening of health, mental well-being, the development and improvement of psychophysical abilities and personal qualities, self-determination in physical culture;
- the formation of students' understanding of the role of physical culture in personality development and preparation for professional activity; personal development and preparation for professional activities;

Motivation is an impulse to a certain action; that is, the psychophysiological process that controls human behavior, sets the direction of activity, the organization of its further actions, stability and activity; as well as the ability of a person to satisfy his needs through his actions.

It is quite difficult to imagine today's world without motivation. Every day people try to make their life better, and every day these tasks become more and more difficult, but what controls them in these aspirations? Each person has their own motivation for a particular business. So what should happen in a person's life in order to receive a push in the form of motivation?

As the leading Soviet psychologist A. Leontiev wrote: “Motive is an objectified need”, that is, a person relies on motivation to satisfy his needs, for example, a person is very thirsty (need), he has a desire to satisfy this thirst (goal), and he reaches for a water bottle (motive). With the help of motive and motivation, a person develops, in addition to everyday things (eating, drinking, going to the toilet, personal hygiene), people are still keen on deeper things (work, art, science), and all this is the merit of motivation - the thing without which there would be no world in its manifestation today.

Vanity is an integral part of student life. Studying, part-time, personal affairs, all this consumes a significant amount of time from the life of the student. It is very difficult to find at least an hour in your free time in order to devote time to sports, and then physical education classes come to the rescue. Time allocated for self-development in the field of sports, which is mandatory included in the curriculum. But because of great worries, students do not pay due attention to their own health, what about sports. Every day, students suffer from overwork due to study or personal matters, and fatigue does not allow them to think about training.

So how do you show students the importance of physical activity? To answer this question you need to delve into the problem itself. Many scientists have identified 3 groups of causes of these problems: reasons of an organizational nature, methodological nature and personality. Basically, the methodological nature is the problem of the mismatch of physical capabilities with the proposed workloads, the personal nature makes it possible to see that the level of one's physical fitness is quite low, and on the organizational side, this is a lack of interest groups. There are also many factors that play an active part in physical culture and sports in everyday life: the orientation of the educational process, the content of classes, the availability of material sports facilities, the level of requirements for physical condition, the teacher, the frequency of classes, their duration and atmosphere. You can also note the students' desires: just pass the session or increase the level of health and physical development.

It is not for nothing that it is believed that the attitude of young people to physical education is one of the pressing socio-pedagogical problems. A lot of scientific articles have already been written, and no less research has been conducted that shows that physical culture and sports activities did not take root among students as an urgent need and did not turn into personal interest.

In order to direct young people to sports, a careful approach is needed. At the very least, good pedagogical conditions are needed that contribute to the transfer of the value potential of consciousness of students to a higher, civilized level, as well as the formation of positive motivation among young people, which will affect the physical culture of consciousness.

It is difficult for students to motivate themselves to sport under the enormous burden of their responsibilities. To do this, they need a high-quality teacher, a modern education system, made certain requirements for the selection of staff for the position of teacher: he must form subjective-personal, as well as value-based attitudes to the subject being taught. The teacher needs to have a sufficiently large set of personal qualities that complement the ability to teach physical exercises through the formation of an internal position of confidence in the need for a healthy lifestyle. In this regard, the problem of physical education goes into the plane of scientific substantiation, formation and development of qualitatively new, more subtle and flexible relations of communication between student and teacher.

Quite cruel requirements, but under the guidance of such a mentor, it will be easier for students to understand for themselves the importance of this discipline. It is necessary to use a differentiated and individual approach to the physical abilities and preparedness of students based on the following types of motives:

Wellness motives - the strongest motivation of students to exercise is to improve their health. In the end, everyone gets a little happier when they feel good.

Motive and activity motives - the implementation of mental activity leads to a decrease in the percentage of perception of information. Performing special physical exercises for the muscles of the whole body and visual apparatus significantly increases the effectiveness of recovery than passive rest and the pleasure of the process of physical exercises.

Competitively competitive motives - This type of motivation is based on a person's desire to be the best among friends, and because of this, the desire to beat himself in sports will increase.

Aesthetic motives - the motivation of students is to improve the appearance and impression made on others.

Psychologically significant motives - sport significantly affects the mental state of young people. Certain types of exercise are a means of neutralizing negative emotions in a person.

Educational motives - physical education classes develop in the person the skills of self-control and self-training.

Communicative motives - it is easier for people who are in the same community and are engaged in the same business to find a common language.

Cognitively developing motives are a motivation that is closely related to a person's desire to know his body, his abilities, and then improve them with the help of physical culture and sports.

Creative motives - physical culture and sports provide great opportunities for the development and maturation of students' creative personality.

Professionally-oriented motives - a group of this motivation is associated with professionally-oriented students, in order to increase their level of preparation for future work.

Administrative motives - physical education classes are mandatory in educational institutions. To obtain control results, a system of credits was introduced, one of which was on the subject of "Physical Culture".

Cultural motives - this motivation is acquired from the younger generation under the influence of the media, society, social institutions, in the process of forming the individual's need for physical exercises.

## CONCLUSION

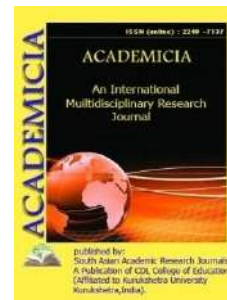
Nowadays, the physical well-being of mankind is at a rather low level, every year our life is simplified, manual labor is replaced by robotization. Man gets less and less physical exertion, but at the same time the amount of mental effort is growing. For all the time of its existence, mankind has become accustomed to the struggle for life; nowadays, it has more and more begun to be "lazy", relying on the brainchild of the industrial revolution. Although recently people nevertheless came to understand that physical culture is necessary in our life. But in any case,

you need to educate all age categories in the field of physical education and sports, because many have an inferior knowledge base in this area, and not a full awareness of the need for exercise for their health.

We need to seriously pay attention to the problem of physical education of children and youth, because these are 2 age categories that will represent the entire human race, which will transmit the knowledge gained over their entire lives to future generations. And knowledge of a healthy lifestyle is one of the most important for all of us.

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## THE ESSENCE OF THE CONTENT OF THE CONCEPT OF DIGITAL EDUCATIONAL RESOURCES AND ITS ROLE IN PRIMARY EDUCATION

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### ABSTRACT

*The article is devoted to the current problem of the use of digital educational resources in elementary school. The work touches on the conditions for the effective use of digital educational resources in the educational process of primary school. The author studies the opinion of primary school teachers on the appropriateness of using digital educational resources in teaching younger students and the difficulties that arise. The article presents possible measures to create favorable conditions for the fruitful use of digital educational resources in educational institutions. The article may be of interest to future primary school teachers, teachers of pedagogical universities.*

**KEYWORDS:** *Digital Educational Resources, The Use Of Digital Educational Resources By Primary School Teachers, Elementary School Students, A Survey Of Primary School Teachers.*

### INTRODUCTION

The development, improvement and dissemination of information and communication technologies cause a significant impact on all components of the educational process - its goals, content, tasks, forms, methods, training tools. The most obvious changes regarding educational tools: the use of digital educational resources forms the face of modern education.

Informatization processes permeate all levels of education, but their intensity decreases from higher to primary school. A certain slowdown in the use of pedagogical software at the first stage of school education was caused by numerous warnings of psychologists, teachers, doctors, physiologists, hygienists who drew attention to the negative aspects of attracting younger students to work with a computer, the presence of risks to the health of the child, the possibility



of undesirable consequences of immersion into the virtual world. Today, a significant expansion of the use of digital educational resources in primary school is stimulated by a number of factors: the transition to continuous school education in the field of information technology, the availability of affordable high-quality pedagogical software for teaching subjects in the natural mathematical and humanitarian cycles; the saturation of everyday life of a modern person with digital devices, as a result of which children with well-established user skills come to school, the level of which goes beyond the elementary; evidence of the positive impact of working with a computer on the intellectual development of a student, his motivation for learning; the interest of parents in the modernization of school, and in particular, primary education.

It follows from the foregoing that the use of electronic teaching aids in elementary school is distinguished by certain specifics: it requires pedagogical justification, well-planned, balanced and careful, accurate selection of funds both from the point of view of contributing to the achievement of the didactic goal, and from the point of view of taking into account individual educational opportunities and student needs. The indicated specificity actualizes research aimed at developing the scientific foundations for the effective use of digital educational resources in elementary school.

Problems of choosing digital resources for teaching primary school students.

The problems of using digital educational resources in the education of primary schoolchildren are widely discussed in the psychological and pedagogical literature. The issues of teaching certain disciplines in elementary school using a computer are devoted to the works of M.S. Tsvetkova, D.V. Zaretsky, Z.A. Zaretskoy, Yu.A. Pervina, N.V. Fedyaninova, V.V. Shakotko and others. In studies P.M. Bisirkina, Yu.A. Beetle, N.I. Tolyarenko examines the impact of computer-based learning tools on the individual characteristics of elementary students. The problems of creating didactic situations using a computer in teaching younger students are highlighted in the works of V.M. Andrievskaya.

The issues of developing a set of requirements for digital educational resources are in the field of view of many psychologists and teachers, scientists and practitioners, in particular I.A. Ankudimova, M.I. Belyaeva S.G. Grigoriev, V.V. Grinshkuna, G.A. Krasnova, G.P. Lavrentieva A.V. Molokov

N.V. Molotkova, A.V. Aspen, M.O. Sviryayeva, I.A. Smolnikova, M.P. Shishkina and others. The problems of preparing a teacher for the use of information technology in the educational process are highlighted in the fundamental research of G.V. Lomakovskoy, V.V. Kotkova, L.E. Petukhov, A.V. Spivakovsky, O.V. Sukhovirsky, A.I. Shiman and others.

At the same time, the pedagogical literature did not find sufficient attention to the issues of introducing productive approaches to the implementation of the didactic potential of digital resources in the educational process of elementary school, which primarily involves conducting theoretical studies aimed at clarifying and revealing the essence of the functions of such resources in teaching younger students.

The aim of the article is to reveal the didactic potential of digital educational resources for elementary schools.

The powerful didactic potential of digital educational resources is undeniable, however, the decisive factor for its effective implementation in teaching practice is the conscious support of

certain didactic functions that are essential in terms of solving a particular pedagogical task. This is what constitutes the basis for the design of didactic situations, in which the use of digital resources is the central point.

Revealing the spectrum of didactic functions of digital educational resources in teaching younger students is of interest from another point of view. The existing restrictions of a medical, sanitary and hygienic nature have led to rather stringent standards for the use of such resources in elementary school, including those relating to the allowable time for a student to work at a computer. These restrictions, combined with didactic requirements, such as accuracy of the lesson's purpose, accessibility for students, the presence of the necessary balance between academic and game goals, make it difficult for the teacher to choose the right resource. In such cases, the most acceptable way out is the creation of an author's educational resource by the teacher, which requires the teacher to become familiar not only with practice-oriented technologies and tools for designing such resources, but also with its theoretical basis - the didactic functions of electronic resources.

The analysis of psychological and pedagogical research devoted to the problems of the development and use of digital educational resources in the education of primary schoolchildren has revealed the totality of the basic didactic functions of these resources. Despite the diversity and variety of the allocated functions, they are interrelated and mutually agreed: the quality of the implementation of some determines and affects the quality of the implementation of others.

The disclosure of the essence of the studied functions requires their preliminary systematization. We have proposed systematization, the basis of which is the allocation of the leading pedagogical goal of using the resource in the learning process. This approach makes it possible to distinguish four groups of functions of digital educational resources in the education of primary schoolchildren. The first group contains functions focused on the formation of a positive attitude of the child to the process and learning outcomes; This group includes functions:

- Development of the student's own motives for the implementation of educational activities,
- Tracking and approval of the student's successful actions,
- creating a favorable emotional background for educational activities,
- realizing the connection between the content of instruction and life.

The second group contains functions that contribute to the assimilation of the content of training; This group combines functions:

- Visualization,
- Training,
- Correctional,
- Integration,
- Adaptive,
- providing timely assistance in mastering the content of training,
- Compensatory.

The third group consists of functions aimed at optimizing the educational process, namely functions:

- Control
- Diagnostic;
- monitoring,
- Intensification of the educational process.

The fourth group combines functions that contribute to the success of further education of the student. This group includes the functions of meta-subject and personal value, the significance of which goes beyond the effectiveness of the current educational process and is promising in nature, contributing to the formation of general educational skills and the formation of cognitive activity of a school student. This group includes functions:

- Instrumental,
- Research,
- Mobilization,
- development of the student's intellectual skills,
- The formation of his holistic worldview.

We give a brief description of these functions, considering them in accordance with the selected groups.

1. The functions of forming a positive attitude of the child to the process and learning outcomes.

The formation of the needs and motives of the student's activity occurs in the process of the activity itself, therefore, for the emergence, strengthening and development of the student's cognitive motives, he should be involved in learning activities and conditions under which such activity will arouse his interest and bright positive emotions. This is what makes it possible to make electronic didactic resources.

In digital educational resources, the function of developing a student's motives for performing educational activities is realized through: unobtrusive involvement of the student in educational and cognitive activity, which takes place not at the direct instruction of the teacher, but at the student's own will to resolve the situation that appears on the computer screen; the variability of educational tasks, the variety of methods for their presentation and design, which makes the usual process of developing skills attractive; the possibility of "authorization" of the resource by the student. This opportunity is embedded in resources open for modification, which allows the student to supplement them with materials reflecting his personal experience.

A child of primary school age requires constant attention to the results of his activities, he needs praise for successful actions and in encouragement in case of failure. The function of tracking and approving the student's successful actions is implemented in digital educational resources due to the ability to accumulate and analyze statistical data on the student's achievements, developing a programmed reaction to positive changes. At the same time, not only the improvement of the result as a whole can be noted, but also small achievements in individual indicators, for example, an increase in the number of correctly solved problems per unit of time,

correct answers to control questions, a decrease in the number of unsuccessful attempts to complete a task, mistakes made, and requests for help etc.

No less important for the formation of a positive attitude of the child to learning is the creation of a favorable emotional background for learning activities. The use of educational resources in the lesson, as a rule, does not leave a single student indifferent. The formation of positive emotions and aesthetic feelings is facilitated by the pleasant resource interface, harmoniously selected color scheme, the use of special techniques to attract and focus the student's attention, the development of his imagination, thinking, memory. The creation of a positive emotional background is also facilitated by the opportunity at any time to cancel the performed actions and return to the previous step. To find the right or effective way to solve the learning problem, the student can make several attempts without fear of any negative consequences.

The use of educational resources expands the possibilities for realizing the links between the content of instruction and life realities. A training task on a computer screen can be presented with all the attributes it needs: for example, objects that need to be counted, the basket in which they are contained, weights and weights for weighing. The situations simulated in the tasks can be quite real - the purchase of goods in a store, travel in public transport, sending SMS messages that use the genuine prices of goods, the cost of travel, the price of mobile communications are the ones that a child encounters in everyday life. The statement of the problem itself may be close to reality not only in terms of wording, but also in the variability of possible solutions. Electronic resources allow us to propose a problem related to the need to choose a rational way to solve it.

In many psychological and pedagogical studies, the visualization function is defined as the leading function of didactic tools. The importance of this function is due to such factors as the capacity of the visual way of presenting information, increasing the availability of educational material for students, and increasing the volume of educational material that must be learned as part of a separate lesson. In modern conditions, the importance of the considered function is enhanced by the emergence of new powerful technologies for visualizing objects of various nature, improving the quality of expressive means of computer graphics, as well as the visual form being the preferred form of presenting information to the younger generation.

The use of digital resources significantly expands the range and quality of illustrative materials available for use in training: traditionally used drawings, photographs, reproductions are supplemented by animated images, flash illustrations, videos of real events, digitized rare materials - historical archival documents, unique book editions, photographs of a past era etc. Among visual aids, schemes and tables deserve special attention, which are widely used in teaching practice and can be quite capacious, including both a compact representation of the current educational material and a demonstration of its logical connections with concepts previously studied in the framework of this or another discipline.

In digital educational resources, the visualization of the learning object is controllable: the scale of the object on the screen is adjustable, any fragment of it can be reviewed repeatedly as many times as necessary. Visualization allows students to demonstrate processes that occur in real conditions too quickly or too slowly, visualize macro and microworld objects, reproduce events from the distant past, introduce them to phenomena that are difficult, impossible or unsafe to reproduce in real conditions.

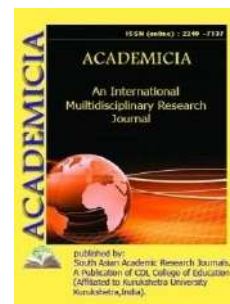
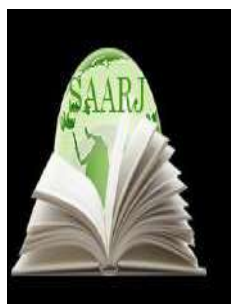
The value of implementing the visualization function in educational resources lies in the fact that it contributes to the formation of correct ideas about new objects for the student, and during further education, these ideas can be deepened, clarified, avoiding the need for their correction.

Timely assistance is an indispensable condition for the success of a younger student in school. In digital educational tools, the function of providing timely assistance in mastering the learning content is realized by accompanying the student's activities with individualized tips, directions, explanations, etc. Such assistance to the student can be provided both at his request and automatically. A signal about the need for help can be a long delay of the student with the start of work or with the execution of the expected actions, a significant number of unsuccessful attempts to solve simple problems. The level of help can range from concise directions to demonstrating a detailed solution to the problem with explanations. At the same time, ensuring the success of the educational activities of each student should not relieve him of certain efforts in completing tasks that, although they go beyond his current capabilities, but not so much as to exceed the level of difficulty that is extremely accessible to him.

The mismatch between the conditions of schooling and the individual needs of the student often inhibits his development. The compensatory function of electronic didactic resources is aimed at creating optimal conditions for realizing the potential capabilities of each student, ensuring his both educational and personal progress; to reveal the gifts inherent in every child, and to promote their development. The implementation of this function is based on the properties of electronic resources described above during the consideration of the training, adaptation, integration, correctional functions, and timely assistance functions. At the same time, we consider it necessary to single out the compensatory function, taking into account its significance from the point of view of arranging the correct emphasis in training, the effectiveness of which should not be measured in estimated indicators, but in terms of the so-called "surplus value" that characterizes the progress of each individual student.

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## AXIOLOGICAL ANALYSIS OF SOCIO-AESTHETIC PROBLEMS IN HADITHS

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### ABSTRACT

*In this Hadith, the idea stands out that God gives wealth to a person, first of all, not to satisfy personal needs, but to perform good deeds for other people. The Sufi must strictly follow the sunnah of the Prophet, his companions and comply with all the instructions of the Sharia. The basis of the Naqshbandi path is a passionate attraction to Truth and a quiet dhikr ("Knock out, cut out in your heart the remembrance of the name of God." The crown of his work is the book "Al-Kashshofan hakoik it-tanziyl wa yunilakoviyl fi vuzhuh it taviyl" ("Revealing the truths of revelation"). His commentary on the Qur'an al-Kashshof, completed on February 20, 1134 in Mecca, to this day, is a canonical work in this area. The author paid much attention to the lexicological part of this book and examines in detail the discrepancies. Today, caring for the priceless manuscripts created by the great scientists, thinkers, poets, historians in the Middle Ages is a tribute to their contribution to the development of world civilization, reflects the eternal desire for the accumulation of spiritual wealth. The life of our great scientists and enlighteners is an instructive example for young people, an expression of fidelity and devotion to the Motherland.*

**KEYWORDS:** *Thinkers, Historians, Accumulation, Enlighteners*

### INTRODUCTION

Scientists such as Imam Al-Bukhari, Imam At-Termezi, Bahouddin Naqshband, Khoja Ahmad Yassawi, Mahmoud al-Zamakhshari and others made a great contribution to the development of Islamic theology. At the opening ceremony of the Tashkent Islamic University, President of Uzbekistan I. Karimov noted that Studying the heritage of great thinkers and saints - Imam Al-Bukhari, Imam At-Termezi, Bahouddin Naqshbandi, Khozh Ahmad Yassawi, Mahmoud az-



Zamahshari and thousands of our other ancestors, generalizing and passing them on to our people, especially the younger generation, is our holy duty<sup>1</sup>. The most significant contribution to the development of Islamic theology was made by Imam Al-Bukhari. He was born in 810 in a family of Iranian descent in Bukhara, and died in 870 in the village of Hartang, Chelek district, Samarkand region. From childhood, he showed great interest in the humanities. Starting to study hadith from the age of 10, Al-Bukhari showed extraordinary abilities and extraordinary memory. For many years he traveled, comprehending the science of hadith in various provinces of the Caliphate (Hijaz, Egypt, Iraq, Khorasan). Al-Bukhari listened to the hadiths of more than a thousand Shaykhs. He set out to collect all the "reliable" (sahih) legends about the statements and actions of Muhammad. Al-Bukhari checked, as they say, 600 thousand hadiths, which were then in use, and, in addition, another 200 thousand, which he himself recorded with his teachers and informants. Of this enormous number of traditions, Al-Bukhari selected only about 7,400 hadiths as "impeccable". Of these, he composed the Al-Jomi as-Sahih code. This is the first collection of hadiths compiled according to the principle of musannaf, i.e. with the classification of hadith according to the plot. This construction principle allowed us to significantly expand the circle of legends, to include hadiths of the most diverse content - legal, historical, biographical, ethical, medical. He divided his collection of hadiths into 97 books with 3450 chapters (the title of each chapter indicates the theme of the hadith contained in it), which conclude 7397 hadiths with complete isnad. Studying the works of Muslim scholars, he traveled to India, Iran and other countries. So, the main achievement of Al-Bukhari is the creation of a collection of the most reliable hadiths "Al-Jomi al-Sahih." This collection occupies the second place in the Islamic world after the Koran. In all Islamic religious educational institutions, the collection of Al-Bukhari is studied along with the Qur'an. According to the Muslims of the whole world, this is one of the greatest books created by mankind<sup>1</sup>. At the same time, the great merit of Al-Bukhari is the development of a methodology for selecting hadiths for collections. This technique contains the following principles - taking into account the views of the most respected theologian; taking into account the opinion of most theologians; by analogy (by similarity); conformity of the hadith to the Islamic good (given the degree of conformity of the hadith to the interests of the Islamic religion, the Islamic world). The collection of Al-Bukhari hadiths contains eternal spiritual values that do not lose their relevance for the social life of modern Uzbekistan. In the Sunnah of al-Bukhari, the following hadeeth is given: "One person asked the prophet: "What is the best about Islam?" "The nurse and the greeting," "Peace be to you all," he replied. This Hadith determines that the main value for Muslims should be peace and tranquility for all people, acquaintances and strangers, Muslims or non-Muslims.

Another hadith says: "It is permitted to envy a person with white envy in two cases: Allah gave wealth to a man, and he spends it on good deeds. Allah gave knowledge to man, and he acts accordingly and teaches others. " In this Hadith, the idea stands out that God gives wealth to a person, first of all, not to satisfy personal needs, but to perform good deeds for other people. This idea is especially relevant in modern conditions, when the development of market relations leads to social stratification of the population, to an increase in the number of rich people.

The next thinker who made a significant contribution to the development of Islamic theology was At-Termezi. Born in the city of Termez. From the age of eight he worked diligently in the religious sciences. At twenty-eight years old, At-Termezi went to Mecca. Having returned from pilgrimage, he embarked on the Sufi path: secluded himself from people, studied mystical

treatises. Among his teachers are the famous Khorasan shahs - Abu Turaban Nahshabi, Yahyu al-Jalla, Ahmad Khadravaikhi, etc. His wife, who fully shared his views, played a large role in the fate of At-Termezi. Among the sermons and writings include "Ilal al-Shariah" and "Khatm al-auliya," in which he talked about the meaning of Muslim rites, about "love of God", about various categories of mystics, etc. This caused dissatisfaction of the Fakihis and those in power.

Fleeing persecution, At-Termezi was forced to move to Balkh, then to Nishapur, where he gained numerous supporters. When opponents of At-Termezi were forced to emigrate as a result of a change in the political situation, he was able to return to his hometown. There he died, surrounded by disciples and followers. The significance of At-Termezi's activity is determined by his writings, of which he has about eighty. The teachings in them about the "soul", its "states" and "movements", about the ways of self-improvement and curbing the base instincts, about suffering as purification, had a huge impact on subsequent Sufi psychology. The highest knowledge available to man, At-Termezi considered mystical "gnosis" (marifa or hikma), which he identified with the "divine light" contained in the hearts of people. Unlike ordinary knowledge, which comes down to the interpretation and application of the provisions of Sharia, "gnosis" comprehends the secret meaning of things and, in the end, "divine essence."

Probably At-Termezi was the first to theoretically substantiate Sufi ideas about Auliya, effectively equating them "in rights" with "messengers" and "prophets". His ideas about the correlation of "prophecy" and "holiness" about the hierarchy of "saints" in Sufism were developed by Ibn Arabi, who often included large fragments from At-Termezi's treatises in his writings. According to researchers, At-Termezi was familiar with Buddhist, Christian and Manichaean teachings, the influence of which can be found in his writings. Paying tribute to the depth of his knowledge and breadth of horizons, contemporaries gave him the honorary nickname al-Hakim (Sage).

Bahouddin Naqshband is the largest representative of Central Asian Sufism of the 14th century. The name of the Sufi brotherhood of Naqshbandiyya comes from his craft (nakshband - chaser), however, the tradition of the brotherhood does not consider him to be the founder: he is the fifth in the chain of leaders of nakshbandiyya. Bakhouddin Naqshband was born in the family of a craftsman in the village of Kasr-i Hinduvan, later renamed in his honor Kasr-i Arifan, and died in his native village. His father was a weaver and chaser (nakshband). The grandfather, who had strong ties with the Sufis, played the main role in the fate of Naqshbandi, and he aroused his grandson's interest in mysticism. Almost all his life Nakshbandi lived in Bukhara and the surrounding villages. Hadjtwice.

It is presented in the sources as a preacher of contentment with small and voluntary poverty (he earned his bread by his labor, was content with the old mat and a broken jug, and considered it a sin for the Sufi to have servants or slaves). After the death of Naqshbandi, he was gradually recognized as a saint and intercessor before God, the wizard and patron of Bukhara. Naqshbandi was canonized, and his cult was widespread, both in Central Asia and in neighboring countries, and the mausoleum above his grave, erected back in 1544 by Shibanid Abd al-Aziz Khan, became an exceptionally popular pilgrimage site: it was believed that a triple visit to his grave replaces the hajj to Mecca and Medina. Naqshbandi rejected the ostentatious piety and ritualism leading to the side of a true mystic: forty-day fasts, vagrancy, begging, public delights with music, singing and dancing, a loud dhikr. Spiritual purity, refusal of money-grubbing, voluntary

poverty, no contacts with the authorities are his basic requirements. The Sufi must strictly follow the sunnah of the Prophet, his companions and comply with all the instructions of the Sharia. The basis of the Naqshbandi path is a passionate attraction to Truth and a quiet dhikr ("Knock out, cut out in your heart the remembrance of the name of God.")

Naqshbandi did not leave written works. An important contribution to the development of Islamic dogma and theology was made by Hajj Ahmad Yassawi. He was born in 1103 in the city of Sairam in the Chimkent region of Kazakhstan into a very reputable religious family. His family came from Fatima, the daughter of the prophet Muhammad. The graves of his father and mother are places of religious worship. The first teacher of Ahmad Yassawi was the Turkish sheikh Bab-Arslan, who was considered the heir to the symbol of the Islamic idea (the spirit of Islam) from the prophet Muhammad himself. After the death of Bab-Arslan, Yassawi moves to study in Bukhara, the most important center of Islam or, as he was called, the "Dome of Islam". His teacher becomes the Sufi sheikh Yusuf Hammadi, who had great authority among the followers of Islam, since he personally performed 38 hajjs to Mecca and prepared 213 sheikhs. Relying only on his own strength, Ahmad Yassawi went from an ordinary murid to a sheikh of all Sufis in Bukhara. He became famous for his asceticism not only in Central Asia, but throughout the Muslim world. Possessing great influence among hundreds of thousands of believers, by his old age he did not even have the means for his own funeral. His favorite phrase - the life principle - was the statement of the Prophet Muhammad "My poverty is my pride."

Ahmad Yassawi condemned the desire for wealth and luxury, and was not afraid to condemn the shahs, viziers, as well as sheikhs and imams for this sin. Some Sufi sheikhs in northern Africa seized power in a number of countries and lived in great luxury. The main creation of A. Yassawi is a collection of his religious poems "DivaniHikmat" ("Book of Wisdom"). According to some historical sources, Yassawi wrote a total of 4400 hikmats. In addition, he created the theological treatise "Risolai." Poems of Ahmad Yassawi were popularly called "divine hikmats." Most of the verses are set to music and are performed on different occasions - both in grief and in joy. Yassawi has developed a system of communication with a higher spirit. This connection was carried out through the five parts of the soul that were in the human chest. The human soul consists of two parts: soul, spirit, mystery, hidden, secret. He spent the rest of his life a hermit in an underground cell. At the age of 56, he moved to the city of Iasi, where he dies. At the place of his burial, Amir Temur built a mausoleum, which is one of the shrines of Islam and an outstanding monument of Islamic architecture. The dome of this mausoleum has a height of 41 meters, comparable to a modern 13-story building. This mausoleum is annually visited by tens of thousands of pilgrims from all over the world.

Mahmoud al-Zamahshari is one of the great thinkers of the Muslim Renaissance. The traditions of Khorezmian science, which survived even after the Arab conquest, had a strong influence on the formation of him as a scientist. Mahmoud al-Zamahshari, using his pseudonym in his own name, chose the place where he was born, and thereby his small homeland became known throughout the East. Regardless of the country in which he lived and worked, Mahmoud al-Zamahshari retained a sense of love for the Motherland, considered it a matter of honor and a sacred duty to faithfully serve its prosperity. Mahmoud al-Zamahshari was born on March 19, 1075 in the town of Zamakhshar (Izmikhshir, now in Turkmenistan) into a poor family.

In the XI – XII centuries. in Central Asia, the literacy of the population in the Muslim world was one of the highest and the value of education grew. It was comparable to the literacy of the population of ancient Athens. The emergence of maktab and madrassas played a huge role in this. As a child, he attended elementary school - maktab, and also studied under the guidance of his father. Here, children were mainly taught reading, writing, grammar and Islam. In childhood, one leg was amputated due to illness and he moved on the prosthesis. The father decided that his son should learn tailoring, but Mahmud asked to go to the capital of Khorezm - the ancient Urgench (Gurganj), where he finds a job due to his good handwriting. In his youth he makes many educational trips, as a result he perfectly masters the Arabic and Persian languages. Mahmud Az-Zamahshari died in 1144 in his native Khorezm and was buried in ancient Urgench (now KunyaUrgench, modern Turkmenistan). After completing his studies in Bukhara, Mahmud al-Zamakhshari served as a scribe at the court of Khorezmshahs. Already in his young years, Mahmud al-Zamakhshari wrote several philological works. He offers his services to prominent dignitaries at the court of the Seljuk Sultans and sends them his Qassids.

In 1118, after suffering a dangerous illness, Mahmud azzamakhshari, changing his lifestyle, switched to solitude and teaching. Twice makes a pilgrimage to Mecca. In Mecca, he continues his scientific work, deeply studies the grammar and dictionaries of local Arab tribes, their customs and proverbs, collects information about the geography of the region. He writes many of his works in Mecca. Therefore, the word "Jarullah", that is, "protected by Allah" was added to his name.

Returning from Mecca, he visits Baghdad, Damascus, Isfahan, Nishapur and other cities. Then he meets with such prominent scholars as ad-Damgani, Ibn al-Shajari, al-Javaliqi and others. Mahmud al-Zamakhshari is a major historian, philosopher, geographer, literary critic, linguist and connoisseur of grammar and literature of the Arabic language, teacher, a poet of his time, became famous in such sciences as tafsir, hadith, fiqh. The great scientist has written over 50 works. According to their content, they can be classified into the following groups: religious sciences, lexicology, grammar, aruz (the science of rhythm), literature and literary criticism, pedagogy, history, geography, logic. Hespreadknowledgethroughhisbooksandstudents.

In his works, Mahmud al-Zamakhshari expresses interesting thoughts about the high spirituality and spiritual culture of the peoples of Central Asia. For example, he writes that one should not indulge in praise, false pride, verbosity and verbiage: "The path with truth and honor is comparable to the gait of a lion in the forest," "The merchant's honor and authority is in his pocket, and the scientist's in his books," "A person who always denigrates someone will not achieve much success, as there is nothing to whiten in resin", "An honest person is always at peace and calm, a traitor and thinking about evil, is always doomed to failure"1. In general, Mahmud al-Zamakhshari writes about the will, the human desire for prosperity and prosperity, which can be achieved through knowledge and universal human qualities. Humanity and honesty, mercy and courage - these are the main qualities of man. The main works of al-Zamakhshari are devoted to theology. The crown of his work is the book "Al-Kashshofanakoik it-tanziyilwaunyunikoviyl fi vuzhuh it taviyl" ("Revealing the truths of revelation"). His commentary on the Qur'an al-Kashshof, completed on February 20, 1134 in Mecca, to this day, is a canonical work in this area. The author paid much attention to the lexicological part of this book and examines in detail the discrepancies. In fact, this interpretation is the first example of scientific criticism of the text of the Koran. This work was widely known under the name Al-

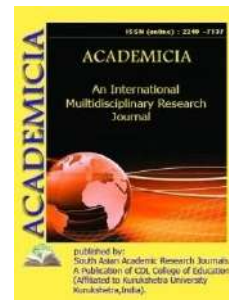
Kashshof. When writing his book, Az-Zamahshari used many sources, such as tafsir, hadith, fiqh and other knowledge related to Sharia. The work of Mahmoud al-Zamahshari "AlKashshof" at one time was described by scientists as follows: "If there hadn't been Al-Kashshof, then the interpretation of the Koran would not have been open." Therefore, in the East, his work "Al-Kashshof" is very popular - the interpretation of individual verses of the Koran.

In Egypt, students at Al-Azhar University are still studying the Qur'an based on the work Al-Kashshof. According to the information of the German orientalist Karl Brockelman, about 100 manuscripts of Al-Kashshof and more than 20 comments on this book are stored in various manuscript collections of the world. Arab grammar experts unanimously confirm that Al-Kashshof is one of the first places among the commentaries on the Qur'an that were written at different times. Unlike other Qur'anic comments, AlKashshof in Mahmud azZamahshari paid much attention to the philological analysis of this holy book. The rich scientific and literary heritage of Mahmoud al-Zamahshari has long been revered as an authority in the East and West. During his lifetime he was awarded such high titles as "Ustaz-ul-duniya" (a teacher of the whole world), "Ustaz-ul-arabwa-l-ajam" ("a teacher of Arabs and non-Arabs"), "FakhruHvarazm" ("Pride of Khorezm"). Over the years of independence in Uzbekistan, the study of the heritage of Imam Al-Bukhari, Imam At-Termezi, BahouddinNaqshbandi, Khoj Ahmad Yassawi, Mahmoud al-Zamahshari and thousands of our other ancestors has reached a new qualitative level. Today, caring for the priceless manuscripts created by the great scientists, thinkers, poets, historians in the Middle Ages is a tribute to their contribution to the development of world civilization, reflects the eternal desire for the accumulation of spiritual wealth. The life of our great scientists and enlighteners is an instructive example for young people, an expression of fidelity and devotion to the Motherland.

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## **A RESEARCH ON INTERACTION OF IDENTIFIED, INTEGRATED, INTERJECTED REGULATION WITH MOTIVATION**

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### **ABSTRACT**

*For several years now, intense studies have been made about self-regulation as well as intrinsic and extrinsic types of motivation; the distinction between them has shed important light on both developmental and educational practices. Interaction is a process through which extrinsically motivated behaviors become more self-regulated. In the same way, interaction specifies the social contextual conditions that support intrinsic motivation and facilitate extrinsically motivated tasks. Learning is the acquisition of some symbolic representation that serves as guide for future behavior. Self-regulated behavior is triggered by motivation in the natural human propensity to learn and assimilate information. In this paper, the researcher attempted to explore how identified, integrated, and introjected regulation remains important constructs that relate itself to motivation. The researcher used the descriptive method of research with questionnaire as the main instrument for gathering data. To explore the crucial interaction between self-regulation on student learning and motivation, the researcher used the Pearson  $r$ ; data were treated using the SPSS version 19. Findings of this study were summarized that there is a significant relationship between participants' regulation to their academic performance in Principles of Teaching 2, thus the null hypothesis is rejected.*

**KEYWORDS:** *Identified, Integrated, Interjected, Self-Regulation, Motivation*

### **INTRODUCTION**

The term **self-regulation** can be described as a process that guides learning. Students learn self-regulation through experience and self-reflection. Self-regulated learners are characterized by autonomy and control. That is, self-regulation is a process of bringing one's emotions, thoughts, and behavior under control. It is construed that students can control their behaviors in order to improve their academic learning and performance. In the same way, self-regulation is an



integrated learning process, consisting of the development of a set of constructive behaviors that affect one's learning. Likewise, self-regulation involves the ability to control one's impulses, behavior, and emotions until an appropriate time, place, or object is available for expression (Berns, 2007). Moreover, self-regulation is not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic skills. When self-regulated learners find inadequate learning strategies, they regulate their learning activities. Regulating refers to "the fine-tuning and continuous adjustment of one's cognitive activities" (Chen, 2002 citing Pintrich et al.). As discussed in Chen's literature review, research found that both self-monitoring and effort regulation training resulted in achievement. Abundant research revealed that higher achievers use more self-regulatory strategies, control their physical environment to meet their needs, seek help when needed, and use time management skills. Regulated behavior often involves postponing or modifying immediate gratification for the sake of a future goal. It involves more than mere knowledge of a skill; it involves the self-awareness, self-motivation, and behavioral skill to implement that knowledge appropriately. Aptly put, self-regulation is not a trait that students possess. Rather, it involves the careful use of specific processes that must be personally adapted to succeed at a learning task. Therefore, self-regulated learning is volitional.

Self-regulation refers to several complicated processes that allow children to appropriately respond to their environment (Bronson 2000). Self-regulation in learning represents an internalization of the social connections and scaffolding that have helped students learn in the past. Self-regulation refers to alertness and selectivity in receiving information, being able to connect the information to one's own experiences and knowledge base to plan and initiate a question or learning strategy, and continuous monitoring (Cornelius-White & Harbaugh, 2010). Self-regulation involves different domains; regulation of one domain affects other areas of development. Emotional and cognitive self-regulation is not separate, distinct skills. Rather, thinking affects emotions and emotions affect cognitive development (Blair & Diamond 2008). When provided with appropriate opportunities, students can learn intentional self-regulation. Researchers Elena Bodrova and Deborah Leong, for instance, taught preschoolers to plan their play activities and found planning helped children develop stronger self-regulation skills (Bodrova & Leong 2007). Helping students develop their self-regulated learning is likened to helping them develop their motivation. In hindsight, self-regulation is what allows a person to control his or her response or behavior when confronted with externally imposed stimuli.

Motivation can be extrinsic or intrinsic. Extrinsic motivation is a factor outside the individuals which includes money, good grades, and other rewards. Motivation refers to the inducement of actions, feelings, and thoughts (Deckers, 2005). Intrinsic motivation refers to the internal desires that energize individuals to perform a particular task. Ryan and Deci (2002) termed extrinsic motivation a form of self-regulation. In short, intrinsic motivation directs people to do certain tasks because it gives them pleasure or it develops a particular skill. On the other hand, extrinsic motivation is a factor outside the individuals which includes money, good grades, and other rewards. In other words, motivation refers to the inducement of actions, feelings, and thoughts (Deckers, 2005). With this, it is construed that motivation can be regulated or controlled.

There are at least three types of self-regulation for extrinsic motivation: identified, integrated, and introjected regulation (Ryan & Deci, 2002). *Identified regulation* occurs when students participate in an activity because such is considered important and of high value, even if they do

not enjoy the activity itself. Behavior is internally regulated but in a self-determined way. An example would be students who choose to do extra work in Principles of Teaching 2 because they believe that this will eventually improve their ability in that subject. *Integrated regulation*, on the other hand, occurs when students perform activities to benefit different aspects of life, rather than for the pleasure of participating in the said activity. Integrated regulation is the most autonomous type of extrinsic motivation. It does not only involve identifying with the importance of the behavior, but the regulation is evaluated and brought into harmony with the individual's own personally values, goals, and needs that are already a part of the self (Ryan & Deci). The third type of self-regulation for extrinsic motivation is *Introjected regulation*. It occurs when students participate in an activity because of various pressures. For example, students would be forced to study well because of guilt.

One notable finding from research: the actual process of self-regulating can be a source of motivation, even for those tasks that may not be motivating themselves. Motivation is a critical component of learning. Motivation is important in getting students to engage in academic activities (<http://www.psychologycampus.com/educational-psychology/motivation.html> retrieved on March 3, 2012). It is also important in determining how much students will learn from the activities they perform or the information to which they will be exposed. Students who are motivated to learn something use higher cognitive processes in learning about it. Motivation to do something can come about in many ways. It can be a personality characteristic or a stable long-lasting interest in something. There are several existing theories for motivation. Some state that motivation is tied to the idea that behaviours that have been rewarded in the past will be more likely to be repeated in the future. Therefore past experiences will motivate a student to perform in future ones.

There are three types of intrinsic motivation: Knowledge, Accomplishment, and Stimulation (Weinberg & Gould, 2003). *Knowledge* occurs when students participate in activities because of the pleasure and satisfaction they get from learning, acquiring, and studying something new in their subject. This, for example, would include learning how to write lesson objectives or assessment strategies in Principles of Teaching 2. Being intrinsically motivated for *accomplishments* occurs when students participate in activities because of the pleasure and satisfaction they get from mastering various skills. For example, knowing how to formulate objectives would help them write lesson plans. Being intrinsically motivated for *stimulation* occurs when students participate in activities because of pleasant sensations such as excitement. For instance, the rush they have when they submit task analysis in lesson planning might give them a feeling of excitement.

Based on the personal observation of the researcher, many students are physically present in the classroom but largely mentally absent; they fail to invest themselves fully in the experience of learning. It is for this reason that learning often becomes associated with drudgery instead of delight. However, she believes that all students are motivated in one way or the other. One student may be interested in classroom subject matter and seek out challenging tasks, participate actively in class discussions, and earn additional points on assigned projects. Another student may be more concerned with the social aspect of school, interacting with the entire student body frequently, and attending extracurricular activities. Still another may be focused on athletics, excelling in sports, such as tennis, volleyball, football, basketball or dancesports. In any of these instances, one thing is certain—students are motivated in one way or the other.

The same thing happens in every subject. Some students are motivated; some are not. Since motivation, like culture, can never be superimposed on others, it is incumbent upon teachers to do something about their motivation. There is no such thing as unmotivated behavior (Bluestein, 2008). There has to be something for students to strive to perform certain tasks. That something may be for pleasure, avoidance of pain or punishment, satisfaction, commitment, or pursuit of a larger goal. It is believed that motivation is a critical component of learning. Motivation is important in getting students to engage in academic tasks. It is also important in determining how much students will learn from the tasks they perform or the information to which they will be exposed. However, students have the ability to regulate their motivation.

It is in this context that the researcher wanted to explore the interaction of self-regulation and intrinsic motivation with the participants' academic performance (final grades) in Principles of Teaching 2. The researcher handles professional education subjects in the College of Education. One of which is Principles of Teaching 2. She believes that in the teaching-learning process, there must be something that propels the students' mind or dangles in front to make them more active and vibrant. In classroom teaching and learning, self-regulation is present while the interaction of motivation comes into the picture.

In the given paradigm, it can be expected that an interaction between self-regulation and intrinsic motivation occurs among the participants particularly in their performance in Principles of Teaching 2 subject (See Conceptual Framework of the Study).

Ho = There is no significant relationship between participants' self-regulation to academic performance in Principles of Teaching 2.

### **Statement of the Problem**

The main purpose of the researcher was to explore the interaction between self-regulation and intrinsic motivation to the performance in Principles of Teaching 2 among the participants. Specifically, the following ancillary problems were posited:

1. How may the participants' self-regulation be described in terms of:
  - 1.1 identified;
  - 1.2 integrated; and
  - 1.3 introjected regulation?
2. How may the participants' intrinsic motivation be accounted as to:
  - 2.1 knowledge;
  - 2.2 accomplishment; and
  - 2.3 stimulation?
3. What is the academic performance of the participants in Principles of Teaching 2 with regard to their final grades?
4. Is there a significant relationship between the participants' self-regulation and intrinsic motivation and their grades in Principles of Teaching 2?

### **METHODS AND MATERIALS**

The researcher utilized the descriptive-survey method in gathering data using co relational design to explore the interaction of identified, integrated, and introjected regulation with motivation in the participants' performance in Principles of Teaching 2 subject.

### Participants

A total of 91 second year BSED English major students from 3 sections were used as participants in this study. They are currently enrolled in the College of Education, Bulacan State University, City of Malolos during the academic year 2012-2013.

### Instruments

The researcher used the questionnaire as the main instrument for gathering data. It was composed of two parts: the first part dealt with the self-regulation items. There were a total of 30 items; 10 items each were allotted for the identified, integrated, and interjected regulation. The second part of the questionnaire had also a total of 30 items; 10 items each were slated for knowledge, accomplishment, and stimulation. The researcher likewise obtained the participants' grades in Principles of Teaching 2. She also conducted cursory interviews with the participants.

### Data Collection and Analysis

Questionnaires were modified based on the suggestions of the experts after the dry-run had been conducted. Then, the final draft was reproduced for the actual conduct of the research. Questionnaires were distributed to the target respondents. The data were gathered, sorted, tallied, tabulated, and analyzed using frequency counts and means to describe the participants' self-regulation and intrinsic motivation. The researcher also used the SPSS version 19 to determine the relationship between the participants' self-regulation and intrinsic motivation.

A 5-point Likert scale was used to measure the significant interaction between self-regulation and intrinsic motivation, where:

Mean Numerical Rating	Verbal Interpretation	Descriptive Equivalent
4.50-5.0	Strongly Agree	High Regulation
3.50-4.49	Agree	Sufficient Regulation
2.50-3.49	Undecided	Fair Regulation
1.50-2.49	Disagree	Minimal Regulation
1.0-1.49	Strongly Disagree	Low Regulation

### Results

#### Participants' Self-Regulation

Of all the components of extrinsic motivation, Identified regulation received the highest mean score of 4.66 and was interpreted as "Strongly Agree" while Integrated regulation got a mean of 4.64 and was interpreted as "Strongly Agree;" Introjected regulation obtained a mean score of 4.47 and was interpreted as "Agree" (See Table 1).

For Identified Regulation, items 1 and 2 got the same highest mean of 4.84 and were interpreted as "Strongly Agree." Item number 8 "Learning is transfer of knowledge" got the lowest mean score of 4.37.

For Integrated Regulation, item number 19 “I want to be an agent of social transformation” got the lowest mean of 4.36 and was interpreted as “Agree.” On the other hand, item number 13 “Learning does not only happen within the four walls of the classroom” received the highest mean of 4.94 and was interpreted as “Strongly Agree.”

For Introjected Regulation, item number 22 “When I learn, I feel my ego is at the highest level” obtained the lowest mean of 4.00 and was interpreted as “Agree.” Item number 28 “When I learn, I feel that my parents’ sacrifices worth it” received the highest mean of 4.80 and was interpreted as “Strongly Agree.”

### **Participants’ Intrinsic Motivation**

Knowledge component obtained a mean score of 4.43 and was interpreted as “Agree;” Accomplishment component got a mean score of 4.52 which was interpreted as “Strongly Agree,” while the Stimulation component received a mean score of 4.54 and was interpreted as “Strongly Agree.” Seemingly, the stimulation component got the highest mean score (See Table 2). For knowledge component, both numbers 1 and 9 received the lowest mean of 4.21. “Learning refines my reasoning about concrete items versus abstract ideas” and “Learning develops my ability to arrange ideas in a chain-like progression that takes on meaning and on itself.” Item number 5 “Learning gives me the freedom to think out of the box” got the highest mean score of 4.71 and is interpreted as “Strongly Agree.”

For Accomplishment component, item number 13 “Learning enhances my computation skills using basic numerical concepts” got the lowest mean of 4.16 and was interpreted as “Agree.” On the other hand, item number 14 “Learning develops my conversation skills” had the highest mean score of 4.57 and was interpreted as “Strongly Agree.”

The third and last component, Stimulation component reveals that item number 23 “Learning stimulates me to recognize that a problem exists” got the lowest mean score of 4.44 and was interpreted as “Agree.” Item number 27 “Learning stimulates me to acquire, store and share the knowledge I gain so that others may also benefit from it” obtained the highest mean score of 4.64 and was interpreted as “Strongly Agree.”

With regard to the participants’ academic performance as to their final grades in Principles of Teaching 2, it could be said that out of 91 participants, only 3 or 3.30 percent got a grade of 1.75; 45 students or 49.45 percent obtained a grade from 2.25 to 2.0; 39 or 42.86 percent received a grade from 2.5 to 2.75; and 4 or 4.40 percent had a grade of 5.0 or a flunking mark.

### **Relationship between the Participants’ Self-regulation and Intrinsic Motivation to their Final Grades in Principles of Teaching 2**

All the components of self-regulation are significantly correlated to their final grades in Principles of Teaching 2. In the same way, all the components of intrinsic motivation are also correlated to their final grades in principles of Teaching 2. Therefore, the null hypothesis is rejected.

### **DISCUSSIONS AND CONCLUSIONS**

The participants believe that learning the lesson is important because without a deep understanding of the lesson, they will not have anything to share. A well-trained and certificated teacher must show evidence of mastery of subject matter. In fact, according to Dunhill (2000)



teachers' knowledge must be of two-fold nature. Good teachers must first possess a wide range of general knowledge and within the confines of this general knowledge, a sound understanding of the subject they are to teach in the classroom. In hindsight, teachers must be well-versed in their area of specialization; they must know which to teach, when to teach and how to teach. The quantity and quality of teachers' knowledge will give them enough material and confidence to teach effectively. Based on the result, the participants believe that learning is more than just transfer of knowledge. They know that learning goes beyond the ordinary way of transferring knowledge. This result was supported by Cornelius-White and Harbaugh (2010) when they say that learning is not only transmission of knowledge from the enlightened teacher to the naive students. For them, students inherently construct knowledge and develop according to self-organizing principles. In fact, learning undergoes several stages such as acquisition, fluency, maintenance, or generalization (Algozzine, Daunic, & Smith, 2010). Most psychologists agree that "learning is a relatively permanent change in one's behavior as a result of his interactions in the environment." With this definition, it can be said that learning is really more than mere transfer for it can be a change in behavior or a result of practice and experience. One thing obvious in this result is the idea that the participants have acquired a plethora of definitions of learning based on the different theoretical perspectives. This only shows that participants strongly agree that learning can take place everywhere. Learning can take place anytime, anywhere, with anyone (Coates, 2010). The participants know that learning is situated and context dependent. Since learning is a process that involves action and experience, the participants believe that learning requires interaction and collaboration. It means that learning, both outside and inside school, advances through collaborative social interaction and the social construction of knowledge. This result is supported by Jean Lave's theory of Situated Cognition. Central to the situative perspective is the belief that one should abandon the treatment of concepts as self-contained entities and instead conceive of them as tools that can be fully understood only through use. According to Oliver (2000), meaningful learning will only take place if it is embedded in the social and physical context within which it will be used. Results only show that the participants put so much emphasis on the hardships and sacrifices of their parents particularly in educating their children.

The participants do not yet realize the importance of concrete reasoning. Concrete reasoning is important because it is the basis of all knowledge. Students need a firm understanding of basic conceptual knowledge and problem solving. This enables them to learn new ideas. It helps with later learning because it gives students the ability to link new ideas to previously learned ones. In the same way, this promotes stronger long-term memory of concepts. The first kind of reasoning is sequential reasoning, where each assertion follows the next through a chain of implication. It means that students strongly agree that looking at a problem from different perspectives is important in finding new ways of learning.

During the cursory interview with the participants, they disclosed that they disliked Math, which is why they majored in English. It means that as English majors, they love to learn more of the language so that they can harness their conversation skills; they love to master their craft as effective conversationalist.

The participants are stimulated to learn based on their understanding that knowledge should be constructed, shared, and negotiated. According to the constructivist view, learners construct their own knowledge by looking for meaning and order; they interpret what they hear, read, and see



based on their previous learning and habits. Students who do not have appropriate backgrounds will be unable to accurately “hear” or “see” what is before them (<http://www3.telus.net/linguisticsissues/constructivist.html> Retrieved on April 21, 20112). In other words, knowledge has different meanings for different students; knowledge has personal meaning and it is created by individual students. As corollary, item number 28 “Learning stimulates me to assess my knowledge, skills, abilities, and potentials so that I can make effective matches between my abilities and the demands of the profession I have chosen” got a mean score of 4.63 and was interpreted as “Strongly Agree.” These results reveal that the accent is placed on learning. In hindsight, it is the learners who interact with their environment and thus gain an understanding of its features and characteristics. They are the ones who construct their own conceptualizations and find solutions to their own problems. Results indicate that majority of the participants are fairly regulated.

### CONCLUSIONS

In the light of the findings of this study, the following conclusions were drawn:

Self-regulation provides the foundation for students to perform. Extrinsic motivation which can be regulated may guide students to set goals for themselves. Since students have the ability to have dominion over their extrinsic motivation, their self-regulation can be identified, integrated, and introjected.

There is the inherent tendency for students to seek out to explore and learn for themselves. Maintenance and enhancement of this intrinsic motivation requires supportive conditions such as self-regulation. Intrinsically motivated students perform for stimulation, accomplishment, and knowledge.

Motivation to learn is paramount to students’ success; therefore, the higher the students’ self-regulation and intrinsic motivation, the higher is their academic performance.

Identified regulation and Stimulation are found to be most powerful in extrinsic and intrinsic motivation.

### Recommendations

Based on the conclusions drawn, the researcher recommends that:

1. The College of Education provide its teachers with seminars on teaching strategies that focus on increasing the level of students’ self-regulation and intrinsic motivation.
2. Teachers design lesson activities that are both focused on self-regulation and intrinsic motivation so that students make learning a rewarding and interesting endeavor.
3. Teachers increase the level of students’ knowledge so that the latter may fully develop high motivation for learning.
4. Other researchers conduct studies that account for related constructs to self-regulation and intrinsic motivation such as self-concepts or self-fulfilling prophecy as other interesting variables for motivation. Others may determine and explore how different types of motivation affect the learning process and promote performance.

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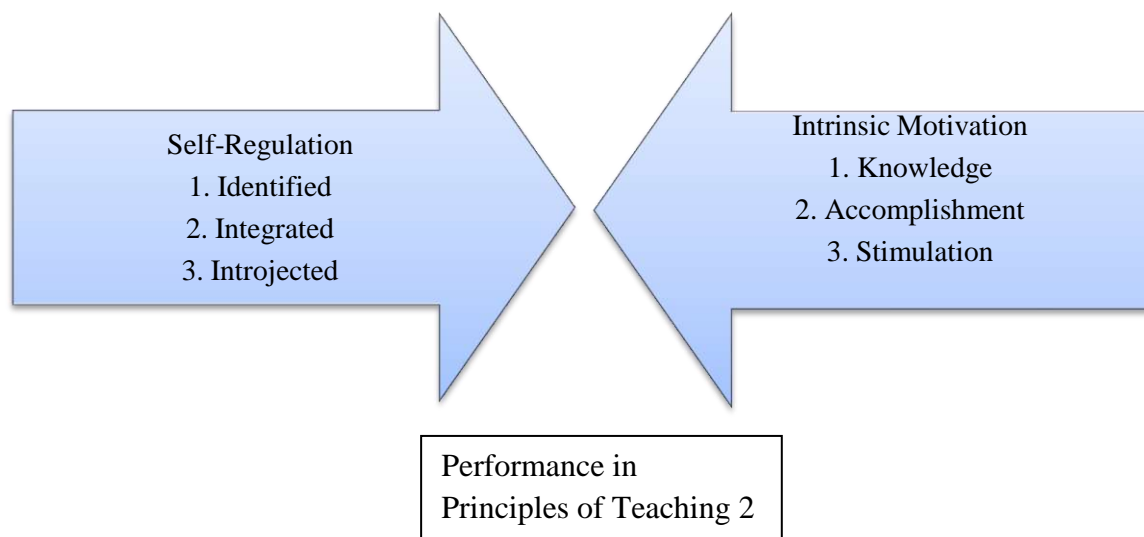
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**Figures and Tables***Figure 1 The perceived interaction between self-regulation and intrinsic motivation***TABLE 1 PARTICIPANTS' SELF-REGULATION**

Items	Scales					Mean	Verbal Interpretation
	1	2	3	4	5		
<b>Identified Regulation</b>						<b>4.66</b>	<b>Strongly Agree</b>
1. Learning the lessons is important for me as a future teacher.	0	0	0	14	75	4.84	Strongly Agree
2. Learning is important because I cannot teach what I do not have.	0	1	0	11	78	4.84	Strongly Agree
3. I want to be a part of the profession that takes pride in the nobility in teaching.	0	3	4	18	65	4.61	Strongly Agree
4. I see that teachers can influence humanity.	0	1	2	32	55	4.57	Strongly Agree
5. I see that my teacher takes nobility in her profession.	0	0	3	31	56	4.59	Strongly Agree
6. Learning is the foundation for my future teaching endeavors.	0	0	1	24	65	4.71	Strongly Agree
7. I won't have anything to teach tomorrow if I won't learn anything today.	0	1	4	22	63	4.63	Strongly Agree
8. Learning is transfer of knowledge.	0	4	9	27	50	4.37	Agree
9. Learning is the foundation	0	0	4	23	63	4.66	Strongly Agree

of knowledge.							
10. Learning is a never-ending quest for knowledge.	0	0	1	15	74	4.81	Strongly Agree
<b>Integrated Regulation</b>						<b>4.64</b>	<b>Strongly Agree</b>
11. Applying what I have learned makes me feel good.	0	0	4	26	60	4.62	Strongly Agree
12. Learning is a part of growing up.	0	0	1	23	66	4.72	Strongly Agree
13. Learning does not only happen within the four walls of the classroom.	0	0	0	5	85	4.94	Strongly Agree
14. Learning makes me mature, responsible, and productive.	0	0	1	27	62	4.68	Strongly Agree
15. Learning is the only thing that cannot be taken away from me.	0	1	2	17	70	4.73	Strongly Agree
16. Learning leads the way to discovery of new insights.	0	0	1	28	61	4.67	Strongly Agree
17. I feel great when I learn about things which may be useful to me.	0	0	2	22	66	4.71	Strongly Agree
18. Learning helps me become an effective teacher.	0	0	6	23	61	4.61	Strongly Agree
19. I want to be an agent of social transformation.	0	1	8	39	42	4.36	Agree
20. Learning gives me self-satisfaction.	0	0	10	37	43	4.37	Agree
	<b>Scale</b>					<b>Mean</b>	<b>Verbal Interpretation</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Introjected Regulation</b>						<b>4.47</b>	<b>Agree</b>
21. Learning provides my inner worth.	0	0	7	38	45	4.42	Agree
22. When I learn, I feel my ego is at the highest level.	1	5	17	37	30	4.00	Agree
23. When I learn the lessons, I feel that I am ten feet tall.	2	4	8	36	40	4.20	Agree
24. Learning develops my pride.	1	3	16	38	32	4.08	Agree
25. I believe that learning is the key to my personal success.	0	2	4	23	61	4.59	Strongly Agree
26. Learning boosts my morale.	0	1	2	43	44	4.44	Agree
27. I want to inspire others in teaching. Learning is	0	0	5	10	75	4.78	Strongly Agree

precious.							
28. When I learn, I feel that my parents' sacrifices worth it.	0	0	1	16	73	4.80	Strongly Agree
29. Learning is worthy for it fulfils my dreams. It is the cornerstone of productive life.	0	0	0	26	64	4.71	Strongly Agree
30. I want that my parents feel proud about me when I learn in school.	0	0	3	20	67	4.71	Strongly Agree

TABLE 2 PARTICIPANTS' INTRINSIC MOTIVATION

No.	Items	Scales					Mean	Verbal Interpretation
		1	2	3	4	5		
	<b>Knowledge</b>						<b>4.43</b>	<b>Agree</b>
1	Learning refines my reasoning about concrete items versus abstract ideas.	0	0	7	57	26	4.21	Agree
2	Learning provides the development of my analytical evaluation of arguments.	0	1	2	44	43	4.43	Agree
3	Learning gives me the chance to generate hypothesis.	0	0	8	41	41	4.37	Agree
4	Learning elicits a feeling of self-confidence.	0	0	1	36	53	4.58	Strongly Agree
5	Learning gives me the freedom to think out of the box.	0	0	3	20	67	4.71	Strongly Agree
6	Learning refines my ability to respond to novel situations.	0	0	3	48	38	4.38	Agree
7	Learning develops my ability to think about myself in relation to the material I am studying.	0	0	0	42	48	4.53	Strongly Agree
8	Learning develops my concentration skills.	0	0	5	39	46	4.46	Agree
9	Learning gives me the opportunity to interpret sensory phenomena.	0	0	12	47	31	4.21	Agree
10	Learning develops my ability to arrange ideas in a chain-like progression that takes on meaning and on itself.	0	0	2	45	43	4.46	Agree
	Items	Scales					Mean	Verbal Interpretation
		1	2	3	4	5		

	Accomplishment						4.52	Strongly Agree
11	Learning refines my interpretation of written and verbal information.	0	0	2	39	49	4.52	Strongly Agree
12	Learning develops my organization skills.	0	0	3	36	51	4.53	Strongly Agree
13	Learning enhances my computation skills using basic numerical concepts.	1	0	15	42	32	4.16	Agree
14	Learning develops my conversation skills.	0	0	5	29	56	4.57	Strongly Agree
15	Learning provides an avenue for receiving and responding to verbal messages.	0	0	3	42	45	4.47	Agree
16	Learning allows me to understand abstractions.	0	0	4	47	39	4.39	Agree
17	Learning provides me the necessary skills for getting the main idea or important messages.	0	0	0	42	48	4.53	Strongly Agree
18	Learning allows me to understand the appropriate format for writing letters, essays, and other written reports.	0	0	5	37	48	4.48	Agree
19	Learning refines my skill in responding to practical situations.	0	0	4	36	50	4.51	Strongly Agree
20	Learning develops my ability to obtain and convey qualitative information.	0	0	6	46	38	4.36	Agree
	<b>Stimulation</b>						<b>4.54</b>	<b>Strongly Agree</b>
21	Learning stimulates me to combine text with meaning.	0	0	3	42	45	4.47	Agree
22	Learning stimulates me to adapt new knowledge and skills to both familiar and changing situations.	0	0	2	40	48	4.51	Strongly Agree
23	Learning stimulates me to recognize that a problem exists.	0	0	3	44	43	4.44	Agree
24	Learning stimulates me to specify my goals and consider risks.	0	0	3	31	56	4.59	Strongly Agree
25	Learning stimulates me to become aware of false assumptions that may lead to wrong conclusions.	0	1	2	38	49	4.50	Strongly Agree
26	Learning stimulates me to select	0	1	1	37	51	4.53	Strongly Agree



	important goals related activities and rank them in order of importance.							
27	Learning stimulates me to acquire, store and share the knowledge I gain so that others may also benefit from it.	0	0	2	28	60	4.64	Strongly Agree
28	Learning stimulates me to assess my knowledge, skills, abilities, and potentials so that I can make effective matches between my abilities and the demands of the profession I have chosen.	0	0	1	31	58	4.63	Strongly Agree
29	Learning stimulates me to organize how my personal system works for my advantage.	0	0	1	34	55	4.60	Strongly Agree
30	Learning stimulates me to work with cultural diversity. It means that I base my impressions not on stereotypes but on performances.	0	0	3	33	54	4.57	Strongly Agree

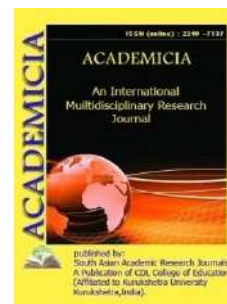
**TABLE 3 ACADEMIC PERFORMANCE OF THE PARTICIPANTS AS TO THEIR FINAL GRADE IN PRINCIPLES OF TEACHING 2**

Final Grade	Frequency	Percentage	Descriptive Equivalent
1.25 - 1.0	0	0	High Regulation
1.75 - 1.5	3	3.30	Sufficient Regulation
2.25 - 2.0	45	49.45	<b>Fair Regulation</b>
2.75 - 2.5	39	42.86	Minimal Regulation
3.0 - 5.0	4	4.40	Low Regulation
Total	91	100	
Mean	2.25	Average	

**TABLE 4 RELATIONSHIPS BETWEEN THE PARTICIPANTS' EXTRINSIC AND INTRINSIC MOTIVATION**

Self-Regulation	Final Grade in Principles of Teaching 2		Decision
	Computed r	Probability	
Extrinsic			
1. Identified	0.511**	0.398	Reject Ho
2. Integrated	0.99**	0.639	Reject Ho
3. Introjected	0.544**	0.534	Reject Ho
Intrinsic			
1. Knowledge	.326	0.434	Reject Ho
2. Accomplishment	0.538**	0.527	Reject Ho
3. Stimulation	0.611**	0.543	Reject Ho

\*\*Significant at .01 level



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## THE ISSUE OF PROFESSIONAL TRAINING OF DEAF PEDAGOGUES-STUDENTS IN IMPROVING THE EFFECTIVENESS OF LITERARY EDUCATION - AS AN OBJECT OF RESEARCH

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### ABSTRACT

*Tasks such as reforming the higher education system, strengthening the material and technical base, radically modernizing the system of teacher training, bringing the quality of the educational process to a new level, "continuous improvement of the quality and level of professional skills of teachers" in the priorities of the higher education system marked. On this basis, the purpose of the study is to study the process of improving the technology, methodological support, systems and mechanisms of activity-related competencies to improve the professional training of deaf teachers in the implementation of the system of speech development of hearing-impaired children in the process of literary education. This article describes the content of increasing the professional training of deaf teachers-students on the implementation of the system of speech development of hearing-impaired children in the process of literary education. The directions of professional development of deaf pedagogues-students will be revealed.*

**KEYWORDS:** *Literary Education, Hearing-Impaired Children, Speech, Development, System, Deaf Pedagogues-Students, Vocational Training, Pedagogical System Directions*

### INTRODUCTION

The quality of education in higher education institutions around the world, the training of quality personnel is gaining momentum. The concept of international education until 2030, adopted by UNESCO, identifies "creating opportunities for quality education throughout life" as an urgent

task [3]. The implementation of innovative ideas in the field of education is the basis for achieving high results in the modernization of the system of training deaf teachers. In particular, the pedagogical-psychological and professional-pedagogical orientation, practical effectiveness of the future deaf pedagogue-teacher is important in the education system of developed countries. Opportunities to ensure the effectiveness of education have been expanded in our country by reforming the system of higher education, strengthening the material and technical base, radically modernizing the system of teacher training, bringing the quality of the educational process to a new level. The priorities of the higher education system include such tasks as "continuous improvement of the quality and level of professionalism of teachers" [2]. On this basis, it is important to improve the methodological training of future deaf pedagogues, the technology of organization of this process, methodological support, the system and mechanisms of competencies related to the activity.

### THE MAIN RESULTS AND FINDINGS

Tasks such as reforming the higher education system, strengthening the material and technical base, radically modernizing the system of teacher training, bringing the quality of the educational process to a new level, "continuous improvement of the quality and level of professional skills of teachers" in the priorities of the higher education system marked [2]. On this basis, the purpose of the study was to study the process of improving the technology, methodological support, systems and mechanisms of activity-related competencies to improve the professional training of deaf teachers in the implementation of the system of speech development of hearing-impaired children in the process of literary education. Issues of development of professional competence were discussed by B.Abdullaeva, S.Bazarova, N.Muslimov, Yakubjanova D.B. studied in scientific researches of scientists of the republic [11,15,26,]. Theoretical and practical bases of methodical training of students and teachers in the CIS countries S.Abdulina, G.Abramyan, V.Aleynikov, K.Angelovsky, R.Arefev, O.Badagueva, V.Bespalko, L.Vygotsky, P.Galperin, N.Gomulina, Studied by such scientists as V.Davydov, N.Kuzmina, M.Seliverstova, V.Shadrikov [4,5,6,7]. Identifying a set of pedagogical measures that contribute to a qualitative change in the system of training specialists in higher education requires a change in the organizational and meaningful component of education, establishing links with other components of education and the formation of new components [16, -12b]. At the Tashkent State Pedagogical University named after Nizami in the direction of education 5111900 - Defectology (Deaf Pedagogy) bachelors are prepared on the basis of educational-professional programs. special pedagogical education is carried out, the third stage (3-4 years of education) is aimed at the formation of special professional competence in students. However, practice shows that graduates do not have enough information on the literary education and speech development methods of students with hearing impairments. The reason for this is the lack of courses in the basics of literature, children's literature, introduction to literature, literature of the XVIII, XIX and XX centuries in the educational-professional curricula, the main methodology is characterized by a small amount of hours devoted to academic subjects. In this study, we focused on a content-based system of knowledge that allows to increase the special competence of bachelors and specialists in the field of literature, children's literature and introduce innovative approaches in teaching reading and speech development to children with hearing impairment [12, p.145].

Students' readiness to teach students with hearing impairments to read on the basis of a new pedagogical system - an understanding of the importance and necessity of solving the problem of speech development of students with hearing impairments; knowledge of the basic principles and components of the pedagogical system of speech development of hearing-impaired children in the process of literary education; personal participation in its popularization in practice; the ability to consciously choose one's actions; the analysis of the results obtained is reflected in the ability to plan further actions.

The required level of professional training of deaf pedagogues-students can be achieved through a specially organized educational process at the university and taking into account the relevance and importance of this problem for teachers and students [16, -23b]. the need for interaction, which is a condition and means of development of the participants in the learning process, to become a creative, evolving subject [13, - 145.p.]. In accordance with the objectives of the study, we developed areas for improving the professional training of deaf teacher-students:

- Developed an improved curriculum of general professional subjects "Deaf pedagogy", "Special methods of teaching native language";
- a new specialized subject "Technology of Literary Education" was included in the educational-professional curriculum, a curriculum was developed within the subject;

Curricula for new courses developed on a competitive basis in subject preparation. In the 2019-2020 academic year 5111900 - Defectology (Deaf Pedagogy) undergraduate curriculum increased the number of hours of general education subjects "Deaf pedagogy", "Special methods of teaching the mother tongue", developed an improved curriculum and book [14,15]. In these students, in the third academic year, the technology of literary education plays a fundamental role in the study of sciences. In the curriculum of the bachelor's degree program (Surdopedagogy) a new specialized subject "Technology of Literary Education" was introduced. This course is aimed at developing students' knowledge, skills and abilities in the content of literary education in a special school, the principles and methods of literary education, forms of organization of literary education, literary education technology, speech development technologies for deaf and hard of hearing students. A curriculum and textbook have been developed within the framework of the new specialized subject "Literary Education Technology". The third direction of improving the training of deaf pedagogues-students required us to develop elective courses. The purpose of these courses is to address the problems and modern foundations of literary education, innovative approaches to teaching reading, and modeling of teaching sessions. We have developed special courses on "Developing the Speech of Visually Impaired Students in the Process of Literary Scholarship" and "Using Interactive Methods in Working with Art in a Special School".

We plan to implement the system of preparation of deaf pedagogues-students for the development of speech of hearing-impaired children in four stages [12, -125.p.]:

The first stage is the formation of students' ability to identify, analyze and solve creative pedagogical tasks, as well as the development of creative curiosity, the independent transfer of previously acquired knowledge and skills to a new situation, in the implementation of the system of speech development of hearing-impaired children. to see the problem and the new function of the object in the situation, to identify the components of the object, to see an alternative solution

or its methods, to transform it into an innovative product by combining previously mastered methods of activity with a new problem and to develop creative thinking in teachers;

In the second stage, students will be able to acquire the basics of the methodology of scientific speech development in the stage of pedagogical research, to acquaint them with the conditions of the system of speech development of hearing-impaired children, its basic concepts.

The third stage involves the organization of participation of deaf pedagogues-students in the creation of authoring programs, the development of methods of independent authoring programs, the further development of innovations and the analysis and prediction of difficulties in the application of innovations in educational practice.

The fourth stage includes the organization of practical work of deaf pedagogues-students in special schools, correctional work and monitoring of experimental results at the stage of implementation of the system of speech development of hearing-impaired children. At this stage, in the process of implementing the system of speech development of hearing-impaired children, the skills of self-analysis of their professional activities increased, their views, directions, attitudes to news have changed, innovative views were formed.

The study used the methods of systematic analysis of psychological and pedagogical phenomena, modeling of the pedagogical process, study of best pedagogical practices in higher education, questionnaires, interviews, observation, mathematical and statistical analysis of experimental results. In the 2016-2020 academic year, 201,202,301,302,401,402 students of 5111900 - Defectology (Deaf Pedagogy) undergraduate education participated as research objects. On the basis of methods, techniques, models and teaching aids to implement the system of speech development of hearing-impaired children in the process of literary education developed in this study in the 2016-2020 academic year, the special pedagogical faculty of Tashkent State Pedagogical University named after Nizami conducted pedagogical experiments. This system showed to be effective in improving professional training and it recommended that they be put into practice. The indicators of pedagogical reflection, which determine the interdependence of criteria affecting the improvement of methodical training of deaf teachers of higher education institutions, improved on the basis of competence requirements for the quality of their training. In addition, in the course of experimental work it was found that on the basis of improving the methodological training of deaf teachers-students can form the following values of professional and personal significance: moral satisfaction (lessons, educational hours, good extracurricular activities high level of opportunity to improve direct communication, communicative, public speaking skills with the class; to be a human being who transmits his knowledge, life and spiritual experiences to students; to consider pedagogical activity as an opportunity for personal development, to open the possibility of its potential which was not previously demanded and realized; attitude to professional difficulties (communication, learning problems, ethical situations, etc.) as an opportunity to overcome them, to apply pedagogical experience; Perception of the teaching process as a progressive cultural process that develops teachers and students; understand that he was focused on his professional development in the field of science, methodology, develop and apply his approach to education and upbringing; create promising professional development based on continuing education, self-education, professional development; designing future professional and material status in relation to the level of success and continuous professional development and social status. It was found that the improvement of



methodological training on the basis of the developed methodological developments and tools for deaf pedagogues-students has an effective impact on the personal and professional socialization of future professionals. In particular, students process, select, evaluate, re-evaluate their educational, professional, life-oriented orientation, motives, goals; activation of intellectual activity, manifestation of "authorship" - independent formation of ideas and concepts; students' solid, deep mastery and understanding of the material in connection with their great contribution to its independent organization; clearly form important new relationships, along with facts and events on social and pedagogical activities; identify the strengths and weaknesses of their communication, specialization, socialization; it was shown to identify developmental contradictions as self-improvement and stimulation. Within the framework of the proposed system, future deaf educators demonstrated activity and independence in interaction with others, took a responsible approach to their chosen professions, acquired self-management and self-development skills, qualified and pedagogical staff showed higher creative activity during the internship.

The main goal of the special school is to shape the speech of children with hearing impairments as a means of communication. In this regard, the deaf pedagogue-teacher is a person who ensures the formation of speech of children with hearing impairments as a tool of communication. The formation of professional training of future deaf pedagogues consists of the formation of professional skills, creative skills, culture of communication, pedagogical techniques and technologies, building the initial potential of teaching skills, observation, creativity, independent mastery of advanced pedagogical practices, ensures the distribution of attention, knowledge, skills and abilities in the process of reading and teaching, the ability to manage mental states.

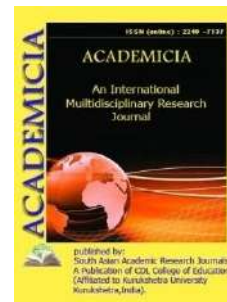
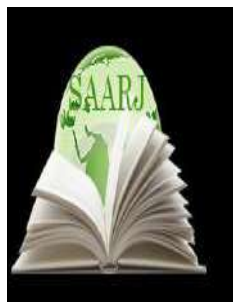
## CONCLUSION

In order to improve the professional training of future deaf pedagogues, it is necessary to organize, regulate and adapt pedagogical activities on a scientific basis, to develop the intellectual, motivational, volitional, personal, moral qualities of a teacher from a modern point of view. It is recommended to improve the methodological approaches to the stages of improvement on the basis of creating and conducting demonstration experiments, designing opportunities for the preparation and use of didactic materials. On the basis of theoretical research and analysis of research work, it was proved that the improvement of professional training of future deaf teachers involves the effective use of hours allocated for general and specialized subjects in the curriculum, improvement of science programs and substantiation of its scientific and methodological aspects. The proposed system consists of developing professional skills, creative skills, communication skills, pedagogical techniques and technology skills, building the initial potential of teaching skills in future deaf educators, teaches students the secrets of observation, creativity, independent mastery of advanced pedagogical practices, attention in reading and teaching, distribution, knowledge, skills and abilities, provides the ability to manage mental states.



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## TECHNOLOGY FOR PRODUCING MIXED YARN FOR RANGE OF DENIM FABRICS

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### ABSTRACT

*The article describes the technology of obtaining mixed yarn for rope in the weaving of denim fabric, in which cotton, polyester spandex yarns are obtained for the raw material and the physical and mechanical properties are studied. The technology of adding and baking different compositions was obtained from them to obtain experimental sample yarns. Physico-mechanical properties of the obtained sample yarns were studied.*

**KEYWORDS:** *Cotton Fiber, Artificial And Synthetic Fiber, Polyester, Lycra, Deformation, Elongation, Hygienic Property.*

## INTRODUCTION

Demand for denim clothing is growing because it fits the human body, is easy to move, durable during operation, has good air permeability, and has the ability to change its aesthetic properties during chemical and mechanical processing (boiling, printing, coloring, softening, etc.). One of the main tasks of the textile industry of the republic is to increase the competitiveness of production, the search for and rational use of local raw materials, deep processing of finished products, especially denim and textiles. Targeted scientific research and studies are being conducted in this regard today.

## THE MAIN PART

Foreign experience in the production of jeans is being studied in depth and widely implemented in practice. New production facilities based on modern equipment and technologies are being created. The main raw material for denim fabrics is cotton [1]. But in order to expand the range of denim fabric, it is also produced from yarns mixed with various artificial and synthetic fibers. Analysis of the products of modern jeans manufacturers and scientific research conducted by many researchers [6-10] has shown that the leading brands [2-5] currently use mainly 100% cotton fiber, cotton-elastane, cotton-polyester-elastane, denim fabrics are also produced from mixed fibers such as cotton-viscose-polyester-elastane, cotton-liotsell-elastane. The purpose of adding chemical yarns to denim fabrics is to improve the quality of the yarn and increase the range of new denim fabrics. For example, when mixed with polyester fiber yarn, the strength of denim fabric increases, it looks beautiful, elastic yarns shape the garment into a human figure, making it comfortable to move [9]. According to the results of the analysis, the production of garments made of denim fabrics woven with a mixture of yarns containing natural fibers and elastic properties is increasing day by day. Such blended fabrics are mainly used in various denim garments for children, men and women, as well as as covers for furniture accessories. For denim fabric, fiber quality and staple length are important. The longer the fiber, the smoother, finer and more durable the yarn is. Therefore, mainly long-fiber cotton is recommended for knitting denim fabric. It is possible to produce chemical yarns in the required sizes. For a new range of composite denim fabric with elastic properties, the Tashkent Institute of Textile and Light Industry conducted research on the experimental sampling of polyester, elastic yarns and cotton fibers in a mixture of different compositions and baking. For the experiment, 30/1 (18.8 tex) snow-spun cotton, 9 tex spandex and 75/36 DTY (8.7 tex) polyester yarns were obtained as back yarn (Table 1).

**TABLE 1. PHYSICO-MECHANICAL PERFORMANCE OF SAMPLES FOR EXPERIMENTS**

Sample yarns	Linear density, tex	Delay force, F (cH)	F (sN) Specific tensile strength, (sN / tex)	Tensile elongation, $\epsilon$ (%)
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		Average	variance	of coefficient variation	Average	variance	of coefficient variation	Average	variance	of coefficient variation
Cotton	18,8	210,68	8,56	4,07	11,21	0,46	4,07	3,36	0,36	7,6
Polyester	8,7	245,36	21,8	8,88	28,2	2,51	8,88	18,49	2,05	11,09
Spandex	9	277,14	17,12	6,18	30,79	1,9	6,18	21,84	1,68	7,69

Selected yarns were wrapped in 6 different variants of yarn in the laboratory of the department "Spinning Technology" in the Italian machine FADIS, adding the same tension in different proportions. In the next stage, the added yarns were baked on a German Saurer VTS-08-0-S machine. Figure 1 shows a schematic of the wrapping technology by adding individual yarns.

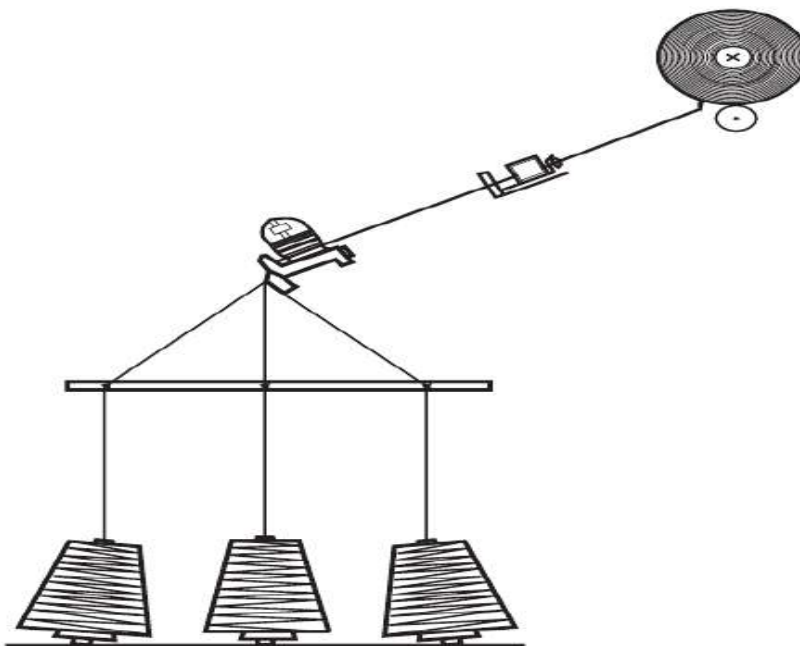


Figure 1. Diagram of wrapping technology with the addition of mixed yarn

Sample 1: yarn with a linear density of 38.4 tex, wrapped in two 18.8 tex single cotton yarns;

Sample 2: yarn with a linear density of 58.2 tex, wrapped in three 18.8 tex single cotton yarns;

Sample 3: yarn wrapped with the addition of three 8.7 tex polyesters with a linear density of 26.1 tex;

Example 4: yarn with a linear density of 27.7 tex, wrapped with two 8.7 tex polyester and 9 tex spandex yarns

Sample 5: single cotton with a linear density of 49.1 tex, 18.8 tex, polyester with 8.7 tex, two spandex yarns of 9 tex;

Sample 6: Three single 18.8-text cotton yarns with a linear density of 81.4 tex and two 9-tex spandex yarns were woven together.

The characteristics of the obtained rope yarns are given in Table 2, the physical and mechanical properties are given in Table 3.

**TABLE 2. CHARACTERISTICS OF YARNS OBTAINED FOR WEAVING**

№	Indicators	Type of samples					
		№ 1	№ 2	№ 3	№ 4	№ 5	№ 6
1	Fiber content, %:						
	Cotton	100	100	-	-	50	67
	Polyester	-	-	100	67	15	-
	Spandex	-	-	-	33	35	33
2	Linear density of yarn, tex	38,4	58,2	26,1	27,7	49,1	81,4
3	Number of circles	150	150	150	150	150	150

**TABLE 3. PHYSICAL AND MECHANICAL PROPERTIES OF SAMPLE YARNS**

Sample yarns	Linear density, tex	interruption power, F (sN)			Specific tensile strength, (sN / tex)			Elongation at Break, $\epsilon$ (%)		
		Average value	variance	coefficient of variation	Average value	variance	coefficient of variation	Average value	variance	coefficient of variation
1-sample	38,4	379,33	14,69	3,87	9,88	0,38	3,87	3,63	0,21	5,75
2-sample	58,2	612,8	29,44	4,8	10,53	0,51	4,8	4,94	0,21	4,35
3-sample	26,1	821,21	18,3	2,23	31,46	0,7	2,23	24,42	1,19	4,89
4-sample	27,7	891	14,53	1,63	32,17	0,52	1,63	30,05	1,56	5,18
5-sample	49,1	936,31	4,38	0,47	19,07	0,09	0,47	31,69	0,87	2,76
6-sample	81,4	872,08	48,37	5,55	10,71	0,59	5,55	7,28	0,19	2,6

The results showed that although the linear density of sample 6 was almost 60% higher than that of sample 5, samples 4 and 5 were the most mature yarns (891 sN and 936.31 sN). In our opinion, the strength of samples 4 and 5 is that they contain spandex and polyester fibers. The elongation index of these specimens is also explained by the high content of spandex and polyester fibers. Based on the results obtained, an elongation graph of the yarn samples was constructed (Fig. 2). When analyzing the average elongation graph of the back yarn samples, it was observed that the maximum tensile strength of the 5th sample yarn was 936.31 sN, an elongation of 31.69%. This is due to the addition of polyester and spandex yarns. Since samples 1 and 2 are made of 100% cotton, it can be seen that their toughness is lower than that of mixed composite samples (379.33

sN and 612.8 sN). Due to the fact that the number of yarns added in the 2nd sample increased by one, its toughness increased by 40% compared to the 1st sample, and its elongation at break increased by almost 28%. Since the main fiber content of samples 3 and 4 was polyester, it was found that their hardness was also high (821.21 sN and 891 sN), respectively. It was observed that the specific tensile strength of these samples was higher than 30% compared to the rest.

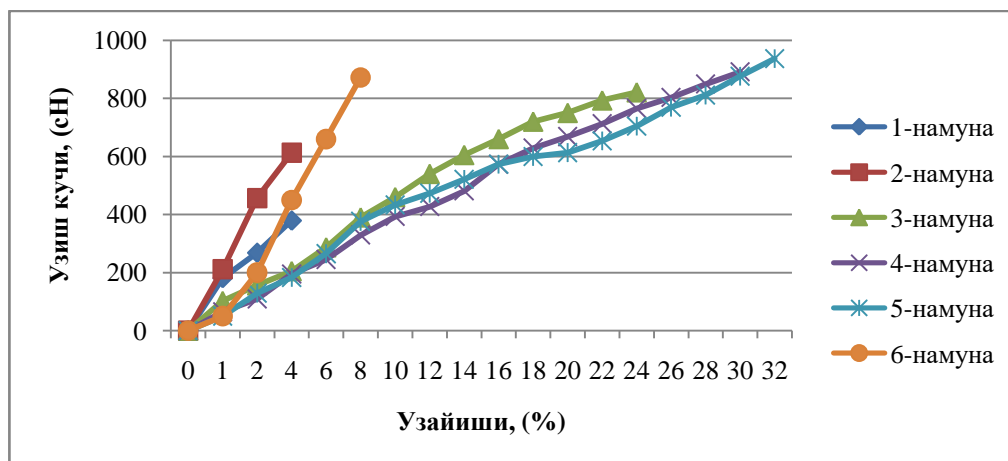


Figure 2. Graph of average elongation of yarn samples.

## CONCLUSION

Analysis of the test results of the yarns obtained in the experiment revealed that the mechanical properties of the 5th sample yarn obtained by adding cotton, polyester and spandex yarns were higher than other samples. Based on the study, it was confirmed that the quality of yarn with the addition of mixed fiber yarns is higher than other yarns. While polyester fiber increased the toughness of the yarn, spandex yarns increased its elasticity. Such performance of the yarn allows you to get the desired, quality denim fabric.

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## ENGLISH LANGUAGE IN A HISTORICAL PERSPECTIVE AND FORMING OF VOCABULARY

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### ABSTRACT

*The article is about peculiarities of forming special terminological lexicon of the English language from the point of view of its starting period of formation. The author puts forward his own original viewpoint on the problem and tries to suggest scientifically grounded arguments in favor of his position. The study showed that the processes of abstraction and generalization - in the linguistic aspect - in the English language did not exist unchanged at all stages of historical development. The study also showed that the English scientific terminology of the era under study was a developing metastable system in a relatively stable state and subject to various kinds of micro changes.*

**KEYWORDS:** Terminology, Historical Perspective, Formation, Development, Cognition, Reflection, Abstraction, Evolution.

### INTRODUCTION

The formation of scientific (in the broadest sense of the word) vocabulary in England during the formation of the national language (15th century) was characterized by two factors. The first is the impact of national specifics of socio-economic and cultural development. The second is a reflection of the main trends in general language evolution. Such lexical units reflected various levels of abstraction in thinking and cognition of the world. Initially meaning only specific objects and visible situations, they indicate that the movement from concrete to abstract was reflected not only in the name of units of the language, but also in the nature of their functioning.

Terms, as you know, are a linguistic explication of a certain stage in the development of cognition, when boundaries blurred in the awareness of the difference between the material and

the ideal, cause and effect, personality and surrounding nature, when the laws of perception still had a certain effect on the processes of abstraction [1;4]. In terminology of this order of this period, we came across words that, at first glance, refer only to the field of natural and psychological disciplines or, in general, as if they contain nothing concrete [2]. However, when we correlated them with the attempts of philosophical understanding of the authors of the terms, it turned out that these lexical units undoubtedly have the character of a terminological orientation [3].

## RESULTS AND DISCUSSION

The bulk of the terms was created on the basis of borrowings from classical languages and by rethinking the meaning of words and combinations of the general literary national language. At the same time, imagery and connotation played a special role. This turned out to be a remarkable feature of the formation period of English terminology. Our conclusion is not in all respects consistent with existing ideas about terms as units that tend to rigidly explicate concepts and lack connotations. Modern English is characterized by a number of active word-formation processes, among which derivation is not the last place, carried out without adding the word-forming affix to the basis of the motivating word. One of the most productive methods of such word-formation is conversion.[6]

The process of the formation of English science led to the further growth and spread of both oral and written English. It turned out that in the era of the most rapid social transformations, there are also rapid processes of improving the language. The process of borrowing from other languages, as well as the entire system of word production, is activated.

The material under study showed that the formation, evolution of English national vocabulary of a terminological nature occurred in independent ways, which determined the “face” of national terminology, when a large number of lexical units that existed in the ordinary language and the language of science are defined terminologically and rise to the level of philosophical concepts, giving words with a narrow limited specific meaning, generalized logical-conceptual meanings. The transformation of the basic concepts of English terminological vocabulary of the formation period of the English national language (XIV-XVII century), which determines the language situation, is associated both with the socio-cultural and philosophical worldviews of the corresponding era, however, the qualitative specificity of the formation of the determinants of the genesis of scientific knowledge and, accordingly which form the system of terms in terms of language, have completely different forms in different eras, which constitute the stages of the emergence and approval of dominant new scientific concepts and directions.

The study showed that the processes of abstraction and generalization - in the linguistic aspect - in the English language did not exist unchanged at all stages of historical development. The formation of abstract meanings and their formal, verbal shells is closely related to the development of the abstract category and therefore represents the undoubted mutual interest of philosophy and philology, because the development of language and, in particular, linguistic meanings and categories, is a necessary component of the study of the laws of development of human thinking and cognition, an integral part of the theory of knowledge of any scientific system.

The study also showed that the terms in English are units used in the functions of hard-informative nominators of the phenomena of reality within the framework of a scientific and

terminological system that reflects the worldview of a particular scientist or school, which characterizes their originality and national specificity.

The main trends in the development of English general scientific vocabulary of the research period (and further replenishment of its conceptual apparatus), the speech expression of which was manifested in the vocabulary, were the following three main directions: firstly, the expansion of the composition of English scientific vocabulary in its content reflected the emergence of qualitatively new phenomena in the language societies of the period of formation and formation of a nation; secondly, a characteristic feature of this period was the emergence of new words to express already known concepts. To a large extent this was due to the abundance of French borrowing. But there is another reason - this is the incompleteness of the English dictionary in the early New English period, which led to the diversity and instability of the expression of certain concepts. This feature of the English national language is also characteristic of scientific vocabulary; thirdly, the introduction, assimilation and interpretation of new words were mainly facilitated by the authors' targeted goals.

We also established some patterns of the linguistic organization of scientific texts of the studied period, which are as follows: a) texts that reveal various aspects of scientific knowledge created by authors who are different in their professional inclinations and vocation, nevertheless, contain a certain set of lexical and vocabulary - grammatical units of the language system and demonstrate a similar picture of the syntactic design of text fragments; b) the main compositional-speech form of the thinker when creating his scientific works is "reasoning / reflection"; c) the main line of work of a scientific nature of the period is either explanation, or justification, or evidence or refutation.

The study also showed that the English scientific terminology of the era under study was a developing met stable system in a relatively stable state and subject to various kinds of micro- and macro evolutionary changes. Despite the highly dynamic nature of the terminological system, the elements of statics that make up its core prevailed over the elements of dynamics that form the periphery of the system.

In the XIV-XVII centuries the replenishment of the vocabulary of the English language as a whole and the creation of scientific terminology, in particular, was largely due to Roman borrowings, mainly from Latin. Secondary borrowing of the English terminological system is largely associated with the high susceptibility of the English language of the XIV-XVII centuries to borrowing in general and to term-creation, in particular. It is this feature of the English language, its "openness" to borrowing, and the ease of this process that during the period under study had a favorable effect on its gradual exaltation as the international language No. 1 in modern conditions. It was the long and absent-minded "absorption" of other people's words without scientific and bureaucratic obstacles that allowed the English language to reach a wide range of intercontinental, interregional, interstate and interethnic relations and become an effective means of humanity's communication in the context of expanding globalization in the modern world. In general, the studied material testifies to the strength and versatile nature of the influence of Latin on the vocabulary of the English language and covers the main areas of activity of English society in the XIV-XVII centuries. For the period of formation (XIV-XV centuries) and development (XVI-XVII centuries) of general scientific vocabulary, the replenishment of the thematic series by Romanisms and, especially, Latinisms is due to the fact

that, firstly, this historical period was the beginning of a systematic presentation in English the first scientific works, and, consequently, the beginning of the formation on the English soil of the semantic core of modern English professional terminology. The use of this vocabulary in the works of various genres is one of the characteristic features of the XIV-XVII centuries. At the same time, there is a process of gradual professional differentiation of the language of science in connection with the specialization of knowledge, the design of each direction in a separate science. This process is accompanied by the terminization of individual words and their lexical-semantic variants, an increase in the number of terminological phrases.

Since ancient times, the number has been serving as a means of describing the world order and orientation of a human in it. They attributed the hidden meaning and magical ability to influence on everything. Numbers were considered as integral characteristics of all creatures and objects: they controlled not only physical harmony and the laws of life, space and time, but relationship with God, which was understood as World Unity, the Highest Truth.[5]

The historical and hermeneutical analysis of the formation and development of the categorical-conceptual apparatus of English scientific terminology seems promising in solving the problem of the relationship of science directions. The historical and genetic relationships revealed by such a study of a different register of words can serve as additional material in solving the complex problem of developing a terminological system and its dialectics, in particular, in determining and refining the initial beginning in its formation. The combined efforts of philosophy and linguistics in the study of Gasparov B. M. Language of memory, image. Linguistics of linguistic existence. Linguistics of linguistic existence. M.: New literary review, vol. IX / Ed. Volume I. Prokhorova. 1996. Gasparov B. M. Language of memory, image. Linguistics of linguistic existence. Linguistics of linguistic existence. M.: New literary review, vol. IX / Ed. Volume I. Prokhorova. 1996. the process of complex formation of the English vocabulary of the period under study can make a significant contribution to the further development of dialectics, the evolution of its terminological base.

Semantic parallels in the content of words in the process of their formation in English thinking serve as the basis for the conclusion about the fundamental unity of the formation of ideas about this vocabulary.

The revealed regularities of the process of formation of the conceptual apparatus of English terminology allow us to give a critical analysis of some hermeneutic statements about their origin, concepts of the causal nature of human thinking in the period under study, and linguistic relativity theory.

## CONCLUSION

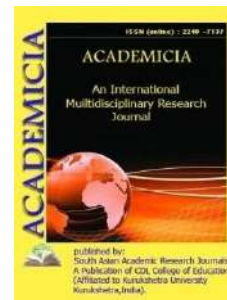
And, finally, one cannot fail to note the following circumstances: the complex and long historical path of the formation and development of the system of terminology and scientific concepts in English is instructive in many respects for the Uzbek reality and the Uzbek language. In our opinion, two completely separate and independent periods in the formation and development of the term system and concepts in the Uzbek language require special attention: a) the period of the VIII-XVI centuries and b) the period of the XIX-XX centuries. They had their distinct features. But, on the other hand, they are internally interconnected, since it was one language at different stages of its development and in various historical eras and political situations. With such a statement and understanding of the meaning of our research, we can understand and understand

the fundamental position that we study the history of our own and other countries and peoples not for the sake of studying, but for practical tasks, in this case, to clarify and justify further ways of developing and improving the language sciences in independent Uzbekistan, systems of its categories and conceptual apparatus.

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## THEORETICAL VIEWS OF BOBUR ABOUT THE DIVÂN STRUCTURE

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### ABSTRACT

*Zahiriddin Muhammad Babur (1483-1530), the founder of the great Baburi dynasty, was not only a talented poet but also a literary theorist. This article highlights Babur's own scientific and theoretical views on the structure of the divân, a collection of poems in the classical period of Eastern Islamic literature, based on the author's work. The material is based on information about Babur's collection of poems in Turkish and manuscripts of this collection.*

**KEYWORDS:** *Zahiriddin Muhammad Babur, Manuscript, Divân, Divân Structure, Theory.*

### INTRODUCTION

Zahiriddin Muhammad Babur (1483-1530) is one of the great figures of Turkish classical literature. His special work on literature is *AruzRisolasi*, which is about the poetic dimension of *Aruz*. In addition, the work “Boburnoma” contains information about literature, literary works and literary personalities. He is a poet who is well-versed in lyrical genres as well. There is also a collection of poems – **ديوان (divân)** of this collection of works, and his literary-theoretical views on the creation of a special **divân** in Eastern Islamic literature are contained in the poems of this devon.

### THE MAIN FINDINGS AND RESULTS

First of all, about Bobur's divân. According to recent research, the number of manuscripts of Babur's divân preserved in the world's book treasures is ten [1, 114-116; 2, 51-61]. They are:

1. رساله ترکی منظوم نوشته دستی تصنیف بابر پادشاه قلمی

(Risâlai turki manzum, navishta dasti tasnifi Bâbur pâdshâh, qalami)



(India, Rampur Raza Library, №19)[3].

**2. دیوان ترکی بابر پادشاه (Divâni turki Bâbur pādshah)**

(Paris, Bibliotheque Nationale, Suppl. Turc. 1230) [4].

**3. دیوان بابر شاه چغتائی (Divâni Bâburshah chig'atay)**

(Istanbul University library No: 3743) [5].

**4. دیوان سلطان اعظم بابر میرزا (Divâni Sultânul a'zam Bâbur mirzâ)**

(Istanbul, Topkapı Palace Revan library no: 2314) [5].

**5. دیوان میرزا بابر (Divâni mirzâ Bâbur)**

(Istanbul, 100. Yıl Atatürk Library (Municipality Ktb.) Muallim Cevdet manuscripts K. 332) [5].

**6. دیوان بابر پادشاه (Divâni Bâbur pādshah)**

(India, Salar Jung State Library No: 4) [6, 49-51].

**7. دیوان بابر پادشاه (Divâni Bâbur pādshah)**

(India, Salar Jung State Library No: 18) [6, 49-51].

**8. دیوان بابر پادشاه (Divâni Bâbur pādshah)**

(London, The British Library D.P. 1402, Turki Ms 25) [7, 14-20].

**9. دیوانی بابر (Bâbur divâni)**

Tashkent, Fund of the Alisher Navoi State Museum of Literature, Manuscript No. 317.

10. Another **divân** manuscripts are reported by the Turkmen scholar R. Kurenov in his research [8]. According to him, the manuscript is number 3 in the Islamabad National Library in Pakistan. This copy of **divân** seems to be close to the Paris manuscript in textual terms. [Although this dissertation is intended to be a textual study of Babur's **divân**, it should be noted that it did not result in a complete study due to ignorance of many works on the subject and the lack of study of many important materials.]\* \* \*

During the study of the above-mentioned manuscripts, it can be concluded that:

A) They are mainly manuscripts copied between the XVI-XVIII centuries (the Tashkent copy is foreign);

B) None of them is in the form of a literally traditional Eastern classical structure;

C) They are, first of all, an existing collection of the poet's poems or drafts;

G) There are some ornate copies among them, and it is these ornate manuscripts that are important from the point of view of source studies and textual studies, as well as from Babur studies;

D) Almost all of these manuscripts are written in fluent and beautiful calligraphy (mostly in Nastaaliq script).

The question is, “**Did Babur make divân with his own hands?**” it is natural that the question arises [9, 114-117; 10, 41-43]. It is well known that being the owner of a devon is an element in

classical literature that requires the poet to be literally the owner of classical poetry. This requires great responsibility and talent from the poet. The composition of **divân** has a centuries-old tradition, and only a poet who has mastered it could do it.

We do not think it is correct to answer the above question on the basis of the manuscripts of his office without studying the views of Zahiruddin Muhammad Baburshah. Therefore, it would be appropriate to draw a more solid scientific conclusion by studying the author's theoretical views on whether or not Babur compiled **divân**. It can be said that Babur has his own approach to composing **divân**. However, his special scholarly work on the structure of poetry, including aruz [11; 12] and we do not know the full text, which contains his theoretical views on the science of aruz, which reflects his scientific views on the structure of **divân**. However, among his writings there are some passages devoted to the subject through which we see that the author has a perfect knowledge of the subject as well.

In one of his rubai he writes:

*Divânima ne rabtu ne tartibedur,  
Ne jadvalu ne lavhu ne tazhibedur.  
Gar sangayibordimani, aybaylamakim,  
Divâningnitilargataqribedur.*

In one place in the “Boburnoma” the governor of Samarkand, one of the Shaybanis, writes “*Fólod Sultonga divânimni yibordim*” [13, 174]. This incident took place in 1518, when Babur was still in Kabul. Accordingly, it can be said that the poet arranged the first drafts of his devon at this time. But when was the quoted rubai itself written? Before or after 1518? Who else is Babur asking for in exchange for his office? Why is he counting the shortcomings of his office and what are their “faults”? Does a quartet really raise so many questions?!

True, it is very difficult to find answers to all of them now. In particular, the question of to whom it is addressed will remain open until clarity is established on the basis of a reliable source.

But first of all, it should be noted that Babur did not have time to complete his collection of poems in the traditional classical style. In addition, this rubai was written after the collection was sent to Folad Sultan. That is, the poet's first collection of poems – **divân** was written after the end.

And we have a reason to think so. First of all, this rubai text comes in only three copies of the manuscripts of the poet's **divân**. They are manuscripts kept in Istanbul. Secondly, the first of these sources – the copy at Istanbul University – is the largest collection of poems by Babur's divâns. The mentioned rubai is on pages 67<sup>b</sup>-68<sup>a</sup> of the manuscript. In addition, this copy served as the basis for two other sources in Istanbul.

The fact is that the absence of this rubai in the copies of Rampur and Paris, which are considered the most revered of Babur's divâns, also indicates that it dates back to 1528-1520. This is because it is the largest collection of Babur's poems at Istanbul University. Even a few poems in it are not found in other sources. According to the calligraphic features on some of its pages, the Turkish scientist B. Yujel also suggested that the author's autograph [5, 21]. But you can't agree

with that. After all, the source that confirms the existence of Zahiriddin Babur's handwriting is a copy in Rampur.

Even when comparing the text of the copy of Istanbul University with the text of Babur in the copy of Rampur, B. Yujel's opinion was not confirmed. Moreover, the publication of the source at Istanbul University dates back to the second half of the 16th century. That is, long after the author's death.

Let us now return to Bobur's theoretical views.

In his rubai, Babur mentions the important elements of the structure of the divan. That is, here the author emphasizes, albeit briefly, the elements that serve the formal and theoretical foundations of bureaucracy.

So, in the opinion of Babur, in order for the **divân** to be formally complete, it is necessary to answer the following:

1. ربط (**Connection**). This term means “communication” and “system”. Accordingly, the internal structure of the sofa should be disciplined, i.e. interconnected. That is, first there is a preface and then there are poems of praise, supplication and nat type;
2. ترتب (**Order**). The meaning of this term is known. Only, in this regard, the poet is referring to the order of the alphabet and genres in the **divân**– the sequence;
3. جدول (**Table**). This term is widely used in Middle Eastern Muslim book art [14, 103] and is considered important. Table is one of the most widely used artistic ornaments in book art. It can be simple, elegant and golden. A separate table is drawn around the text on one page of the manuscript, or a single table is drawn around the text on both pages. If a text on a page consists of several columns (mostly poetic works), each column is separated from each other by table lines. In the devons, in the bayoz, each poem is also tabulated. The titles and pictures (miniatures) in the manuscript are also separated by a table. A simple table is often one-line red drawn around the text; the elegant table is very thin and consists of two, three, or even four rows of several colors; the gilded table consists of one or more rows given golden water;
4. لوح (**Writing board, board**.) This term is also widely used in the art of bibliography [14, 141]. This word has several meanings in relation to the objects it expresses. But in Babur's rubai, the East comes as one of the main artistic ornaments in book art. The sheet can be worked at the beginning of the manuscript, if the manuscript contains several works, at the beginning of each work, and sometimes at the beginning of chapters and chapters. A sheet consists of a pattern drawn across the width of half or one-third of the page where the text begins. In the Eastern book art of the XIV-XVI centuries, the plate was made mainly of golden water. (Manuscripts of the XVII-XIX centuries are distinguished by the fact that they consist of more simple paints.)
5. تذهیب (**Tazhib**) This term was also active in ancient bibliography according to its application [14, 301]. Tazhib is the gilding of manuscripts, the decoration with golden water. Of the manuscript ornaments, most are engraved with gold watercolors, engravings, titles, plates, patterns, tables. Some manuscripts are embellished by sprinkling golden water on the border of the page. Such a frame is called a “*tazhibihoshia*”.

So, if we pay attention to the above-mentioned rubai, Babur considers these five terms, in a sense, important or sufficient, in order for the **divân** to be complete and reach the hands of the reader.

Looking at the next two verses of the rubai, the word “*Gar sanga yibordim ani, ayb aylamakim*” asks not to blame his office, even if there are no five main elements – “*connection*”, “*order*”, “*table*”, “*writing board*” and “*tazhib*”.

In turn, the reason for this is “*Divâningni tilarga taqribedur*”. That is, he is sending this rubai to another pen-poet, the **divân**-compiler, and is willing to send his unfinished **divân** and ask for his collection in return.

It is understood that the tree and fame of Babur's **divân** were still famous before the author gave it a complete order. Fans, who read it at the request of the author himself, though not in a perfect way, begged him to enjoy it as soon as possible.

From the rubai of Babur it is possible to draw the following theoretical conclusion in connection with the structure of the **divân**. The first two terms – “*connection*” and “*order*” are related to the textual structure of the **divân**, while “*table*”, “*writing board*” and “*tazhib*” are terms related to the appearance of the **divân**, the decoration of the book.

Hence, **divân** (a collection of poems) should have a strict internal order in terms of text (sequence of letters of the alphabet, sequence of rhymes, sequence of genres; *introduction of prefixes, praises, prayers and verses*), and then it is appropriate to have internal manuscripts depending on the structure used. It should also be noted that **divân** copies of a simple copy, even without artistic decoration, are common. However, at this point it would be appropriate to assume that Babur was a king and a highly talented artist.

## CONCLUSION

It is clear that Babur Mirza is a poet who strives to organize his **divân** in a perfect way on the basis of the above-mentioned requirements of classical **divân** and to show his sensitive creative aspects in this regard as well. His **divân** views on composition and clerical work once again confirm that he is a talented artist with a perfect knowledge of the classical clerical traditions, experience and skill.

This means that during his lifetime, Babur did not have time to complete his collection of poems in the traditional classical style. [Only, the London manuscript is in a certain **divân** state. However, it was also copied in 1190 AH (1776) and was thus compiled by the scribe.]. Even in Babur studies, the perfect copy of the poet's **divân**, which is composed in full accordance with the tradition of composing the classical **divân**, is still unknown.

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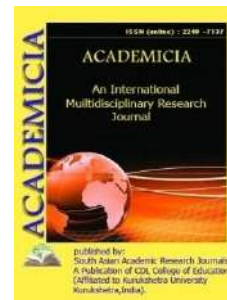
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## THE ROLE OF THE FAMILY IN TEACHING THE CHILD TO READ

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### ABSTRACT

*This article provides the necessary recommendations for all parents, the role of the family in teaching reading culture to the child, methods of fostering a culture of reading, to form a culture of reading, which is one of the five initiatives.*

**KEYWORDS:** Book, Family, Reader, Library, Reading, Listening, Audio Books, Bookcase, Discussion, Sample Presentation.

***"A child who reads one book today can lead ten children who are watching TV tomorrow".***

***Shavkat Mirziyoev***

### INTRODUCTION

"There is a wealth in the world that will never wear out, and it is the knowledge and skills that you give to your child. But where and from what can knowledge and enlightenment be obtained? First of all, from a treasure called a book." We must always keep in mind these valuable thoughts of our President ShavkatMirziyoev and incorporate them into our way of life [1, 2017]. This is an important principle in shaping the culture of reading in the younger generation. Of course, our scientists have done a lot of research on the culture of reading, its stages of development, reading. In particular, the phenomenon of reading A.O.Umarov, its role in the development of harmoniously developed people, optimization of reading processes in society, pedagogical and psychological opportunities of B.N.Ganieva aimed at shaping the reading culture of primary school students and the reading culture of primary school students; the essence, content, form, methods and means of educating the culture of reading are defined. The issues of formation of reading culture of schoolchildren are also reflected in the research work of



M. Kayumkhodjaeva. Scholar SafoMatchon's contribution to children's reading, the development of their speech, and the most appropriate methods and forms of introduction to the world of art, highlighting the role and importance of literature lessons in engaging students in reading, is great [2, 2019].

If we look at the lives and activities of many celebrities, writers, poets and statesmen, we can see that they grew up reading books in their youth and listening to works of various genres such as fairy tales and poetry. One day the famous German poet Heinrich Heine said to an acquaintance: "When I was a child, I became a poet because my mother read poems. My uncle Solomon became a bank clerk. Because her mother only read her books about traders" [3, 2018].

### THE MAIN FINDINGS AND RESULTS

It is not in vain that our wise people say that they do what they see in the bird's nest. The culture of reading is also formed primarily in the family. There is a difference between a child who sees his parents reading a book and a child who grows up not seeing his parents holding a book. A vivid example of this is the Avar poet RasulKhamzatov, known and respected not only in Dagestan, but all over the world. What made him famous was the book. In his book *My Dagestan*, he wrote: "I imagine my father only reading a book "The young Rasul always saw his father reading a book, loved books since childhood, read many books and grew up to be a famous poet. So how can a child be a reader if the parent does not read the book himself? The essence of the "Reader's Family" contest held in our country is to return parents to reading. That is, if parents read books, children will also read books [4, 2019].

Children's favorite writer H. Tukhtaboev said, "In developed countries, reading has risen to the level of science. "Reading is not just about promoting a book; it's also about learning to read, to choose a book to read, to grasp the essence, to understand oneself with the help of a book". Psychologists believe that in the process of reading a book together, a special relationship is established between parents and children. They say such an attitude never occurs when they watch TV together. Children who read a lot of books master the lessons well [5, 2018].

When shaping your child's reading culture, remember that the most important role model is yourself. Often parents do not have time to read at all because they work, their time and energy is enough to read newspapers and magazines. And stay-at-home moms use social media to watch serials or over the phone. From the moment a baby is born, he sees the phone in his mother's hand, and even modern mothers, instead of saying goodbye, put their child to sleep through music and songs on the phone, and give him a phone so that he can sit quietly in his arms when he cries. As a result, if a child learns to prefer a television or computer to a book, it is difficult to convince a child that reading a book is better and more rewarding. The best way out of this situation is to read a family book together. P.A. Pavlenko says, "No family can be a spiritually complete family without reading a book" [6, 2017].

Monitoring the regular performance of teacher assignments in school also helps primary school students to become literate, to acquire reading skills correctly and quickly, but also a personal example of a parent in the family is to cultivate a culture of reading based on values from birth. This means that everyone has a role to play in shaping the child's reading culture. As a result of studying the information about the role of the family in this matter, what work they should do, it is recommended that parents systematically do the following in the formation of a culture of reading to their children:

- Read funny, fun stories and poems to your child outside of the school program. Every day, it is recommended that one parent read with the child and spend half an hour or hours of free time discussing what they have read with him or her.
- Act out a story from a book with your child, play a “theater” game, and experiment with the plot. Change your game to run away from a fox, meet a dragon or ask the “Golden Fish” what you want, who is to blame in the fairy tale “Zumrad and Kimmat”, why, how to interpret the fairy tale “Bobo and Sholgom” in Uzbek (in modernized form), etc. allow to enter. Your child will develop creativity.
- Draw a picture of the heroes of the works you read with your child, you will know how the heroes of the work look, what they think about it. You determine if your child has the ability to draw.
- Look for life events similar to the plot of the story in the reading book, identify their different sides. You learn to observe and analyze the events around you.
- Compare the books you read with the movies and cartoons created for them, discuss what fits and what doesn't, talk about what changes the film makes and what aspects it doesn't add. The ability to think independently grows.
- If the child refuses to read any additional books, do not force him; try to teach him the kiosk he wants. You will know his interest through the book of your choice.
- Teach your child to use quotes from what they read in their speech. The use of memorized poems, proverbs, wise sayings, conclusions drawn from the story gives good results. In the future, this skill will decorate and enrich your child's speech. Thanks to these methods, the content of books is closely connected with the daily life of the child, forcing him to read what is natural and necessary. In addition, examples of folk oral art contribute to the development of the child's imagination and speech.
- Have a family book reading evening. You can read in turn: first it to you, then you to it, or vice versa. With older children, reading the play in roles will give good results. You will learn how to vote for which heroes, how they mastered their character, their actions, their acting skills.
- If the child has learned to read together in the evening, but does not want to read it himself, try a little trick. Stop reading in an interesting place the day before, and the next day talk about how busy you are with the necessary work, and tell the child to read the rest of the book himself and then tell you what happened. However, don't let the lie make you feel “busy” - the child may realize that you're forcing him to read it that way.
- Don't strive for speed of reading; pay more attention to reading words, intonations, and content correctly. Teach your child to retell what they have read, to repeat, to ask questions. It develops their skills of oral retelling, narration, essay writing.
- It is good to start with homework reading as it helps to engage the child in lesson preparation, but do not exceed the norm of reading aloud to the child every day - reading aloud on demand is 8-10 minutes for 1st grader, 10 for 2nd grader It should take -15 minutes.
- The child should not be allowed to study as a punishment. Don't be punished by reading instead of playing, walking, or watching TV. Because in the process of reading, the child's

imagination is in that game or TV show. You can punish a child by depriving them of evening reading together, but not vice versa. It is a punishment for the child, his parents, and his siblings to be left out of the discussion of the work of art that they are reading and debating at this time.

- Separate time should be set aside for reading, don't force your child to read instead of watching their favorite TV shows. They have the right to spiritual rest.
- If your child is interested in a book, never turn it off. Reading something is better than not reading anything. Make sure this is quality literature. You don't have to interest a child in comics, "horror," love, and detective novels. Once a child is formed as an independent reader, he or she can read the works of art of his or her choice when he or she reaches adulthood, during which time he or she learns to draw the necessary conclusions [7, 2018].
- Teach your child to take care of books. Not tearing the book, keeping it clean, and making it "as dear as bread" are also first understood from the attitude of parents towards the book. Your bookshelf should always be neat and tidy with interesting, rare works, pictures-rich books. Remember that what you pay special attention to will not go unnoticed by your child either.
- One of the constant gifts for a child should be a book that is appropriate for his or her age. If you find the book too difficult or not interesting, don't insist on reading it. Set it aside for a while. But don't miss the moment when a child starts to "master" a certain type of book.
- Teach your child to use the library. To get started, sign up together at the school, neighborhood, or county information library, and select books together.
- When you go for a walk with your child, don't forget to go to the bookstore and buy a book. Let him choose the book himself and bring it, even if it is expensive. Then he realizes that the book is more important than anything in human life.
- With the help of modern media, the child can hear the audio, recorded discs of the book. Of course, this is useful when the child has learned to read and opens the book with the text on the disk and watches it. Audio books teach children to distinguish letters, pronounce sounds correctly, write words correctly, and read with intonation. As a result, the child is happy and proud to learn letters and sounds independently, freely [8, 2020].

## CONCLUSION

Following these recommendations in the family and systematically implementing the formation of reading skills in the upbringing of children will give the expected result. And together we will be able to nurture perfect people who are the owners of a great future.

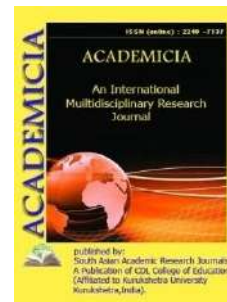
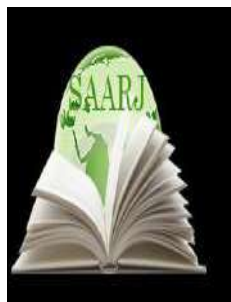
In Uzbekistan, people have always recognized the family as a sacred place and attached great importance to the upbringing of our future owners - children. Family reading is also important for the world that the baby sees from the moment he or she is born to grow up with the traditions and values in it. At this point, I found it necessary to quote the words of Abdullah Avloni: "Education is for us a matter of life or death, salvation or destruction, happiness or disaster" [9, 1967].

The above-mentioned ideas are effective recommendations for the formation of reading in the upbringing of children in the family, and in the words of our wise people, we have no right to delay a day in upbringing from the moment the mother is three months pregnant. In conclusion,

as the President said, "the desire to read books should begin, first of all, with the family, and parents should be readers themselves, so that they instill in their children a love for reading" [1, 2017.2, 2019].

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## PECULIARITIES OF THE FORMATION OF ANIMATED NON-SIGNIFICANT USING SUFFIXING IN THE MODERN CHINESE LANGUAGE

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### ABSTRACT

*This article is devoted to the study of the features of the formation of animate nouns with the help of suffixation in modern Chinese. The relevance of the study is due to the fact that this phenomenon is widespread in the word formation of the modern Chinese language and takes the second place in the productivity of the forming of both new lexical units and various forms of the word. In this regard, this article is aimed at identifying productive affixes that serve as material for the formation of such nouns. The article presents constructions with affixive morphemes, on the basis of which nouns are formed, the lexical features of each of the suffixes are revealed, new constructions are revealed, on the basis of which new nouns are formed, were analyzed the lexical features of forming the nouns using these morphemes.*

**KEYWORDS:** *Affixation, Suffixation, Morpheme, Vocabulary, Attributive Model, Subject-Predicative Model, Verb-Object Model.*

### INTRODUCTION

In modern Chinese language, word-formation methods have been studied to varying degrees by both domestic and foreign linguists. For example: Gao Yaoichi [1, p. 220], Zhang Jing [2, p. 220], Sun Changsuy [3 p. 493], Li Gao [4, p. 120], Lu Zhivei [5, p. 160] Zhen Xuelyan [6, p. 320], Zhang Shoukan [7, p. 96], S. Nosirova [8, p. 150], S. Khashimova [9, p. 150] and many others. So, one of the methods of word formation is affixation. This method is widely used in the formation of various words related to different parts of the speech of the modern Chinese language. This article is devoted to the study of affixes, with the help of which animated words-nouns are formed in modern Chinese. In modern Chinese, the semi-affixes that form words related to the part of speech, the noun, make up a significant part of affixes. They form noun



words with the meaning of human professions, names of objects, their qualitative shades, etc. These semi-affixes, as examples, include the following morphemes: 员 “yuan”, 师 “shi”, 生 “sheng”, 汉 “han”, 士 “shi”, 夫 “fu”, 客 “ke”, 手 “shou”, 丁 “ding”, 鬼 “gui”, 虫 “chong”, 蛋 “dan”, 派 “pai”, 份子 “fenzi”, 物 “wu”, 品 “pin”, 素 “su”, 体 “ti”, 力 “li”, 处 “chu”, 心 “xin”, 意 “yi”, 性 “xing”, 切 “que”, 当 “dang”, 学 “xue”, 论 “lun”, 主义 “zhuyi”, 化 “hua” and etc. Consider the features of some of the affixes that form animated nouns in modern Chinese.

Affix 手 “shou” forms the names of various professions, and also forms words denoting people who are knowledgeable and are specialists in the relevant field. The root of this morpheme is morpheme 手 “shou” (“arm”). For example: 对手 “duishou” “competitor”, 帮手 “bangshou” “assistant”, 助手 “zhushou” “assistant”, “assistant”, 提琴手 “tiganshou” “violinist”, 打手 “dashou” “watchman”, “guard”, 射手 “sheshou” “mergan” [10, P.89]. Nouns containing this morpheme are formed using this suffix, based on the following models: [noun + 手 “shou” = noun]: 歌手 “geshou” “singer”, 航手 “hangshou” “ferryman”, 2) [verb + 手 “shou” = noun] : 凶手 “shashou” “killer”, “flayer”, 护手 “hushou” “guard”, “watchman”, 能手 “nengshou” “Master”, 3) [adjective + 手 “shou” = noun] : 好手 “haoshou” “master”, 4) [numeral + 手 “shou” = noun] : 一把手 “yibashou” “first hand” (here in the meaning of the first customer), 三把手 “sanbashou” “third hand” (here in the meaning of third customer).

## THE MAIN FINDINGS AND RESULTS

The modern period of development of grammatical elements in word formation is marked by the interchangeability of the half-suffix 匠 “jiang” instead of the half-suffix 手 “shou”. The use of 手 “shou” has a wide range in modern Chinese, so if 匠 “jiang” is used mainly with monosyllables, then affix 手 “shou” is used both with monosyllabic and polysyllabic roots.

In military vocabulary, with the help of affix 手, words are formed that denote people shooting from any weapon. For example: 机枪 “jiqiangshou” “machine gunner”, 迫击炮手 “pojipaoshou” “mortar machine”. Possibly, the primary form of this suffix was in the form of a two-syllable lexical unit 射手 “sheshou”, which later contracted to a reduction to form 手 “shou”. In such terms, it is not possible to interchange the affix 手 “shou” with synonymous affixes, such as 者 “zhe”, 家 “jia” and 员 “yuan” [11, C .56].

In modern Chinese, there are words that can be used simultaneously with several affixes and form lexical units with the same meanings. For example: words 画家 “huajia”, 画手 “huashou” are lexical units with the meaning “artist”. The root of these words is the verb 画 “hua” “draw”. In this case, these words are formed using the suffixes 家 “jia”, 手 “shou”, forming nouns. Another example: the words 音乐家 “yinyuejia”, 音乐手 “yinyueshou” “musician”. In these words, the root is the word 音乐 “yinyue” “music”. In this case, these words are also formed using the suffixes 家 “jia” and 手 “shou”, forming nouns. Based on the foregoing, we can conclude that the area of use of the suffixes 者 “zhe”, 家 “jia” and 手 “shou” is similar and complementary.

Morpheme 工 “gong” has the meaning of “work” and as a suffix forms words according to three constructions:



1) [noun + 工“gong” = noun], for example: 电工 “diangong” “electrician”, 车工 “chegong” “master”.

2) [AB (noun formed according to the verb-object model) + 工“gong” suffix = noun]. For example: to the word 学徒“xuetu” “student”, formed according to the verb-object model (学“learn” (verb) + 学“student” (noun) = 学徒“xuetu”), by adjoining affix 工 “gong” the word 学徒工 “xuetugong” is formed “worker-student”.

3) [adjective + 工“gong” = noun], for example: 壮工 “zhuanggong” “wrestler” (壮 “zhuang” “strong”), 青工 “young worker” (青 “qing” “bright”, “clean”).

Morpheme 丁“ding” means “adult person”. Words with this morpheme are formed according to the following constructions:

1) [noun + 丁“ding” = noun], for example: 园丁 “yuanding” “gardener”, 家丁 “jiading” “master”, 男丁 “nanding” “man”, 保丁 “guard”, 门丁 “watchman”.

2) [adjective + 丁“ding” = noun], for example: 壮丁 “zhuangding” “strong”, 成丁 “chengding” “man”. Words with a given morpheme indicate male nouns. [11, 53].

Morpheme 汉 “han” has the meaning of “Chinese” and, unlike the suffix 丁, “ding” forms words related to both male and female. Words with the suffix 汉 “han” are formed according to two constructs:

1) [noun + 汉 “han” = noun], for example: 单身汉 “danshenghan” “unmarried (male)”, 英雄汉 “yingxionghan” “hero” ..

2) [adjective + 汉 “han” = noun], for example: 醉汉 “zuihan” “drunk”, 大汉 “dahan” “official”, 老汉 “laohan” “old man”, 硬汉 “yinghan” “despot”, 好汉 “haohan” “good man”.

The lexical meaning of affix 匠 “jiang” is “master”. In modern Chinese, affix 匠 “jiang” forms the words “master”, “specialist”, “artisan” and is considered an unproductive affix. For example: 铁匠 “tiejiang” “blacksmith”, 瓦匠 “wajiang” mason, 木匠 “mujiang” “carpenter”. Words with the suffix 匠 “jiang” are formed according to the construction [noun + 匠 “jiang”].

Morpheme 郎 “lang” has the meaning of “man” and forms the words related to the male gender. Words with morpheme 郎 “lang” are formed according to three constructions:

1) [noun + 郎 “lang” suffix = noun], for example: 货郎 “huolang” “bear the burden”, 儿郎 “erlang” “boy”, “child”.

2) [AB (noun formed according to the verb-object model) + 郎 “lang” = noun], for example: 卖油郎 “maiyoulang” “seller” ([卖 “mai” “sell” + 油 “you” “oil”] + 郎 “lang” = 卖油郎 “maiyoulang” “seller of oil”), 放牛郎 “fangniulang” “shepherd” ([放 “fang” “shepherd” + 牛 “niu” “cow”] + 郎 “lang” = 放牛郎 “fangniulang” “shepherd”).

3) [adjective + 郎 “lang” = noun], for example: 新郎 “xinlang” “new employee”.

Morpheme 信 “guan” has the meaning of “shepherd”, as a suffix forms new words only with nouns, related to a part of speech a noun according to the construction [noun + 信 “guan” = noun], for example: 牛信 “niuguan” “looking after a cow”, 马管 “maguan” “looking at a horse”, 羊信 “yangguan” “looking after the sheep.”

Morpheme 豪 “hao” means rich. Words containing this suffix form only according to one construction: [noun + 豪 “hao” = noun], for example: 文豪 “wenhao” “scientist”, 土豪 “tuhao” “master of the earth”.

A morpheme with the meaning “lord” 主 “zhu” forms new words according to three models:

1) [noun + 主 “zhu” = noun] : 物主 “wuzhu” “possessor” (物 “wu” “item”, “thing”), 财主 “caizhu” “cashier” (财 “cai” “wealth”).

2) [verb + 主 “zhu” = noun] : 失主 “shizhu” “lost man” (失 “shi” “lose”).

Morpheme 众 “zhong” “society” as a suffix forms new words according to three constructions:

1) [noun + 众 “zhong” = noun], for example: 群众 “qunzhong” “group (of people)”

2) [adjective + 众 “zhong” = noun], for example: 公众 “gongzhong” “audience (society)”, 大众 “dazhong” “audience (most of the society)”,

3) [verb + 众 “zhong” = noun], for example: 观众 “guanzhong” “audience (viewer)”, 听众 “tingzhong” “audience (listeners)”.

Morpheme 属 “shu” has the meaning of “relate to” and forms new words according to three constructions:

1) [noun + 属 “shu” = noun], for example: 家属 “jiashu” “family member”, 军属 “junshu” “army member”,

2) [adjective + 属 “shu” = noun], for example: 亲属 “qinshu” “relative”,

3) [verb + 属 “shu” = noun], for example: 下属 “xiashu” “subordinate employee”.

Morpheme 派 “pai” “group” also forms new words as a suffix. Our research has shown that words with the suffix 派 “pai” are formed according to two constructions:

1) [verb + 派 “pai”], for example: 反对派 “fanduipai” “opposition”,

2) [noun + 派 “pai”], for example: 乐天派 “letianpai” “a group of optimists”.

It should be noted that words related to a part of speech are a noun, a verb in the composition of these constructions, are formed according to various word-formation models (verb-object, copulative, etc.).

In modern Chinese, there is also a group of words that is on the periphery of transformation into word-forming morphemes. This group includes the second elements of four-syllable constructions formed according to the “noun + noun” model. For example: a combination of morphemes 分子 “fenzi”. This combination translates as a “molecule”; as a suffix, this morpheme loses its lexical meaning. Words formed by this suffix indicate specific qualities or

character of people. For example: 知识分子 “zhishifenzi” “intellectual”, 危险分子 “weixianfenzi” “dangerous man”, 动摇分子 “dongyaofenzi” “two-faced” [11, p. 54]. Words with this suffix are constructed according to the following models: [noun + 分子 “fenzi”], [adjective + 分子 “fenzi”], [verb + 分子 “fenzi”].

Morpheme 物 “wu” has the meaning of “thing” and also retains its meaning as a suffix, for example: 人物 “personality”, “person”, 买物 “sold thing”. Words with the suffix 物 “wu” are formed according to the construction [verb + 物 “wu”], [noun + 物 “wu”].

Morpheme 巴 “ba” has the meaning of “bar,” “desire,” when used as a suffix, loses its lexical meaning. This suffix is widely used in the Beijing dialect. It is well known that the Beijing dialect serves as a literary Chinese language. Therefore, all words with the suffix 巴 “ba”, functioning in the Beijing dialect, also occur in all dictionaries relating to the vocabulary of the Chinese language. With the given suffixes words are formed that relate to both animate and inanimate words, for example: 嘴巴 “zuiba” “mouth”, 下巴 “xiaba” “tail”, 泥巴 “clay”, 盐巴 “yanba” “salt”, 结巴 “jieba” “stutter”, 想把头 “xiangbatou” “thought”, 眼巴前 “yanbaqian” “before your eyes”. Words with the suffix 巴 “ba” are formed according to the construction [verb + 巴 “ba”], [noun + 巴 “ba”].

Morpheme 亲 “qin” has the meaning of “relative” and retains its lexical meaning as a suffix, for example: 父亲 “fuqin” “father”, 远亲 “yuanqin” “distant relative”, 近亲 “jinqin” “close relative”. Words with the suffix 亲 “qin” are formed according to the construction of [noun + 亲 “qin”], [verb + 亲 “qin”].

Affix 鬼 “gui” forms nouns with evaluative expressive coloring. These nouns express people with negative qualities. Zhen Suelyan marks this morpheme as (比喻性的词尾 “biyuxingde ciwei”) “suffix with estimated coloring”. The root of this affix is the root morpheme 鬼 “gui” (“hell”). Words with this affix 鬼 “gui” appeared in colloquial speech, but, despite this, are widely used in the literary language. For example: 醉鬼 “zuigui” “drunkard”, 胆小鬼 “danxiaogui” “coward”, 丑鬼 “chougui” “freak”, 穷鬼 “qionggui” “beggar”, 油滑鬼 “youhuagui” “cunning”, 烟鬼 “yangui” “drug addict”. Nouns are formed using this suffix based on the following models: 1) [noun + 鬼 “gui” = noun]: 酒鬼 “jiugui” “drunkard”, 2) [verb + 鬼 “gui” = noun]: 讨厌鬼 “taoyangui” “cheater”, 3) [adjective + 鬼 “gui” = noun]: 穷鬼 “qionggui” “beggar.” Thus, we can safely say that words formed by this suffix have a negative meaning, for example: 酒鬼 “jiugui” “drunkard” (酒 “jiu” “alcoholic beverage”, “wine”), 烟鬼 “yangui” “drug addict” (烟 “yan” “cigarette”), 赌鬼 “dugui” “person, keen on gambling” (赌 “du” “gambling”).

Using affixes 虫 “chong” and 蛋 “dan”, a subjective (negative) meaning is added to the lexical unit. These affixes are semi-suffixes and are genetically related to morphemes 虫 “chong” (“insect”, “worm”) and 蛋 “dan” (“egg”). Nouns are formed using these semi-suffixes only using the following construction: [“adjective” 虫 “chong”/蛋 “dan” = “noun”]. Moreover, these affixes, being part of complex words, partially lose their original meaning, for example: 糊涂虫

“hutuchong”, 糊涂蛋 “hutudan” “idiot”, 笨蛋 “bendan” “fool”, 浑蛋 “hundun” “stupid”, 21 “beggar”.

Morpheme 贼 “zei” has the meaning of “thief”, this morpheme as well as 霸 “ba”, 棍 “gun” forms words with a negative meaning. Words formed by this morpheme are formed according to the model [verb + 贼 “zei” = noun], for example : 穷光蛋 “qiongguangdan” “traitor”.

Morpheme 霸 “ba” “tyrant”, “despot”, “hegemon” forms words with a negative connotation, lexical units are constructed according to two models:

- 1) [noun + 霸 “ba” = noun], for example: 路霸 “luba” “road”,
- 2) [adjective + 霸 “ba” = adjective], for example: 恶霸 “eba” is “bully”.

The morpheme 痞 “pi” has the meaning of “bully” and forms words according to two models:

- 1) [noun + 痞 “pi” = noun], for example: 文痞 “wenpi” “rogue”, 街痞 “jiepi” “bully”.

Morpheme 犯 “fan” “spoil” as a suffix also forms nouns :

- 1) [monosyllabic noun + 犯 “fan” = noun], for example: 首犯 “shoufan” “leader versus law” ,
- 2) AB (noun formed according to the subjective-prejudicial model) + 犯 “fan” = noun], for example: 政治犯 “zhengzhifan” “person opposing politics” ,
- 3) [AB (noun formed according to the verb-object model) + 犯 “fan” = noun], for example: 杀人犯 “sharenfan” “killer” ,
- 4) [preposition + 犯 “fan” = noun], for example: 从犯 “congfan” “accomplice”, “accomplice” ,
- 5) [monosyllabic verb + 犯 “fan” = noun], for example: 罪犯 “zuifan” “person who broke the law”.

The morpheme 棍 “gun” has the meaning “stick” and forms new words related to the part of the speech noun according to two constructions, the words formed with this morpheme have a negative connotation:

- 1) [noun + 棍 “gun” = noun], for example: 土棍 “tugun” “bully” ,
- 2) [adjective + 棍 “gun” = noun], for example: 恶棍 “egun” “bastard”.

Based on the foregoing, we can conclude that:

- 1) As one of the methods of word formation, affixation, when constructing new lexical units, forms various lexical units with various structural and semantic features.
- 2) The affix is a formal morpheme, it adjoins a significant morpheme.
- 3) Affixes according to the functional classification are divided into word-forming and form-forming. In this division of affixes into these groups, it is based on functional-semantic, structural, and distributive criteria.
- 4) In modern Chinese, affix word formation in terms of productivity takes second place after collocation.

5) In modern Chinese, word-forming affixes mainly consist of root morphemes. However, there is still a group of affixes in modern Chinese that have not completely moved from the root to a purely affix morpheme. These morphemes occupy an intermediate place between affixes and word-forming morphemes and are referred to as semi-affixes. In linguistics, affixation and semi-affixation are considered two independent types of word formation.

## CONCLUSION

Based on the foregoing, we can conclude that: 1) As one of the methods of word formation, affixation, when constructing new lexical units, forms various lexical units with various structural and semantic features. 2) Affixes according to the functional classification are divided into word-forming and form-forming. In this division of affixes into these groups, it is based on functional-semantic, structural, and distributive criteria. 4) In modern Chinese, affix word formation in terms of productivity takes second place after collocation. 5) In the course of the study, the corresponding constructions with these suffixes were identified, such as:

suffix	construction
丁“ding”	[noun + 丁“ding”], [adjective + 丁“ding”]
犯“fan”	[monosyllabic noun + 犯“fan”], [AB (noun formed according to the subject-predicative model) + 犯“fan”], [AB (complex noun formed according to the verb-objective model) + 犯“fan”], [ preposition + 犯“fan”], [monosyllabic verb + 犯“fan”]
夫“fu”	[noun + “夫“fu”= ot], [verb + “夫“fu”= ot], [adjective + “夫“fu”= ot]
工“gong”	[noun + 工“gong”], [AB is a complex noun formed according to the verb-object model + 工“gong”], [adjective + 工“gong”]
官“guan”	[noun + 官“guan”]
棍“gun”	[noun + 棍“gun” suffix], [adjective + 棍“gun” suffix]
汉“han”	[noun + 汉“han” ], [adjective + 汉“han”]
豪“hao”	[noun + 豪“hao”]
郎“lang”	[noun + 郎“lang”], [AB (a complex noun formed according to the verb-object model) + 郎“lang” suffix], [adjective + 郎“lang”]
痞“pi”	[noun + 痞“pi” ]
生“sheng”	[noun + 生“sheng”], [verb + 生“sheng” ],[ adjective + 生“sheng” ]
士“shi”	[noun+士“shi” ], [verb +士“shi”], [adjective + 士“shi”]
师“shi”	[noun + 师“shi” ],[ verb+ 师“shi”]
属“shu”	[noun + 属“shu”], [verb+ 属“shu”], [adjective + 属“shu”]
员“yuan”	[noun + 员“yuan”], [verb+ 员“yuan”]
众“zhong”	[noun + 众“zhong” ], [verb+ 众“zhong” ], [adjective + 众“zhong”]
主“zhu”	[noun + 主“zhu”], [verb+ 主“zhu”]

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## FEATURES OF THE LIMNIC ECOSYSTEM ECOMONITORING SYSTEM IN THE KHOREZM REGION OF UZBEKISTAN

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### ABSTRACT

*The article discusses the research of limnic ecosystems in the conditions of the Khorezm region of Uzbekistan. It was noted that in order to assess the structure and functioning of limnichny ecosystems, it is necessary to move from private assessments to integrated studies, including monitoring the state of both biota and environmental components. The ecological feature of the hydrochemical regime of the studied reservoirs is the seasonal nature of the change in the concentration of nutrients. Their dynamics is characterized by two maxima - spring and summer.*

**KEYWORDS:** *Khorezm Region, Limnic Ecosystems, Biota, Factors, Hydrochemical Regime.*

### INTRODUCTION

The ecologically destabilized natural environment of arid zones causes the manifestation of a number of new patterns of development and dynamics of natural systems, which changes not only their composition and type of organization, but also changes the conditions themselves, and the strategy of evolution of the organic world. Global trends of environmental degradation are also typical for the territory of the Central Asian republics. The processes of degradation of the natural environment on the territory of the CAR have reached a regional scale and in a number of places have manifested themselves in the form of crisis situations for people. Changes in the hydrological regime of water ecosystems lead to a deterioration of their sanitary and environmental indicators, which in turn aggravates the overall environmental situation in the region.

Uzbekistan's water resources are only part of the total water resources available in the Aral sea basin. Surface water resources of the Republic of Uzbekistan consist of water resources coming

from rivers from mountain regions of neighboring States and resources formed on its territory. In addition, part of the river flow comes through irrigation and drainage reservoirs and channels. To the internal water resources include waters of lakes and water reserves in glaciers on the territory of Uzbekistan. In recent years, the environmental situation in the southern Aral sea region, due to the drying up of the Aral sea and the deterioration of the composition of surface and underground waters, has become particularly acute. One of the reasons for this disaster is the scientifically unjustified use of water and land resources in the region [1, 4].

### THE MAIN PART

Khorezm region is located in the North-West of Uzbekistan in the lower reaches of the Amu Darya river. The total area is 6,100 thousand square kilometers, which is 1.4 percent of the territory of Uzbekistan. In the North, Khorezm region borders with the Republic of Karakalpakstan, in the South with Turkmenistan, and in the northeast with the Bukhara region of Uzbekistan. Geographically, the region is located between 40°-42° North latitude and 60°-62° East longitude. The climate of Khorezm is classified as continental, with hot summers and cool winters. Summer temperatures often exceed 40 °C; winter temperatures are about -2°C, on average, but can fall to -40°C. The coldest month is January, with a minimum temperature of -27°C. The hottest month is July with a maximum temperature of 42°C. The region is quite arid, with an average annual precipitation of 60 to 120 millimeters, mostly precipitation in winter and spring. In the period from July to September, there is little precipitation, which significantly restricts the growth of vegetation during this period. The wind direction is mainly North-East and North.

The main waterway of the Khorezm region is the Amu Darya river. There are irrigation channels as: left Bank, Tashsaka, Shovot, Palvan, Gazavat, and drainage channels lake, Daryalyk, Checkcol, Giancoli. Ground water is very shallow, ranging from 0.7 to 2.5 meters, in some areas up to 5 meters. Groundwater recharge occurs due to underground runoff from the Amu Darya and channels, as well as due to infiltration of irrigation water and precipitation. The content of mineral substances in ground water differs significantly, from 1.5 to 50 g/l, this is due to the high salt and corrosion potential in relation to concrete.

According to the geomorphological structure of the soil in the Khorezm region are loess-like loams interspersed with lenses of sand and gravel with a thickness of 2 to 40 m. The soil structure is dominated by layers of silty loam along with sandy loams and loams, which make up almost 80% of the entire soil layer. The content of organic matter in irrigated soils is low, on average 7.5 g / kg (0.75%) in the upper layers of the soil, and decreases in deeper layers. Most of the underground layers in Khorezm are slightly or medium saline, while most of the upper layers, above 60 cm, are highly saline.

To assess the structure and functioning of limnic ecosystems, it is necessary to move from private assessments to complex studies that include observations of the state of both biota and environmental components. At the same time, it is very important to quickly monitor changes in the environment. Therefore, the proposed approach of joint application of remote sensing methods that allow rapid assessment of changes occurring over large territories using new biomonitoring methods that provide a comprehensive assessment of anthropogenic impact is very relevant [3, 8].

One of the most frequent causes of environmental violations is the discrepancy between the type of nature management and the socio-economic and natural conditions of the territory. From this point of view, it is important to study both the nature of nature management itself (in particular, land use) and its impact on the biological productivity of ecosystems [3, 5].

Observation system for environmental monitoring in order to distinguish the state change of the biosphere influenced by human activities, is particularly necessary for regions such as the Aral sea basin, where occur violations of intersystem relationships and situations characteristic of the ecologically destabilized environment of the whole region of the Aral sea region [5, 7].

It is known that the ecological balance in limnic ecosystems is determined primarily by the balance of production and destruction processes. Therefore, the tasks of qualitative assessment of primary products are extremely relevant in the system of environmental monitoring at the present time [2, 6].

The complex of external abiotic factors on the functioning of natural ecosystems and formation of water quality in water bodies most significantly influenced by changes in the hydrological regime of the river by regulating its flow, which is reflected in a sharp deceleration of flows, reduction of water exchange, changing the type of the nutrient cycle in the ecosystem [3, 6]. As a consequence, significant changes in the hydro chemical regime of the water body and going through complex change, characterized by rapidity and character of their manifestation. As a result of receipt and sedimentation of suspended sediments, ingress and accumulation of nutrients (nitrogen, phosphorus and other biogenic elements) of organic compounds, heavy metals, silting occurs, which leads to violations of their oxygen regime and other links of the biotic cycle [5, 6, 8].

Since the hydrological regime of the lower reaches of the Amu Darya is extremely dynamic, the need for the most up-to-date information is necessary for drawing up promising water management measures, which also applies to information on the content of biogenic elements. The high content of biogenic elements is characteristic of the surface runoff of watersheds developed in agricultural terms, and is the result of anthropogenic impact on the water ecosystems of the region [1, 2, 4].

The main properties that characterize reservoirs as an external environment for the development of organisms should be considered such factors as: temperature, salt composition, the supply of organic and biogenic substances [3]. Research covering a complex of biochemical, chemical, physical and chemical processes in specific conditions of aquatic ecosystems in the arid zone under strong anthropogenic influence is extremely relevant [7, 8].

In connection with the current environmental situation in the southern Aral sea region, monitoring studies on the quality of surface water, which carries an increased anthropogenic load, are of particular importance [7] the Characteristic features of the hydrological and hydrochemical regime in the lower reaches of the Amu Darya are the development of irrigated agriculture, flow regulation, the flow of highly mineralized return water into the riverbed, and the reduction of river flow. At the same time, the quality of incoming water flow is deteriorating. Some characteristics of the studied limnic ecosystems are shown in table 1.





**Gaukel(Гаукуль)**



**Agamikal (Аджаликуль)**



**Shurkul(шуркуль)**

**TABLE 1 SOME CHARACTERISTICS OF THE STUDIED RESERVOIRS**

Indicators	Agamikal (Аджаликүль)			Гаукел(Гаукул)			Shurkul (Шуркуль)		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Total area (ha)	46654 2	45190 7	45684 3	4211 28	433820	4060	4260 97+3 3671 7	4220 22+2 4594 1	40388 9+268 096
Length (km)	1,40	1,37	1,45	1,3	1,5	1,27	1,20+ 0,94	1,13+ 0,84	1,15+ 0,83

Note also that the ratio of ions and salinity of water itself is not a limiting factor for the development of hydrobionts. However, they are important for the characteristics of the aquatic environment. Water mineralization, content of sulphates, chlorides as stable characters

heretics can serve as a certain indicator of the level of trophic activity and very clearly determine the degree of pollution, especially from household and waste water, as well as from agricultural land.

Water salinity in the studied reservoirs ranges from 0.74 to 2.3 g/l. All studied reservoirs have seasonal changes in the ionic composition of water. Minimum values are typical for irrigation channels that feed these reservoirs, and already higher indicators in the reservoirs themselves.

Studies have shown that the oxygen content is very variable and depends on many factors and is determined by the seasons. During the period of spring and autumn homothermy and complete mixing of water masses, dissolved oxygen is distributed unevenly in the water column. In all lakes, the content of dissolved oxygen in the surface water layers is higher, but decreases with depth.

Also note that the high oxygen content in watercourses is due to the presence of current and good aeration of water masses. In reservoirs, its distribution is very specific and is determined by a combination of numerous environmental factors. These include temperature, namely, in low-

water lakes temperature stratification is more pronounced, in deeper lakes-weaker. In shallow water reservoirs, the range of fluctuations is sharper, i.e. the maxima are greater, the minima are less, which is very unfavorable for various hydrobionts.

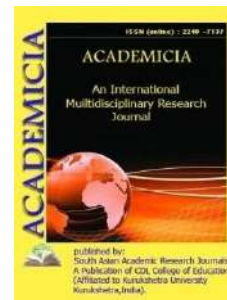
During winter stagnation, there is a stratification in the oxygen content almost every meter: in epilimnion, its content is 7 mg/l, which corresponds to 57% saturation, in hypolimnion, the values decrease to 4 mg / l (32.2% saturation). And during the summer stagnation, such a sharp difference in the stratification of water masses in terms of oxygen content does not differ, because of the specificity of the reservoir, which is located parallel to the wind rose of this region, in open places, water masses are well mixed. The difference between highs and lows is only 3-4 mgO<sub>2</sub>/l. [6, 8].

Thus, the formation of water quality in water bodies is a complex, multi-faceted process that depends on a complex of various factors related to the functioning of water ecosystems, as well as the conditions of the surrounding landscape and the bed of the reservoir. The ecological feature of the hydrochemical regime of the studied reservoirs is the seasonal nature of changes in the concentration of nutrients. Their dynamics is characterized by two highs – spring and summer.

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## PLACEMENT OF CITIES OF UZBEKISTAN ON MAJOR WATER AND ECONOMIC REGIONS

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### ABSTRACT

*The article analyzes the differences between the division of Uzbekistan into large water areas, the distribution of cities in these areas, the density of the urban system and network, and their demographic capacity.*

**KEYWORDS:** *Water Management, River Basins, Amudarya, Syrdarya, Zarafshan, Kashkadarya, Region, Hydrological Indicators, Cities, Population, Network Of Cities.*

### INTRODUCTION

From ancient times the roads have played a key role in the formation and location of cities in most parts of the world. Due to the sharply continental climate, the hydrographic network, along with roads, plays an important role in the formation of settlements, especially cities, in Central Asia. For example, most cities in Uzbekistan are formed along rivers and streams [1, 1981]. These factors need to be taken into account when expanding or establishing new cities, as the development of urban economy and population capacity are determined by hydrological indicators such as water consumption, flow rate, flow rate, flow modulus, river slope. This issue is especially relevant in arid countries such as Uzbekistan. To more accurately assess the impact of the above factors on the formation and development of cities, their demographic capacity, it is necessary to select smaller areas as the object of study. The territory of Uzbekistan is divided into many basins by many hydrologists and geographers based on the purpose of scientific research. In particular, according to Professor VL Schultz, the territory of Uzbekistan is divided into four major (main) basins: Amudarya, Syrdarya, Zarafshan and Kashkadarya [5, 1969]. It should be noted that although some areas belong to a hydrologically historically specific river basin, they are now supplied with water through other river basin sources. For example, the Bukhara oasis belongs to the Zarafshan river basin, the western part of the Kashkadarya region to the Kashkadarya basin, but today these areas are supplied with water from the Amudarya, which

is part of the Amudarya water management region. Therefore, it is expedient to divide the territory of Uzbekistan into large (main): Amudarya, Syrdarya, Zarafshan and Kashkadarya water management regions. In this article, the cities of the republic were studied within the framework of these water management regions.

## THE MAIN FINDINGS AND RESULTS

### *I. Proposed Methodology*

In this work, the scientist VL Schultz (Shults V.L., Mashrapov R. Central Asian hydrography. - T., Teacher, 1969. - P.65.), Who made a significant contribution to the work of hydrological zoning of the territory of Uzbekistan, as well as zoning, statistical analysis and geographic comparison methods were used.

### *II. Result Analysis*

As of January 1, 2019, 1191 cities and towns are registered in Uzbekistan, with a total of 16.8 million people or 50.4% of the country's population (Table) [6]. The country's urban areas and their population are distributed differently across major water areas.

The Amudarya water management region is the largest water management region of the republic, occupying more than half of the country's territory. The southern, central, western and north-western parts of Uzbekistan (administratively the Republic of Karakalpakstan, Khorezm, Bukhara, Surkhandarya regions, the western part of Kashkadarya region and the southern and south-western Navoi region) belong to the Amudarya water management region. 368 urban settlements of Uzbekistan, ie 30.8% of cities and towns are formed in the Amudarya water management region. In addition, 4 mln. more than urban dwellers (24 percent of the country's urban population). More than 82% of the urban areas in the study area are small towns (population up to 10,000). At the same time, there are 35 small, 14 semi-medium, 9 medium, 2 large (Urgench, Termez) and 3 large (Nukus, Bukhara, Karshi) cities in the region. The analysis shows that although the Amudarya region is ahead of other water regions in terms of area, the network of large cities is underdeveloped, and very large and millionaire cities do not exist at all [2, 2020].

**The Syrdarya water economy region**, which is the largest in the country in terms of cities and towns and urban population, includes the northern and north-eastern parts of Uzbekistan (Fergana, Andijan, Namangan, Tashkent, Syrdarya and Jizzakh regions and the north and northeast of Navoi region). The region consists of 612 urban settlements (51.4% of the country's cities), which are home to 61.9% of the country's urban population (about 10.4 million). The only millionaire city of Uzbekistan is Tashkent, one of the two largest cities is Namangan, two of the five largest cities (Andijan and Fergana), 6 of the 10 largest cities (Kokand, Margilan, Jizzakh, Chirchik, Angren and Almalyk) are located in this region. The large number of urban settlements in the Syrdarya water management region, which occupies about 30% of the country's area, has led to the density of the urban network.

**TABLE DISTRIBUTION OF CITIES OF UZBEKISTAN BY MAJOR WATER MANAGEMENT REGIONS**

Reservoirs	Number of cities and towns City population (January 1, 2019, thousand people)											Percentage of total
	300 000 ча	30 00- 50 00	500 1- 100 00	100 01- 200 00	200 01- 500 00	500 01- 100 000	100 001 - 250 000	250 001 - 500 000	More than 500,0 00	Millio n, field	On the Reser voirs	
Amudarya	$\frac{124}{340,3}$	$\frac{12}{510,1}$	$\frac{56}{393,6}$	$\frac{35}{550,3}$	$\frac{14}{475,7}$	$\frac{9}{609,3}$	$\frac{2}{286,8}$	$\frac{3}{860,9}$	-	-	$\frac{368}{4027,0}$	<b><math>\frac{30,8}{24,0}</math></b>
Syrdarya	$\frac{105}{273,8}$	$\frac{18}{481,0,9}$	$\frac{185}{134,4,4}$	$\frac{77}{111,9,7}$	$\frac{42}{125,5,7}$	$\frac{9}{655,3}$	$\frac{6}{106,0,3}$	$\frac{2}{717,7}$	$\frac{1}{612,2}$	$\frac{1}{2510,0}$	$\frac{612}{1036,0,0}$	<b><math>\frac{51,4}{61,9}</math></b>
Zarafshan	$\frac{41}{103,6}$	$\frac{47}{20,0,5}$	$\frac{25}{197}$	$\frac{12}{191,6}$	$\frac{10}{297,1}$	$\frac{2}{150,1}$	$\frac{1}{136,4}$	-	$\frac{1}{510,2}$	-	$\frac{139}{1786,5}$	<b><math>\frac{11,7}{10,7}</math></b>
Kashkadarya	$\frac{24}{61,9}$	$\frac{28}{89,3}$	$\frac{10}{70,1}$	$\frac{4}{48,5}$	$\frac{5}{169,9}$	-	$\frac{1}{137,1}$	-	-	-	$\frac{72}{577,1}$	<b><math>\frac{6,1}{3,4}</math></b>
<b>Total</b>	<b><math>\frac{294}{779,6}</math></b>	<b><math>\frac{38}{416,10,8}</math></b>	<b><math>\frac{276}{200,5,1}</math></b>	<b><math>\frac{128}{191,0,1}</math></b>	<b><math>\frac{71}{219,8,4}</math></b>	<b><math>\frac{20}{141,4,7}</math></b>	<b><math>\frac{10}{162,0,6}</math></b>	<b><math>\frac{5}{157,8,6}</math></b>	<b><math>\frac{2}{1122,4}</math></b>	<b><math>\frac{1}{2510,0}</math></b>	<b><math>\frac{1191}{1675,0,6}</math></b>	<b><math>\frac{100}{100}</math></b>

*Note: the fractions in the table show the number of cities, the denominator shows the total population of these cities, the last column of the table shows the corresponding percentage of these figures.*

*The table was compiled by the author.*

**Zarafshan water management region** occupies the south-eastern part of Samarkand region and Navoi region, mainly the Zarafshan river valley. This region covers 11.7% of the total urban area and 10.7% of the urban population. These figures show that the Zarafshan water management region is almost the same as the urban settlements and the share of their population in the national average. Most of the cities of Zarafshan water management region also consist of small and medium towns. Kattakurgan and Urgut are medium, Navoi is large and Samarkand is very large.

**Kashkadarya water management region** consists of the eastern regions of Kashkadarya region. This region is the smallest among the largest water management regions of Uzbekistan in terms of area, cities and urban population. There are 72 urban settlements in the region, which account for 6.1% of urban areas and 3.4% of the urban population (about 0.6 million) [4, 2020].

The largest city of the Kashkadarya water management region - Shahrisabz (137.1 thousand) belongs to the group of large cities in terms of population. The cities of Kitab, Kamashi, Guzar, Chirakchi and Yakkabag in the region form a layer of semi-middle cities. Although the role of Kashkadarya in the historical formation of the city of Karshi is great, at present the river almost does not reach the territory of the city. Currently, the city of Karshi and surrounding lands are supplied with water from the Amu Darya through the Amu-Karshi canal. Therefore, the city and adjacent areas were included in the Amudarya water management region.

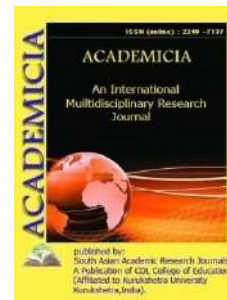
## CONCLUSION

The cities of Uzbekistan are distributed differently in terms of quantity and quality of large water management regions. Although the Amudarya water management region occupies the largest part of Uzbekistan, the share of urban population is relatively low. This is due to the formation of most small towns in the area. In the Syrdarya water management region, the opposite is true. In other words, the proportion of urban population in the total number of cities in the country is significantly higher. The lack of water in the Zarafshan River and Kashkadarya has limited the formation and development of large cities in these areas.

To more accurately assess the impact of hydrological factors on the formation and development of cities, their demographic capacity; it is necessary to conduct large-scale studies in each of the large and small water management regions of the country.

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## **A STUDY ON PERFORMANCE & OPERATIONAL CHALLENGES OF NEPAL AIRLINES CORPORATION**

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### **ABSTRACT**

*For the survival and growth every organization should be capable to translate its plans and programs enhancing performance. Nepal Airlines Corporation(NAC) was incorporated on 1 july 1958 through enactment of Nepal Airlines Corporation Act.2019, with mains objective to provide air transport service to any person, agency,or organization who need such service for transportation of men and materials from one airport to another either within or outside the country. Nepal Airlines started glorious aviation landmark of airlines business with its DC-3 Docota within 97 employees and still was remarkable development in 1990.The national flag carrier has been suffering from the operational loss for the last few years. In this context this article explores the capacity and performance level of NAC and discusses its major challenges. For the discussion, about capacity utilization, scheduling and planning, reliability and punctuality, passengers flow on the based on NPM theory assumptions, secondary data are obtained from NAC offices and some of the key personnel of the NAC are also interviewed. The findings show that there are still important roles of NAC for air service delivery system, economic development, improving tourist flow, which however, also facing problem of fleets, lack of smart management, lack of proper attention of government and politics*

**KEYWORDS:** *Nepal Airlines, Performance, Capacity, Challenges, Nepal*

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## INTRODUCTION

### 1. Background

After the world war-II, numerous states owned enterprises were created in both developed and developing countries to address market deficits, reduce capital shortfalls, promote economic development, reduce mass unemployment or ensure national control all over the economy of the country (U.N, 2005 P. 3). Nepal was also not exception for establishing such entities. Nepal establishes more than five dozens of such enterprises up to the late sixties. Nepal Airlines Corporation (NAC) the existing Royal Nepal Airlines (RNAC) was one of these corporations related to airlines which has been established in Nepal primarily with a view to improve the socio-economic condition of the country through air transport service. The strong air travel growth in the global economy helped air travel deregulation and technology to promote more connectivity between cities. (Airbus, 2009).

NAC the then RNAC was established by special Act, 1962 on July 01, 1958 as the national flag carrier. It has been considered as the geographical and cultural bridge connecting Nepal within and beyond the country. Initially it started glorious aviation landmarks of airlines business with its DC-3 Docota with 97 employees in 1958. From 1958 onwards fleet expansion process accelerated till the induction of two jets-Boeings 757 in the year 1987 and 1988 in its fleets, totaling 19 aircrafts including few other twin otters, Avro, Focker and a couple of Boeings 727. The airlines were on growth stage till 1990 which was also marked as golden era in the history of the airline in Nepal. During that time it had four jet aircrafts, three Hawker Siddeley (HS), four Avro, ten Twin otters and two Pilatus porters. The airlines had spread its wings from Japan in east to Europe in west as international sector and also made 40 domestic operations within the country. It is also customary with RA to have the air business ups and downs as RA decided to stop its Europe Operation in 2001. Later withdraw the number of flights in Frankfurt (FRA), London (LHR) and Peris (CDG) by the year 2001. In addition RA also was stopped to operate flight to Osaka. Shangaia and Japan which was operating over 13 years. Furthermore the flight to Colombo (CMB), Rangoon (RGN) Karachi (KHI), Dhaka (DAC) and Male (MLE) sectors were also stopped. Besides national flag carrier used to provide chartered flights for UN and British Gorkha-Regiments was also stopped. It was obvious that curtailment of such international flights put RA in critical position for its sustenance. On the other hand, the liberalization policy in the airline sector also affected RA in critical position to compete with other international airline services. At present, RA has been operating in eight international destinations. It is also pity that RA occupies only four aircrafts for international flights. Of them one is 30 years and the other 32 years old. In addition RA has three twin otters, two MA60, and two more 2Y12 in the inventory. At present, NAC has been running with a small number of aircrafts to operate in domestic or international destinations. In this content it is also interesting to what extent NAC has been performing which enable to sustain and maintain regular services to its clients. For the purpose of writing this article the financial and operation performance of RA has been reviewed. In addition, some of the key informants were interviewed. The secondary information was triangulated with primary information for substantiating the factual information.



## 2. Understanding Airlines performance

There is ongoing debates and discussion among the researchers and academics with regard to the performance management of public sector entities (Gautam, 2012, p. 202). Aviation plays a significant role in the world as it supports social and economic development in both emerging and established nations. Air travel deregulation and technology have allowed more connectivity between cities (Air bus, 2009). International air passenger transport is an important factor in facilitating trade and development of others sectors of an economy.( Gonenc and Micoletti (2000) quoted in (piermartini, R. &Rousova, L. 2008) cited by Kankaew K.(2004).Trace, Keith, FrielingBarend, Hew Denis (2009) also mentioned that improved air connectivity through air mentioned that improved air connectivity through air transport links which is an essential components of economic growth, tourism growth, trade growth and so on as it provide personal access to the regions for business, social or recreational purpose as well as physical access to resources and markets. Improved access allows producers to take advantages of an expansion of trade, commerce, economics of scale and specialization (Kankaew, P.1, 2014).

Owing to the fast economic growth, people have gained improved opportunities to enjoy national and International tours and business Rapid economic growth and the deregulation of commercial airlines market worldwide have driven growth in air passenger transportation. Public enterprise (PES) in most of countries of the world, so as also in Nepal were created to accelerate, economic and social development but main issue in Management and organization is corporate sustainability which includes organization performance. Organization performance is one of the strategic issues for any management. Therefore it is needed for airlines to focus on service quality if the airlines aspire to improve on market share and further enhance financial performance in Domestic and international Market (Albrecht and Zemke, 1995).

In this back drop productivity of Airlines depends on the capacity utilization performance, operational performance, Flight scheduling and planning, on time performance. Employee satisfaction, capacity of operation, human resource planning and management and some of the natural phenomenon which is directly related with airlines performance.

Globally, 2000 Airlines operating more than 23,000 aircraft, providing service to over 3,700 airports around the world (Aerospace Global Report, 2011& AIO-2006, P.2). In 2006, there were 28 million scheduled flight departures and carried other the two billion passengers.The growth of world air travel has averaged approximately 5% per year over the past 30 years with annual growth in air travel which would be double over next 10-15 years (AIO, 2006, P.2).

The aviation industry is, by its very nature a global industry or large growing industry, facilitating economic growth, world trade, international investment and tourism so that central to the globalization taking place in many other industries. In order to survive and be prosperous in this sector, airlines have recognized the need for radical change. The new trends emerging in the aviation industry in global scenario are the increased globalization of economics, liberalization of aviation policies, new technological developments in civil aviation.

Over the last decades, the airlines accumulated massive financial losses along with crippling debt arrears from it failure to the service. Its loans and sustain its operation.(Ochieng, M.D.& Ahmed .A. H, 2014).

Performance Management (PM) denotes with achievement of goals or results. Research has shown that large numbers of organizations rely mostly on output Performance measures which include sales volume, sales growth and profitability (Asiegbu& et al., 2011). Performance involves also the economic concept of creation of wealth or value to the organization .Thus, performance is a relation between cost(operation cost of the organization) and the value of benefits obtained(Lorino,2001).Performance is a multi-dimensional concept. In case of Airlines performance should be compared with the achieved result. Nepal airline is considered as 'A' class public enterprise should demonstrate success which could be a model to other enterprises.

Performance of Airlines depends up on the trend of aircraft utilization, aircraft availability aircraft designs, fleets, resources utilization capacity, flight schedule planning and operational capacity, organization capacity and management commitments, organization leadership, organization politics, state policy towards the aviation Industry/Airlines operational capacity, trained and skillful manpower, human resources planning and others. In addition age and modality of the aircraft, employees satisfaction, motivation and moral of the employees, organization philosophy, civil aviation policy of the nation also contribute its performance.

### **3. Indicators of Performance**

The International Air Transport Association (2003) uses many performance indicator to track the annual performance of its member airlines these performance measures can be a Operating performance, financial performance, passenger follow or load factor, capacity utilization, passenger revenue tariff, operating efficiency or reliability and punctuality. Despite NAC is aA class enterprise issues raised from different corners about its performance. Some of the key issues as follows:

#### **I. Financial Performance**

Financial performance occupies a significant place in the performance evaluation of Airlines. Financial profitability, with regard to financial performance evaluation, shows its "ability to earn profits proves a measure of its market strength, its ability to keep down costs. Profitability also affects the amount of investment, for much industrial investment is financed out of reinvested profits, and hence the contribution of the firm to the overall growth of the economy "(Killick, 1983:183) Similarly, Mary M. Shirley (1983:30) argues that "profit is a composite indicator that applies positive weights (price) to benefits (outputs) and negative weights to costs (inputs). If the prices are correct, a profit maximizing firm strives to achieve maximum benefits for minimum costs - the definition of efficiency. "Financial profitability is thus a simple and straight forward indicator which indicates the extent of success of an airlines .The Nepalese PEs have been largely criticized on the ground of financial performance. Despite the huge capital investment these enterprises have not been able to reveal satisfactory increase the volume of outputs to a given level of inputs. With regard to economic performance, a variety of indicators, such as capacity utilization, capital- output ratio, labour-output ratio, labour-administrative cost per output, etc. can be adopted.

#### **II. Economic Performance**

Economic performance provides a firm base for measuring the performance of NAC which shows the result, i.e., ability to increase the volume of outputs to a given level of inputs. With

regard to economic performance, a variety of indicators, such as capacity utilization, capital-output ratio, labour-administrative cost per output, etc. can be adopted.

### III. Capacity Utilization

Capacity utilization is an important indicator in course of performance evaluation. Economic efficiency of an enterprise, indeed, depends much upon the capacity utilization. It has been well realized that the capacity of the enterprise has to be utilized to its maximum in order to improve the performance. However, the capacity utilization rate of the NAC has not increased significantly over the past few years. A World Bank report (1979:25) has stated that the average capacity utilization rate is below 60 percent and this was regarded as one of the major causes for the poor NAC performance. It is noteworthy, while analyzing the capacity utilization rate on the individual enterprises, to note that there are variations in the capacity to use its potential capacity.

### IV. Capital-Output Ratio

The capital-output ratio of NAC is also regarded as not being at a satisfactory level. Capacities of the enterprises have been utilized below to their optimum capacities. Capital-output ratio, labour productivity ratio, and value added-employee ratio have not been improved as desired by the government on the one hand and the enterprises on the other. These could be identified as the convincing reasons for the poor economic performance of NAC.

### V. Distributional Performance

It has been clearly mentioned in the various periodic plans that one of the basic reasons behind creating NAC in Nepal is to generate employment opportunities and also reduce regional economic imbalances. It can, therefore, be observed that NAC is expected to pursue social objectives rather than the economic ones. It is more often noted that the "non-economic" considerations dominate the "economic" ones.

## 4. Analysis and discussion

### I. Utilization of aircraft (fleet wise in HRS:)

Aircraft utilization is a key performance indicator for airline operations and a significant differentiator for same business models. Aircraft utilization is a function of a number of elements, including aircraft design, features and characteristic, Airlines maintenance programs, aircraft technical reliability, airlines business philosophy, market demand characteristics and availability of trained and skilled labor. The status of aircraft utilization of NAC as against the revenue generation is still not very satisfactory as given in Table 1.

**TABLE NO.1 AIRCRAFT UTILIZATION (FLEET WISE IN HRS :) IN 2015**

FleetB-757&A-320	Annual operation (in days)	Total flights hours	Average per day flight HRS	Maximum per day fit HRS
9N-ACA	250	3,602.86	14.41	18
9N-ACB	179	1808.33	10.10	18
9N-AKX	185	1,387.27	7.49	18
9N-AKW	251	1,836.44	7.37	18

Source: Engineering Department NAC, Management, 2016

The above Table 1 shows that the aircraft of NAC utilization was calculated as the sum of block-to-block hours divided by aircraft days available. As per the standard set by ICAO the aircraft utilization on the basis of monthly and annual NAC stands much lower level. According to the definition, utilization of an airframe is calculated as a sum of block-to-block times of all flights which were realized during the observed period of time, i.e., the numbers of days in the month. Afterwards, for each aircraft daily value of utilization is calculated as sum of block-to-block times divided by the numbers of days in a month. Depending of the types of utilization analysis grouping, i.e., range, aircraft type, business model, Airlines philosophy and market segment, a medium value for all airframes per month was calculated and adopted as a representative utilization value for bench marking.

Capacity utilization is an important operational metric for airlines business and it's also a key economic indicator applied to aggregate productive capacity. Capacity is an important for assessing a company's current operating efficiency and it's helps to illuminate cost structure in the short term or long terms. A company with less than 100% utilization can theoretically increase production without incurring expensive overhead costs associated with purchasing new equipment or property.

From above table, the NAC has been operated it's four aircrafts in different sector during the period of 14April 2015 to13April2016.

The above Table 1 Shows that its maximum flights operation was 251 days per year and 14.41 hours for per day in operation and minimum for 179 days per years and 7.31 hours per day in the operation. NAC had been operating its aircraft since 32 years which is quite surprising to use such old age aircraft in international sector. Among the Boeing aircraft and airbus utilization rate the Boeing aircraft has higher rate of flight than the Airbus though Airbus is newer than Boeing.

Airlines operational plan aim to maximize profitability. Aircraft utilization is a key indicator which can be used to optimize planning for airlines schedules and thus increasing profitability. According to data given in Table 1 can be said as the number schedules of operating flights and Aircraft type, features, characteristics, maintenance programs airplane technical reliability, airlines business model or philosophy, market strategy, Demand, characteristics and availability of trained skillful main power plays important role for making profit.”

Optimizing airplane utilization, which includes efficient airplane turn-time at the gates, can help an airline maximize the large capital investment it has made in it's airplanes. Efficient airplane utilization requires close coordination among the airline's own fleet planning, schedules planning, passenger reservations, flights operation, ground operations and airplane maintenance system as well as with air traffic controllers and Airport authorities.

Low capacity utilization is concerned both for fiscal and monetary policy and its effective implementation still NAC is lacking for proper management, operation and utilization of aircraft operation which need serious concern for its development.

## **II. On time flight Performance/ Maintaining schedule**

On time performance is a measure of the ability of transport services to be on time. Almost all transportation systems have time tables, which describes when aircrafts have to arrive at scheduled stops. Transport services has higher utility where services run on time as anyone planning on making a use of the service can align their activities with that of the air transport

service system. On time performance is particularly important where service should be frequent that helps to people to maintain their time/schedule.

Usually airlines are closely monitored on their ontime performance. Typically on time performance is measured by comparing each service with its flight schedule. The on time performance is a key dimension of airlines quality. Airlines can choose to incur higher costs in order to improve on time performance. In this research we try to find out what's the actual on-time-performance situation of NAC? What is the punctuality and Reliability ratio of NAC flight? Table 2 shows the on-time flight performance of NAC

**TABLE NO.2 ON TIME FLIGHT PERFORMANCE: (ONLY KTM STATION) IN 2015/16.**

Fleet B-757 & A-320	Proposed number of flight	OPTD		Aircraft Change		ON Time	Delays	Cancelled	Reliability (%)	Punctuality (%)
		OPT same day	Post pond next day	TO other	From other					
9N-ACA	410	390	03	-	08	227	163	16	94.87	61.79
9N-ACB	186	185	05	01	05	118	67	04	86.75	57.55
9N-AKX	226	231	-	01	08	182	49	-	100.00	83.64
9N-AKW	318	309	-	10	02	260	49	01	94.44	85.97
Overall	1140	1115	08	12	23	787	328	21	95.24	72.23

Source: Operations Department of NAC, Management, 2016

The above table No.2 shows that NAC operations, Engineering & planning division proposed overall number of 1140 flight from KTM Station annually while 97 percent flight schedules were maintained and only three percent flight schedules were not maintained. All together 12 Aircrafts had been changed in that operation duration. Overall 787 No. of flight were departed on time, all together 328 No. of flight was delayed and 21 No. of Flight were cancelled due to different reasons. The Reliability rate of overall flights of this duration was 95.24% and punctuality rate was 72.23% NAC operated above all flight by their 4 Aircraft B-757 (2) and Airbus A-320 (2) in their international flight based upon the KTM station which was found on time performance. The data shows that Airbus is better performing than Boeing, 20:1.

It is natural that the airlines worldwide aim to maximize profitability. Facing worsening economic conditions airlines had to plan their operations in way to minimize losses. This can be achieved by improving quality of services particularly maintaining time schedule. However it depends on how to maximize time spent air bone (block-to-block-time) in comparison to the time they spend other ground (turn around phase of flight, technical checks, overnight stays etc.). Efficient scheduling have also a significant influence on aircraft utilization and on time performance. On the day of operation scheduled times may differ from the actual ones due to uncertainty and lack of predictability (route, weather, Notam etc.). This forces airlines to compromise for maintaining their schedules. During the operational day, airlines tend to



maximize block-to-block time and minimizing turnaround time. When fixing schedules very tightly, airlines have to handle the problems of delays due to very tight planning. The cost of delay is very high and varies depending of the length of a delay and whether it occurred on the ground or in the air.

Flight delays or flight cancellation rate determines the overall performance of aviation industry worldwide. On-time-performance is one of the key indicators of air transport service. It's always deals with reliability and punctuality. Punctuality is one of the key performance indicators in the airlines industry and an important service differentiator especially for valuable high-yield customers. (Allen and Hamiltorn,1999). In addition, improved on-time-performance can help achieve significant cost savings. Various research on performance of major Airlines suggests that there is a positive correlation between on-time performance and operating profit. In this similar phenomenon on-time performance leads to highest productivity, quality service, reliability and punctuality as well.

On-time performance depends up on the network planning and control of the management, aircraft availability, ground operations departure, process and arrival process, weather, Notam, (runway close) civil aviation policy and others variables as well. Despite the increasing attention that Nepal Airlines pay to punctuality the industry's on-time performance is still far below satisfactory levels. So that Reliability, punctuality, investment, turnover, utilization, planning, scheduling, operational and other performance targets need to be managed effectively.

### **III. Earning Capacity/Tariff & Revenue performance of NAC**

Aviation plays a significant role in the world today. It supports social and economic development in both emerging and established nations. The strong air travel helps to grow globalization of economics, air travel deregulation and technology and enhanced connectivity between cities (Airbus, 2009). According to Gonenc&Nicoletti (2008) quoted in (piermartini, R.; Rousava L; 2008) that international air passenger transport is an important factor in facilitating trade and development of other sectors of an economy. Trace Keith, FrielinkBarend, Hew Denis (2009) also mentioned that improved air connectivity through air transport links is an essential component of economic growth, as it provides personal access to the region for business, social or recreational purposes as well as physical access to resources and markets.

Performance is behavior evaluated in terms of its contribution to goals of the organization (Dalrymple et al, 2004; Johnston & marshal, 2003). Sales volume and profitability are among the most frequently used marketing performance (Kokkinaki&Amblier 1999; Ambler and kokkinaki 1997; Cark 2000). Financial performance measure of aircraft depend upon the economic viability, including directing cost comparison, ignore both of the non-cash elements and the time value of money. Aircraft investment out of general revenues to support overall economic development rather than the to produce profit. Operation performance focuses on financial performance such as profit ration and sales growth rate. No-financial performance factors, such as customer satisfaction, employee satisfaction and operating efficiency are important with company's future success. In this Research we can try to find out what the actual traffic and Revenue performance of NAC on the basis of financial performance which is given below on table No. 3



**TABLE NO. 3 TARIFF & REVENUE PERFORMANCE OF NAC**

S.N	Period of time for Revenue collection (in %) Station	17Jul. 2011 to 16Jul.2012	16Jul.2012 to 15Jul. 2013	16Jul.2013 to 16Jul.2014 2071	17Jul.2014 to 16Jul.2015
1.	KTM-BKK	4.35	5.08	4.78	4.64
2.	BKK-KTM	4.32	4.15	3.25	4.20
3.	KTM-DOH	5.03	11.48	16.60	14.01
4.	DOH-KTM	5.21	10.14	11.38	11.93
5.	KTM-DXB	3.34	0.41	-----	-----
6.	DXB-KTM	3.21	0.23	-----	-----
7.	KTM-HKG	11.68	11.19	10.59	11.19
8.	HKG-KTM	12.08	10.78	9.55	11.24
9.	KTM-KUL	22.74	22.76	26.63	20.60
10.	KUL-KTM	26.77	23.73	17.19	18.00
11.	KTM-DEL	0.65	-----	-----	2.46
12.	DEL-KTM	0.57	-----	-----	1.68
Total		100	100	`100	100
		3636525584	4551554201	4629989343	4624968831

Source: Commercial Department of NAC, Management, 2016

In above table No.3, NAC has been conducted/operating six countries within 6 international destinations in 2011. In this duration NAC earned highest revenue from KUL-KTM sector 22.74% and lowest from DEL-KTM Sector 0.57%. In the fiscal year 2011/12 Overall NPR-3636525584 Revenue was collected from international network or flight. Next fiscal year 2012/13, Also highest revenue earned from KUL-KTM sector 23.73% and lowest from DXB-KTM sector 0.23%. In this fiscal year all together (NPR-4551558201) revenue collected from international network. Again, Fiscal year 2013/14 also highest revenue collection through the KTM-KUL which is on 26.63% and lowest from BKK-KTM sector is only 3.25%. Overall NPR-4629989343 revenue collected from international flight network as a same fiscal year. At last fiscal year 2014/15 , Highest revenue collection through the KTM-KUL sector which is 20.60% and lowest from the DEL- KTM which is 1.68%. All together NPR-4624968831 revenue collection from Nepal airline international Network in the fiscal year 2014/15.

According to above data it shows that there is a growth trend of flight revenue but flight is going to be decreasing due to shortage of sufficient Aircrafts. Though Malaysia (KTM-KUL-KTM) sector is very high revenue earned sector of all of above fiscal years. Hong Kong (KTM-HKG-KTM) is the second profitable business revenue collection sector of NAC and Quarter (KTM-DOH-KTM) is the 3<sup>rd</sup> largest revenue collection sector of NAC and other sectors also satisfactory for revenue collection point of view.

In above analysis shows that NAC get satisfactory in terms of revenue collection from all the international Networks. Higher productivity of airline is the key to faster economic growth of an economy. There is still lacking of proper planning for capacity utilization, Aircraft utilization and expand its wings to other part of the world.

#### IV.NAC Capacity Utilization

Capacity is defined as the managerial and strategy system required for realization of performance improvement(Jas and Skelcher,2005).it is curious that does NAC able to utilize full capacity of the available seats in the international sector. The capacity of NAC and number of passengers flow is given in Table 4.

**TABLE NO. -4 PASSENGERS FOLLOW/CAPACITY UTILIZATION**

S.N	Sector	2011/12		2012/13		2013/14		2014/15	
		Available Seat	Used seats by PSG. (%)	Seat production	PSG.fl own(%)	Seat production	PSG.F low n (%)	seat production	psg flown (%)
1.	KTM-BKK	19950	54.27	19760	72.57	17860	78.67	19030	79.19
2.	BKK-KTM	19950	43.57	19760	45.38	17860	41.11	18964	55.05
3.	KTM-DOH	13624	86.52	33725	89.08	33921	84.58	32300	87.37
4.	DOH-KTM	14124	91.07	33193	83.11	32384	84.38	30062	81.37
5.	KTM-HKG	26132	73.37	26320	78.14	24440	74.43	25418	74.56
6.	HKG-KTM	25944	71.97	26299	71.54	24440	64.09	25268	66.84
7.	KTM-KUL	52820	80.63	54150	87.93	55290	89.39	50730	79.64
8.	KUL-KTM	52440	82.22	53960	78.34	55480	67.37	50920	83.57
9.	KTM-DEL	9500	42.07	-----		-----		16914	70.36
8.	DEL-KTM	9500	37.76	-----		-----		16914	59.86
9.	KTM-DXB	13490	61.69	1805	65.54	-----		-----	
10	DXB-KTM	13395	68.72	1710	43.62	-----		-----	
TOTAL		260869	73.92	270682	78.37	26175	75.69	286520	76.44

Source: Commercial Department of NAC, Management, 2016

In above table No.4 shows that NAC, has been operating it's flight for 6 international countries within six destination all sector wise passenger was mention on table No.-6. In a fiscal year 2011/12. The total seat production for all sector overall, 260869 and occupancy was 192842 (73.92%). The highest seat production capacity was KTM-KUL (52820) and DOH-KTM was 91.07%. The highest passenger flown in KUL-KTM sector was 43117. During 2012/13 the total seat production capacity of NAC was 270682 and occupancy rate was 212124 (78.36%). In 2012/13 highest seat production capacity of NAC International Network also was KUL-KTM

which was 53960 and occupancy rate of passenger was KTM-KUL sector 87.95%. The lowest seat production sector of this year was KTM-DXB only for 0.35% But after their few time flight was withdraw due to shortage of Aircraft so that KTM-DXB-KTM and KTM-DEL-KTM both sector flight schedule remove from it's international network. Again, Fiscal 2013/14, NAC only operate it's Flight for only 5 international countries within five destinations. In this year total number of seat production capacity of all of above international network of NAC was 2626875 and occupancy capacity was 198080. Both of capacity of this year decreasing than previous fiscal year due to shortage of Aircraft. In this year highest seat production capacity of KUL-KTM sector 55480 and highest occupancy rate passenger was KTM-KUL sector which is 89.39% and lowest seat production form KTM-BKK was 17860 and occupancy rate of BKK-KTM sector which was only 41.11%. At last fiscal year 2014/15 the total number of seat production capacity of NAC from its international network was 286520 and occupancy rate or passenger follow of 75.69% which was greater than previous all years. The highest seat production capacity of these fiscal years was KUL-KTM 50920 and Highest occupancy rate of KTM-DOH sector was 87.37%. The lowest seat production capacity of this year was KTM-DEL-KTM 16914 and occupancy rate of BKK-KTM sector was (DEL-KTM) 55.01% because of KTM-DEL-KTM flight only re-launching or started from 27 feb2015.

Passenger follow of Airlines is of almost importance for the overall growth of the economy of Airlines. Seat production capacity is an importance productivity of any Airlines. Seat selling capacity or marketing capacity/ strategy only determinants the load factors of Airlines industry. The High level of load factors or occupancy rate determinants to the capacity utilization of Aviation industry. High capacity utilization leads to be high productivity and high productivity lead to be high performance of any organization.

The above phenomenon shows that seat production capacity utilization depend up on the marketing policy or strategy of the organization. So that, NAC also need to focus on online sells, online booked, online check-in, frequent flyer card and priority (facilities), firm issued, pay by credit card, mobile team for capacity sells, code sharing, transit connection management and provide for different skills for regular passenger (like; buy two get one free, etc.) and also need to be improve their regularity, reliability punctuality, aviation safety and security as well.

#### **V. Operational performance of NAC:**

Operational performance occupies a significant place in the performance evaluation of airlines. Operational performance determinates to the financial profitability, with regard to the financial performance, shows its "ability to earn profits proves a measure of its market strength it is ability to keep down costs. (Operation)". Profitability also affects the amount of investment, for much industrial investment is financed out of reinvested profits and hence the contribution of the firm to the overall growth of the economy (Killick, 1983, P.183). Capacity utilization depend upon the operational performance so that in this research try to find out the what is the actual operation performance of NAC in their different fiscal years which is given below on table No.-5.

**TABLE NO.5 OPERATIONS PERFORMANCE OF NAC**

S. N	Station Sector	2011/12			2012/13			2013/14			2014/15		
		Flt as per schld	No. of flt.opt.(%)	No. of flt.xx D.(%)	Flt as per schld	No. of flt. opt.(%)	No. of flt.xx D.(%)	Flt as per schld	No. of flt. opt.(%)	No. of flt.xx D.(%)	Flt as per schld	No. of flt. opt.(%)	No. of flt.xx D.(%)
1.	KTM-BKK	156	67.30	32.70	134	77.61	22.39	141	66.67	33.33	105	96.19	3.81
2.	BKK-KTM	156	67.30	32.70	134	77.61	22.39	141	66.67	33.33	105	97.14	2.86
3.	KTM-DEL	241	20.74	79.24	---	---	---	---	---	---	107	96.26	3.74
4.	DEL-KTM	241	20.74	79.24	---	---	---	---	---	---	107	96.26	3.74
5.	KTM-DOH	157	90.45	9.55	192	97.40	2.60	205	87.32	12.68	190	89.47	10.53
6.	DOH-KTM	156	90.38	9.62	193	97.93	2.07	204	87.75	12.25	192	86.98	13.02
7.	KTM-DXB	157	90.45	9.55	19	100	---	---	---	---	---	---	---
8.	DXB-KTM	156	90.38	9.62	18	100	---	---	---	---	---	---	---
9.	KTM-HKG	155	89.68	10.32	147	95.24	4.76	153	84.97	15.03	149	91.28	8.72
10.	HKG-KTM	155	89.03	10.97	147	95.24	4.76	153	84.97	15.03	149	91.28	8.72
11.	KTM-KUL	316	87.97	12.03	303	94.06	5.94	345	84.35	15.65	347	76.95	23.05
12.	KUL-KTM	317	87.07	12.93	304	93.42	6.58	345	84.64	15.36	348	71.02	22.98
TOTAL FLT.		2363	72.24	27.76	1591	92.39	7.61	1687	82.34	17.66	1799	86.33	13.67

Source: Operations Department of NAC, Management, 2016

The table No.5 shows that Nepal Airlines corporation has purposed 2363 flight to upgrade its overall performance. This could help to maintain schedules in the international network. As mentioned earlier all together 72.24 % of flight were operated as a same day and overall 27.76 % of flight were cancelled due to different reasons. In 2011/12, all together 1591 No. of flights proposed as per schedules but only 92.39% of flights were operated as a same day of flights schedule but 7.61% flights were cancelled in 2012/13. Again, fiscal year 2013/14, Overall 1687 No. of flights on proposed as per it's schedules but only 82.34% of flight were operated as the same day but 17.66% of flights were cancelled as same duration. Alltogether 1799 No. of flights on their schedule but only 86.33% of flights were operated and 13.67% of flight were cancelled in the duration of last fiscal year 2014/15.

When discussing the overall performance of NAC it is still a regular phenomenon that flight cancellation rate is still high due to some sorts of technical reason, having old aircraft, insufficient management and operational ability, lack of skills or trained skillful manpower planning, lack of proper planning & management, various fleets of aircraft utilization, lack of proper resource planning and other natural phenomenon, etc.

#### VI. NAC performance of Domestic Sector

NAC started its preliminary business from the domestic market. Before coming of different private airlines, NAC was only one entity to deliver air service in Nepal. During late 1980s the number of aircrafts for domestic sector was quite high. After enacting the deregulation Act 1992, the domestic sector by NAC got less attention. At present it has 6 aircrafts which provides air transportation service various destinations of the country. The number of passengers who used RA and the volume of revenue generated from domestic sector which is given in the following Table 6.

**TABLE NO .6 REVENUE & PASSENGER FLOWN PERFORMANCE OF DOMESTIC SECTOR**

S.N	Region	2011/12		2012/13	
		Total passenger flown	Total revenue (%)	Total passenger flown	Total revenue (%)
1.	Central Region	35105	45.80	24139	53.99
2.	Eastern Region	16228	31.91	23874	27.60
3.	Western Region	9807	22.30	12082	18.40
Domestic Total		61140	100	60095	100
		-	2429377172	-	249265971

Source: Commercial Department of NAC, Management, 2016

The Table.6 shows that altogether 61140 passengers used RA to travel their respective destinations. From the domestic air service total NPR-242397172 was earned in 202011/12. The rate of passengers flew in central region (35105) and revenue collection also highest at same sector (111277189) and lowest passenger flown from the eastern region (9807) and revenue on NPR-54179997 only. Again in 2012/13 altogether 60095 No. of passenger flown and NPR-249265971, revenue collection from its domestic networks.

In above situation analysis, NAC flight operation situation in domestic network is not much satisfactory and revenue collection was not satisfactory. NAC also have some sorts of social and co-operative responsibility in the society and nation, i.e., being the state owned air service, RA has also employ subsidized rate in remote places like Jumla, Humla, etc.

#### VII. Operational performance of Domestic Sector

Higher productivity of airline industry is the key to factor of economic growth of an economy. The financial performance of airline depend up on the operating capacity of airlines which is determinants by operational performance so that, operation performance is very important factor for overall productivity of/or performance of any airlines (see Table 7)

**TABLE NO. 7 OPERATIONAL PERFORMANCE OF DOMESTIC SECTOR**

2011/12					
S.N	Region	Flights as per schedule	No. of Schedules flight operated (%)	No. of flight cancelled (%)	Total (%)
1.	Central	1384	88.05	11.95	100
2.	Western	2016	80.10	19.90	100
3.	Eastern	1457	87.98	12.02	100
Total		4857	84.72	15.28	100

Source: Operations Department of NAC, Management, 2016

Table 7 shows that during 2011/12 scheduled domestic flights were 4857 but NAC managed only 84.72% of flights to operate. It shows 15.28% of flights were cancelled which is quite alarming. Western Region proposed 2016 No. of Flight as per schedule but only 80.10% of flights were operated in the given period. The cancellation rate of domestic flight in the Western region was 19.90% which was highest in the domestic sector as the reference year. All together 1384 No. of flights as per schedule in central region only 88.05% of flights were operated and 11.95% of flights were cancelled on their given duration .

From the above phenomenon, it can be said that NAC domestic flight cancellation rate is quite high which also affect total revenue earning from the domestic sector. This leads to be loss day to day, i.e., there is lack of efficient and effective flight operational performance in domestic sector.

### VIII. Capacity Utilization in Domestic sector

Capacity is defined as the managerial strengths which require for realization of performance improvement (Gas & skelcher, 2005 cited by Jentabead, 2013 P.1). Organization capacity and capability utilization in Airline determine the overall productivity and performance of airline. Organization capacity covers the study of the capacity within the organization level (child & Falkner, 1998; Finder & Brand, 1999). Table 8 discusses to find out the actual capacity utilization situation of domestic sectors Nepal airlines in Nepal.

**TABLE NO. 8 CAPACITY UTILIZATION IN DOMESTIC SECTOR**

S.N	Region	Total seat production	Passenger flown / capacity utilization	In %
1.	Central	20203	17103	84.65
2.	Western	22129	19987	90.32
3.	Eastern	25375	24147	95.16
Total		67707	61237	90.44

Source: Commercial Department of NAC, Management, 2016

The above Table 10 shows that average 90.44 percent of the domestic sector available seats were utilized in the reference period. When analyzing region-wise it was found the highest utilization rates was in the Eastern region sector compared to other Western and Central Development regions. From this situation it can be said that the percentage of capacity utilization was good but still unable to run in full condition need to planning for maximum capacity utilization in Nepal.



**IX. Status of profit and loss situation of NAC**

Different indicators over the last 10 years, i.e., from 2007 to 2017 shows performance of NAC is in the negative trend especially in case of cumulative loss (See Table 9).

**TABLE 9: CUMULATIVE P/L OF NAC**

S. N	Indicator of PM	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	Net profit /loss(in lakh)	117	3421	(1970.59)	300.16	1262	203.11	200	3105.26	624	2140	433
2	Cumulative loss/profit	(23208)	(15663)	(17634.51)	(16661.92)	(15575)	(19212.18)	(15614)	(11044.56)	(17.4545)	(18858)	(18209)
3	Final audit	2001/2	NA	2005/6	NA	NA	2007/8	NA	2012/13	NA	2016	NA
4	Employees	1417	1472	1412	1369	1426	1411	1411	1273	1239	1328	1265
5	Gross operating income	41615	NA	33128.34	NA	NA	52992	59448	NA	68368.48	78888	NA
6	Total expenditure	44329	NA	35098.93	NA	NA	51717	58440	NA	64789.17	76036	NA
7	Operating profit	(2714)	NA	(1970.59)	NA	NA	1275	1008	NA	NA	NA	NA
8	Other income	2831	NA	NA	NA	NA	267	802.00	NA	NA	NA	NA
10	Loan from GON.	678	764	679.00	764	NA	3693	3493	35486	5193	5693	5893
11	From Banks and financial institution	7628	7310	10692.54	9299.8	NA	12153	11961	103319	10491	10799	114396
12	Net profit ratio	NA	NA	(6.01)	NA	0.57	0.35	0.34	NA	NA	NA	NA
13	Seat factor	NA	72.42	70.0	84.3	NA	80.35	NA	NA	NA	NA	NA
14	Load factor	NA	73.32	72.0	69.2	NA	79.0	73.92	78.37	75.69	76.44	NA

Source: GoN/MoF, Annual Performance status of Public Enterprises, Kathmandu

Over the analyzed period net profit shows positive trend except in 2009, however, the cumulative loss accounted to 1820.9 million in 2017 which was 2320.8 million in 2007. This shows there is slightly improving, but still could not manage to make profit. One of the main reasons to have such huge loss was due to the inappropriate decision for leasing Chase Air which added unnecessary liabilities to NAC. So NAC still could not buy additional aircraft on the contrary, growth of nonproductive expenses such as salaries other administrative expenses could not control. However, NAC started to curtail around 7 percent employees from 2014. NAC has also taking loans both from GoN and other banking institutions to maintain its annual capital and regular expenditures. In case of not taking enough attention to control the unproductive expenses, the loan financing would be suicidal to NAC's future. From this discussion it can be argued that NAC's financial performance is shaky and need to improve.

### **5. Causes of Poor Performance**

The government adopted privatization of airlines industry mainly to bring private sector to expand more air services in the country. NAC was also not able to fulfill the demands of air services to both international and domestic due to the lack of sufficient number of aircrafts. It can also be said government has given little or no attention to expand NAC's capacity enhancement. In addition weak management and politicization for recruitment of executives and among the employee for managing RA also affected to enhance the capacity which directly or indirectly affect the performance of NAC. How to development its capacity for improving performance of NAC has become challenging in Nepal. Of course there is enough opportunity to capture the demands of air services as RA occupies only 10 percent of total air service demands in Nepal.

### **6. Challenges of NAC**

NAC (existing Royal Nepal Airlines) was established long ago like other airlines in Thai airways, Singapore airlines, etc. and gaining good experiences among the technical and other employees. The expansion of airlines market has also been steadily growing; having full ownership of the government could be very helpful to have higher success of NAC. But due to a number challenges NAC could not achieve satisfactory results. Some of the key challenges are NAC has to compete with other mega carriers particularly the foreign airlines, having limited aircrafts, absence of smart management of NAC, having diverse nature of aircraft added for efficient fleet operation, unnecessary intervention from the politics, and increasing financial loss over the period.

### **7. CONCLUSION**

Performance of Nepal Airlines Corporation in this article is discussed on the basis of resource utilization capacity, on time performance capacity, seat production capacity and passengers flown rate, Financial performance, revenue collection tendency, flight delays, postpone and cancellation tendency including safety, security, reliability and punctuality rate. In addition it also take into account the social recognition and image/goodwill of the carrier as the important factors which depend upon airlines performance.

With regard to aircraft utilization it was found annual flights were taken place maximum 251 days to minimum 179 days and in terms of hours/per day it was maximum 14.41 hours to only 7.37 HRS per day during the reference years. Such tendency indicates low level capacity

utilization of NAC. Analyzing on time flight performance it was found to be 70.58% on time, 29.42% delays and 1.88% of flight were cancelled. This indicator shows that still NAC has not been managing on time flight performance. Such tendency is reliability and punctuality is not very much encouraging.

The data shows the traffic & revenue performance of NAC has been increasing despite the decreasing trend of flight schedule.

The data of NAC for the last four years shows that there is uneven growth of passenger flown rate and occupancy rate which gives unsustainable growth of NAC. With regard to operational performance, i.e., financial profitability of NAC has been improving. The ground handling service has significantly contributing to improve financial profitability of NAC, which however, operational performance of RA flights is still not satisfactory.

Despite NAC has bright future as it is only the national carrier which is taken as nation's pride, and also the demands of air services both in domestic and international markets has been increasing the performance of NAC is not that expected level. There is also a tendency of promoting the national carriers such as Belgium air, Swiss Air, Qatar airways, Thai Airlines, Air India, etc. NAC has not getting enough attention by the government in Nepal. By promoting the national flag carriers, the chances of promoting tourism, developing and balancing foreign trade, providing more air services to the people, etc. would be achieved. For this, improvement of performance of NAC is the primary requirement.

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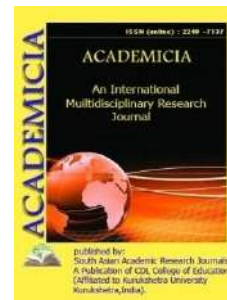
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## SOME VIEWS OF ISLAMIC RELIGION AND MUSLIM SCHOLARS ON THE PHENOMENON OF HUMAN PERSONALITY

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### ABSTRACT

*This article covers the analysis of Islamic anthropology and the issue of religion Islam humanism. Also from the point of view of muslim philosophy the concept of perfect man and personality, its social essence is analyzed. In islamic anthropology, the phenomenon of personality, its content, specific features, structure, features of formation are revealed. In addition, in Muslim philosophy, an analysis of the processes associated with the independence of man and personality, as well as the views of Eastern scientists on man and personality is described.*

**KEYWORDS:** *Islam, Muslim Philosophy, Islamic Anthropology, Islamic Humanism, Perfect Man, Personality, Individ, Individuality, Man, Human, Society, Postmodern, Phenomenon, Mysticism, Muslim Personality, Destiny, East, Social Virtue, Science, Reason, Character, Conviction, Miracle, Freedom, Independent Person, Information.*

### INTRODUCTION

The problem of personality as the most pressing problem in the system of socio-humanities has been the constant focus of philosophical thought. Under the influence of serious changes in social development and positive and negative trends affecting it, "personality" was a specific problem in the attention of each historical period. This in turn became the basis for the formation of philosophical doctrines and directions that study the problem of person in human science from a socio-philosophical, religious-psychological point of view as a subject and object of social development. Therefore, initially, it would be worthwhile to focus on a comparative analysis of the concept of "person" and concomitant concepts to it.



Specialists of the present time use the concepts “individ”, “individuality”, “personality” to characterize a person as a specific phenomenon. The chain of these concepts creates the opportunity to analyze the interaction between man and society. Individ determines any representative belonging to the breed of man. In other words, if the concept of “man” expresses its biological essence, then “individ” characterizes a separate representative of the same breed, but the difference between people does not give an understanding of the individual characteristics of a person. He emphasizes his belonging to the so-called “man”, without including certain social qualities and qualities of man, no more. This concept expresses the richness of any person from genesis to social conditions.

Individuality is a concept that differs from other people, which is inherent only in the individual representative of a person, specifically, separately, used for the purpose of dividing and analyzing some sides. Individuality is a complex of all qualities, characteristics, caroms of a person, and not only his appearance, but also his own. In those who have developed individuality, a noble talent becomes wiser, with repeated rare talents. But individuality can also make a person noble or impoverished, in other words, imperceptible, meaningless personal social qualities. For the same reason, in Muslim philosophy, the concepts of “quality”, “peculiarity”, “miracle” are used with the aim of expressing the individual characteristics of highly capable, extremely talented persons.

One of the most talented manifestations of muslim philosophy, Najmiddin Kubro, was famous in the whole East for his miracle display character. Predict in advance the details of an happened or event that will occur with the help of a miracle display. With his sharp vision, he began to hum at the heart of his interlocutor. In one who has fallen in sight, the qualities of the Guardian have come into being.[1:25]

The historical experience of mankind has shown that the attitude to the phenomenon of man is different. There are certain essences in social thought and philosophy, in which the human essence is understood primarily in the biological context (racial theories) or in a purely social context - for example, in Soviet science there was a similar experience. In particular, at the center of muslim philosophy, there are different approaches to the problem of human personality.

The most important characteristic feature of muslim culture, it is characterized by its strong humanistic character, calling people to good deeds, friendliness, respect for knowledge, science, mind, spirituality, faith, honesty. More precisely, another of the peculiarities of medieval muslim culture, especially its philosophy, is that it is aimed at creating a system of criteria that characterize the humanity of a person, that is, its perfection.

Muslim philosophers also comprehensively analyzed the characteristics of man. The holy book of the religion of religion Islam in the Qur'an that man is a saint and dear, that God is affable within the creatures he created (Surah Isra, verse 70). It is also noted in the Qur'an that the mind is a great blessing, which determines the humanity of man (SurahBaqara, verse 76). Stupidity, mental weakness, condemned as a vice that absorbs the humanity of man. Those who are ignorant of reason are compared to those who are guided by Satan, and even to animals (Surah Anfal, verse 22, Surah Furqan, verse 34, Surah Mulk, verse 10). [2:12, 118, 259, 449]

Therefore, Islamic anthropology is aimed not at understanding and correcting the divine essence of man, but at the fulfillment of the task assigned to him by God. “What is his purpose man? it is not about answering the question”what should a person do and what should not do, what is good

and what is bad for him, what is his purpose in life, how should a person build his relationship with God, how to distinguish good from evil, and how to finally find salvation. In Islam, the main moral value is the activity of a person who understands the practice of serving Allah.

Islamic anthropology affirms practical, active humanism as the main way to serve Allah. He does not deny, on the contrary, accepts a constant conscious moral choice.[3:2]

In Hadis Sharif, which is considered one of the major sources of muslim philosophy, the pursuit of human perfection is glorified in every way. “As soon as Allah almighty created people, he made them happy with the mind. If people approach Allah with their piety, you should approach them with your own understanding.”; “Every believing servant is a mirror of his own. If he sees a fault in someone, he will fix it. You cannot be a perfect believer until you see your fellow man.”; “The best Muslim is those who have not seen offence neither by hand nor by language other than this.”;[4:29, 30]

In the philosophy of Farabi from medieval eastern scientists, the interpretation of man as a product of the development of the whole being is gaining weight. The thinker showed that all the noble qualities of a person are due to science, the meaning of a person’s life is to be happy and strive to be happy, and this can only be achieved through knowledge and enlightenment. Beruni and Ibn Sina looked at the proof that man is superior to other creatures because of intelligence and contemplation. Unlike, Abu Homid Ghazzali showed this superiority not in the mind but in the heart of man.[5]

As noted by Jalaliddin Rumi, man consists in the unity of the soul with the body. Also, in the opinion of the scientist, man is a talking animal. [6:57] Burhoniddin Marginani explained that power, which constantly feeds on human spirituality, is knowledge and enlightenment. Therefore, the responsibility for the spiritual perfection of society was entrusted to the people of science.

In the doctrine of mysticism, which tried to prove that the possibilities of reason were limited, the perfect man was one of the main ideas. These are those who have learned that perfection is manifested mainly in spiritual perfection, spiritual upliftment, the ability to handle physical desires. In Eastern philosophy, theories about man developed in an inextricably linked way with east mentality and lifestyle.

In the study of the structure of personality, the goals of human activity in the philosophy of mysticism developed in the East are analyzed and interpreted. Based on the religious experience, the influence of values and morality on human activity is also discussed. Especially in the philosophy of mysticism, which is a doctrine that studies various ideological-theoretical views, moral rules about the spiritual and spiritual perfection of man, these issues are reflected in an interesting idea, valuable thoughts about the spiritual and spiritual appearance of man are expressed.[7] According to one of the major manifestations of Sufism philosophy Ahmad Yassavi, Bahouddin Naqshband, Najmiddin Kubro and others, is a wise and moral purity that leads to spiritual perfection. [8]

Manifestations of the philosophy of mysticism recognize the most basic qualities of a person as erudition, kindness.[9: 39-44]

As Alisher Navoi pointed out, faithfulness is manifested first of all in kindness, in honesty. One of the qualities inherent in righteous, pious people is freedom. Faithfulness is a free, independent

thought-reasoning for a person, when we say otherwise, the freedom of mind and soul is higher than any reign, crown-throne.[10: 75-85]

In order for a person to have faith in his daily practical activity, that is, to strengthen his faith, one of the great poets of the East – as said by Sofi Olloyor, it is necessary to stand often in the conversation of educated, knowledgeable people. In other words, one of the first conditions for being an believer is to be in a conversation with an educated, knowledgeable person. A person in such conversations begins to take himself away from the circle of hypocrites, ignorant people. Scribes, a person who is in a conversation with good people, gradually begins to make a habit of doing good deeds. In particular, thirst gives water, asks the patient for a condition, shows compassion for the poor, begins to replace the respect of the parents, and others. A person with faith makes it his habit to follow all the good.[11:126]

Here in this place it is possible to see that social virtue, which is an important measure of the state in which a person is formed as an independent person, develops in a certain socio-historical context, the sum of the signs, that arise from his relations with people.

The opinion of Abu Mansur al-Motoridiy as Samarkandi (870-944) on the possibility of free choice in a person, what he does not do, what he will do voluntarily, and therefore his responsibility for every good and bad deed, action, intention is very valuable. This opinion sharply opposes any kind of unification, blind obedience to the will, word of someone, the imposition of a hand on the wrong, the transformation of a person into a fanatic. It is necessary to understand Motoridi's idea of fate and willpower as follows: in a person, fate is hidden as a responsibility and opportunity, he cannot change his destiny, but to a certain extent and to what extent a person reacts (in whole or in part) to his behavior. Therefore, freedom and responsibility in a person should grow and harmonize as one grows.[12: 141-142] Having fulfilled his duty, a person is able to choose and is responsible for it. Islam is even the most basic issue - the lack of coercion on the issue of religion is emphasized in the verses of the Qur'an. Conviction the issue also protects the freedom of choice. According to Islam, God created the world in such a way that a person should always choose between God and Satan, that is, evil with good. From a philosophical point of view, human life is a constant choice between reason and ignorance, laziness and diligence, happiness and generosity and others. According to Islam, a person must always make decisions independently of various options, make decisions depending on how quickly and reliably his personal well-being in the situations he needs, be obliged to understand that an active attitude to life is more important than ever, have self-confidence, strong and capable, know that he has the opportunity to change life for the better.

Abu Ali ibn Sina said that a mentally and morally mature person should have independent thinking skills. Anyone who wants to have an independent thinking skill-it is necessary to master the science of logic, that is, ingenuity. Abu Rayhon Beruni, a prominent muslim philosopher of the Middle Ages, who further developed Abu Ali ibn Sina's views on man, explained that although the external manifestations of people are diverse, their internal structure is common to all.[13]

According to Abu Rayhon Beruni, people are united into different communities in order to meet their daily needs (the need for protection from external enemies, the need to jointly perform various chores related to farming, crafting, livestock). To be more precise, a person is constantly in need of mutual association, unification, living in some kind of society. With the growing

number of people culturing and the emergence of ownership, such a need is becoming more and more developed.[13: 83-86] According to Beruni, man is fundamentally different from other creatures in the universe by his creativity. Such qualities as kindness, honesty, generosity, nobility, kindness, friendly togetherness further glorify a person. A person who embodies such qualities will benefit not only himself, but also the country. Such vices as deceit, evil, competition, extortion, drunkenness, rudeness, theft, slander, hypocrisy, putting a building on oneself, flattery, squabbling will make a person fall into shame. According to Abu Rayhon Beruni, man is glorious by his labor. With the help of Labor, a person saves his body from various vices, in particular laziness, lack of work. Man repeatedly states that he cannot achieve glory, no career without hard work.

Aziziddin Nasafi in his views on the perfect man, recognizes and analyzes many concrete qualities that make up such goodness as his subtle pursuits, tastes, morals, manners, responsibilities, land, faith. The perfect person of Nasafi is not a fully formed, consequently hardened person, summing up all the excellent qualities, but a person in constant movement, perfection, striving for the truth does not stop. The approach to man as a developing distinguishes Aziziddin Nasafi from all philosophers and religious thinkers of his time and brings him closer to modern views.[14] So an important measure of the state in which a person is formed as an independent person is social virtue. Social virtue is the sum of the signs, caused by a person's relations with people in a certain socio-historical context.

Even in the most terrible socio-political conditions, a person will be able to maintain his independence, that is, to remain faithful to the social prints he practices, moral norms (if it really is a principle). The great scholars of the East, Abu Ali Ibn Sina, Abu Rayhon Beruni, Baburahim Mashrab, who did not give up his chosen path despite the fact that he had suffered on his head, remained faithful to the principles he had practiced, are evidence of our thoughts of the path of life full of ill-will. Islamic humanism in general gives clear instructions to a person, emphasizing the need to improve morally. He also understood the need to improve the world, actively fight evil.

In the humanitarian features inherent in Islamic anthropology, of course, the Islamic religion and the factor of its customs, rituals also have its place. About this although in favor of an atheistic look, Y.Petrash, in religion Islam acknowledges universal ideas and says: "the mosque has an important moral and educational function and helps the community to maintain its moral health while urging muslims to adhere to simple and universal moral standards".[15]

The conclusion is that Islamic humanism in muslim culture is a powerful spiritual tool to combat the destructive, antigumanistic trends that are manifested in today's Postmodern society. Moral activity in the anthropology of Islam is an active service to Allah, personal responsibility or rejection of this service, that is, all areas of free moral activity of muslim. Hence, in order to study the social essence of muslim person, it is necessary to analyze the three main components of the relationship between him and Society:

- 1) which social group the person belongs to;
- 2) the sum of the social roles that he performs;
- 3) his needs, interests, knowledge, views, beliefs and convictions.

Even now, researchers are offering new approaches to the conceptual framework of the Islamic personality model. In the structure of the Islamic personality model proposed by some studies, the analysis of the characteristics of the Islamic Personality first, then the aspects of organizational commitment and job satisfaction, and finally job productivity, is described.[16]

In short, a muslim person is a product of socio-historical development, socio-historical activity, a subject of social relations, which as a product of history and society, as a result of education and upbringing acquired a social image. Its essence is formed by the richness of social relations, the scale of social activity and the volume of assimilated culture.

In the Postmodern society, it becomes clear that scientific and technical progress, information and communication technology, information attack and threat can bring a person to very difficult situation. Because in the Postmodern society, the individual is experiencing a truly ideological struggle.

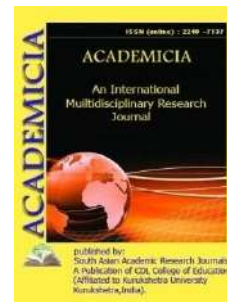
In this situation, first of all, it is necessary to revise and improve the content of spiritual education, taking into account the modern requirements of methods and means, globalisation, information technology and mass culture, information attack, threats. Secondly, it is necessary to interpret the difference between true islamic humanism and vulgar anthroponcentrism, the unity of human land and responsibility, the importance of classical values, in a new way, linking them with the reality of the present time. Thirdly, it is a period of in-depth study of Islamic humanism, which is aimed at unifying people in society, allowing to express and form the consciousness of individuals in accordance with modern needs and demands.

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## **METABOLIC DISORDERS IN WOMEN DEPENDING ON THE DURATION OF MENOPAUSE**

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### **ABSTRACT**

*The menopausal period is almost one third in the life of women, thanks to this fact, not only the health of the woman, but also her ability to work, the ability to perform various social functions that depend on the nature and course of this period. One of the complications of the postmenopausal period are metabolic disorders. In order to study the degree of metabolic disorders depending on the duration of menopause, 75 women were examined. A study of the genealogical history made it possible to find the main clinical signs pathognomonic for the metabolic syndrome (type 2 diabetes mellitus in 32% of cases, arterial hypertension in 52%,*

early coronary heart disease in 36%, found in close relatives). The longer the menopause, the more pronounced signs of obesity, impaired fat and carbohydrate metabolism (increased cholesterol, triglycerides, low density lipoproteins, decreased high density lipoproteins, the development of insulin resistance). An elevated level of C-reactive protein ( $4.3 \pm 0.6 \text{ mg/l}$ ) was found in women with a menopause of more than 5-7 years, which is a factor contributing to the development of vascular diseases. In 32% of patients with a menopause longer than 7 years, pronounced metabolic disorders such as type 2 diabetes mellitus were diagnosed, and in 48% of cases hypertension was diagnosed, therefore, timely diagnosis and metabolic correction will help reduce the risk of cardiovascular disease -vascular diseases and diabetes among women during menopause, as well as improving their quality of life.

**KEYWORDS:** *Postmenopause; Metabolic Disorders; Lipid Metabolism; Insulin Resistance.*

## INTRODUCTION

In recent years, much attention has been paid to women's health during the menopausal period, since this period makes up almost a third of a woman's life. In connection with this fact, not only the woman's health, but also her ability to work, the ability to perform various social functions depend on the nature and course of this period. Estrogen deficiency leads to the development of various complications, therefore, it is important to predict the likelihood of a functional disorder of various organs and systems during menopause, and to perform timely diagnosis and treatment. Metabolic disorders are some of the menopausal complications. Metabolic syndrome (MS) is a complex of interrelated disorders of carbohydrate and lipid metabolism, as well as mechanisms for regulating blood pressure (BP) and endothelial function, due to the reduced sensitivity of body tissues to insulin -insulin resistance (IR). Increased synthesis of free fatty acids in the liver proves that insulin resistance leads to increased synthesis of triglycerides (TG) and very low density lipoproteins (VLDL) in hepatocytes. In the case of insulin resistance, the activity of lipoprotein lipase, which is under the control of insulin, decreases. In this case, dyslipidemia associated with visceral obesity occurs: concentrations of VLDL and TG increase, high-density lipoproteins (HDL) decrease, and the number of low-density lipoproteins (LDL) increases. From this it follows that obesity and insulin resistance contribute to the development of lipid profile disorders, and together with hyperglycemia and hypertension they lead to early and rapid development of atherosclerosis in patients with impaired carbohydrate metabolism and visceral obesity. The effectiveness of the treatment of metabolic syndrome, as you know, depends on the duration of its development. The best treatment results can be obtained at the initial stage of the development of pathology, when excess weight is not considered an aesthetic problem, but serves as a signal for the start of certain actions. Therefore, timely diagnosis and correction of metabolic disorders will help prevent the development of cardiovascular diseases and diabetes.

## MATERIALS AND METHODS

The study involved 75 women aged 45 to 60 years, which were divided into groups depending on the duration of menopause. The first group consisted of 25 patients with menopause duration up to 2 years, the second - 25 patients with menopause duration from 2 to 7 years, the third group - 25 women with menopause more than 7 years. The control group included 20 women during the menopausal period with no signs of metabolic disorders. None of the women received

hormone replacement therapy. Obstetric-gynecological and hereditary history, age of onset of menopause, its duration and course of treatment were studied in all groups of patients. Using the anthropometric method, the following parameters were evaluated: body mass index (BMI), waist circumference (OT), ratio from OT to the circumference of the hips (OT / OB). Metabolic changes in lipids were evaluated on the basis of a biochemical study of total cholesterol (OX), TG, LDL, HDL, VLDL. Insulin resistance was assessed using the HOMA serum index (HOMA-IR - Homeostasis Model Assessment of Insulin Resistanc) - the ratio of glucose to insulin. An index is considered within the normal range, if it does not exceed 2.7 times the limit value. In addition, serum C-reactive protein levels were also evaluated, blood pressure monitored, and electrocardiogram (ECG) results recorded.

## RESULTS AND DISCUSSION

The examined groups did not statistically differ in age, time of the onset of menstruation, the number of births and abortions ( $p > 0.05$ ). Evaluation of the hereditary history revealed the main clinical signs pathognomonic for the metabolic syndrome in close relatives (type 2 diabetes mellitus in 32% of cases, arterial hypertension in 52%, and early coronary heart disease in 36%). In the control group, only 1 case (5%) revealed no arterial hypertension. The main complaints presented by the examined women quickly gained weight after the onset of menopause: hair growth in atypical places, high blood pressure, rough, hyperpigmented skin on the elbows, under the mammary glands, in the axillary areas (the so-called "black acanthosis") in 2 patients (8%) of the II group, in 10 patients (40%) - of the II group, and in the I and control groups these signs were not diagnosed. In women of group I, the average body weight increased by 2.8 kg, in group II - by 3.6 kg during the first two years of postmenopause. 7 years later, after menopause, the weight gain in group III was 7.6 kg, adipose tissue was mainly distributed in the waist area. In the control group, body weight became, on average, 2.2 kg more within 7 years after menopause. In patients from group I, during two years of menopause, OT increased, on average, by 5.6 cm, after five years (group II) - by 7.8 cm, after seven years (group III) - by 9.2 cm. The OT / OB index increased to 0.95 in 27 (36%) of the women examined, in 34 (45.32%) patients it was 1.01. At the same time, 60 (80%) women of reproductive age had a proportional figure in the female type and did not suffer from excess weight. Examination of patients revealed significant changes in the lipid spectrum in blood plasma, characterized by increased total cholesterol, TG, LDL, VLDL and a decrease in HDL. 66.7% of the examined patients showed a decrease in HDL below 1.29 mmol / L and a TG above 1.69 mmol / L. These changes were more pronounced in patients from group III, while in group I these values varied at the upper limit of the norm ( $p > 0.05$ ). Thus, the total cholesterol level rises with the duration of menopause: group I -  $4.7 \pm 0.5$  mmol / l, group II -  $6.2 \pm 0.5$  mmol / l, group II -  $7.2 \pm 0.2$  mmol / l The level of triglycerides also increases with the duration of menopause: group I -  $1.7 \pm 0.2$  mmol / l, group II -  $3.1 \pm 0.3$  mmol / l, group III -  $3.5 \pm 0.2$  mmol / l. Excessive synthesis of triglycerides is a violation of carbohydrate metabolism, together with gluconeogenesis, this process is a method of bioutilization of free fatty acids. Most scientists believe that the most typical sign of dyslipidemia associated with IR is an increase in TG and a decrease in HDL, and these changes are proposed to be used as markers. A fundamentally important pathogenic mechanism of IR is a violation of the regulation of lipid metabolism, as a means of increased release of free fatty acids into adipose tissue. IR in this category of women is confirmed by the value of the HOMA index (table).

**TABLE 1. NOMA INDEX DEPENDING ON THE DURATION OF MENOPAUSE**

Studied Groups	Normal Values	HOMA Index
Control group	20	20 $2.6 \pm 0.2$
I group	25	25 $2.7 \pm 0.2$
II group	25	25 $3.4 \pm 0.5$
III group	25	$3.8 \pm 0.5$

When examining 8 (32%) patients of group III, an increase in the basal level of C-reactive protein ( $4.3 \pm 0.6$  mg / l) was found, which is a risk factor for vascular complications. This indicator was higher in 4 (16%) women of group II and in 1 (2.5%) - group I ( $p < 0.05$ ). An elevated level of C-reactive backing was found in 80% of obese women.

This suggests a direct correlation between the obesity factor and elevated levels of C-reactive protein. In addition, after examination, type 2 diabetes mellitus was detected in 8 (32%) patients from group III. Fasting glucose was at the upper limit of normal among patients of groups II and I. Arterial hypertension was found in 24% of women of group II and 48% of group III. ECG results indicate characteristic signs of hypertrophy of the left cardiac cavities.

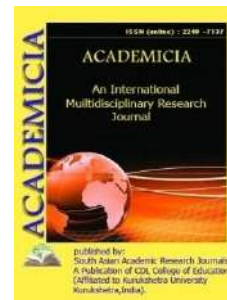
## CONCLUSION

1. Heredity plays a role in the development of metabolic disorders. 2. The longer the duration of menopause, the more pronounced signs of metabolic disorders are detected: obesity, increased levels of OX, TG, LDL and VLDL, decreased levels of HDL, insulin, the development of IR, vascular complications, diabetes. The prospect of further research, timely diagnosis and correction of metabolic disorders will help reduce the risk of cardiovascular disorders and diabetes in women during postmenopause and improve their quality of life.

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## PROBLEMS OF FORMATION AND DEVELOPMENT OF INNOVATIVE ENERGY IN THE REPUBLIC OF UZBEKISTAN

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### ABSTRACT

*The article deals with the problems of formation and development of innovative energy in the Republic of Uzbekistan and the role of innovative energy in the sustainable development of the fuel and energy complex. Data on the projected growth rates of the world economy, medium-developed countries and Uzbekistan, factors for ensuring growth are linked to the efficiency of using fuel and energy resources, as well as specific capital investments and the cost of electricity production using various types of renewable energy sources (RES) are shown. The article examines the prospects for the development of RES, as well as measures to involve RES in the energy balance of the Republic.*

**KEYWORDS:** *Fuel And Energy Complex, Sustainable Economic Development, Energy Balance, Energy Structure, Renewable Energy Sources, Innovative Energy, Energy Resources, Investment.*

### INTRODUCTION

In the context of global competition, the countries that have been able to create a developed infrastructure and institutions for the development, commercialization and implementation of innovations have an advantage. Now, when all countries, although to a different extent, are experiencing the consequences of the financial and economic crisis, it is clear that those countries that take timely measures to re-equip their production and develop new technologies will emerge from this situation with the least losses. One of the most important measures to overcome the consequences of the financial and economic crisis is the accelerated innovative development of the fuel and energy complex. This direction has been and remains a priority in the policy of the Republic of Uzbekistan.



An important result of the economic reforms implemented in Uzbekistan has been the technical and technological renewal of one of the key sectors of the real sector - the fuel and energy complex. With the measures taken by the country's leadership, Uzbekistan achieved oil and, in General, energy independence back in 1995. Currently, taking into account the self-sufficiency of the Republic, measures are being taken to meet its needs in the medium and long term with the necessary quality energy resources on the basis of sustainable innovative development of the industry.

The fuel and energy sector plays a key role in the development of Uzbekistan's economy: almost 50% of capital investment is directed to this sector, and it accounts for 7% of the total gross domestic product (GDP). Specific measures to improve the efficient use of capacity, lower specific power consumption, reducing the share of natural gas by increasing coal use in the process of energy production, based on modernization, technical and technological re-equipment of enterprises, introduction of resource-saving technologies, and as a result, ensuring reliable and quality supply of consumers with electric and thermal energy in the long term [1].

At the same time, in the context of globalization of the world economy, the growth of non-renewable energy resources, increased competition on world markets liquid hydrocarbons and solid fuels for sustainable economic development increasing importance is the modernization of existing and development and implementation of new technologies at the enterprises of fuel-energy complex of the Republic, and also search and involvement of new alternative energy sources in the energy balance of the country. Also, one of the main problems at present is that significant physical and moral deterioration of production capacity does not always allow to compete with foreign manufacturers, even in the domestic market. This problem is also true for enterprises of the fuel and energy complex. Hence, there is a need to develop and implement an effective innovation policy at the enterprises of the fuel and energy complex of the Republic of Uzbekistan, the main task of which is to create a system that will allow you to use the intellectual and scientific and technical potential of this industry in the shortest possible time.

Therefore, the main task for the period up to 2020-2030 is to ensure macroeconomic stability and stable high rates of economic growth, improving its quality parameters through further diversification of economic sectors. This direction is especially relevant for the energy sector, given its system-forming role in the economy of Uzbekistan.

Medium-term targets for the development of the national economy are determined by the need to solve the problem of maximizing the gap between the development of the economy of Uzbekistan and the average level of development of developing countries in the long term. The assessment of the development prospects of the countries included in the category of medium-developed countries of the world is made in conjunction with the development of the world economy as a whole. Forecast estimates showed that the growth of the world economy for the period up to 2015-2020 will be -3.8-4.1% on an average annual basis, followed by a reduction to 3.5% by the end of the forecast period. The growth rate of the countries included in the category of medium-developed countries of the world will be about 4%. However, Uzbekistan's economy is very energy-intensive by international standards. Uzbekistan is 4-5 times lower than the average in Western Europe, 3.5 times lower than the United States, and more than 4 times lower than Japan and Korea. In the group of CIS countries, Uzbekistan has the highest value for this

indicator. The energy intensity of Uzbekistan's GDP exceeds the current value of this indicator in Russia-by 80%, Kazakhstan-by 70%, and Ukraine-by 20%.

This is due to the use of technologically outdated equipment, a high share of fuel and energy resources in the country's exports, relatively low prices for electricity and certain types of fuel, an inadequate accounting system for the production and consumption of electricity and energy resources, etc.

Also, one of the most important factors for the sustainable development of the fuel and energy complex in the medium and long term is the successful solution of tasks for the development of innovative energy, or so-called "green" energy, which implies wide application.

Today, the development of renewable energy is one of the most important issues of national and global security. In recent decades, the negative impact on the environment from the extraction and use of gas, oil, and coal and the high price paid by society for their use (the so-called "external side" environmental costs) have become apparent. The earlier the full-scale transition to economically profitable and environmentally safe renewable energy begins, the lower the risk of an energy crisis and the greater the economic gain for the country.

The developed countries of the world are actively searching for effective technologies for the use of renewable energy and currently various types of renewable energy are used in more than 70 countries around the world. The volume of energy produced on the basis of RES exceeded 10% of the total global energy consumption, despite their inherent disadvantages: time and spatial variability and instability of energy production; low energy density; high cost of equipment and energy produced (except hydro); the need to reserve generating capacity for RES; reactive power consumption.

The competitiveness of electricity based on RES is also weakened by current electricity prices, which currently reflect only the cost of fuel, operation and maintenance of current generating capacities and do not take into account the cost of introducing new ones.

Today, the main obstacle hindering the widespread use of renewable energy is the high cost of equipment and the cost of energy production, which still remain higher than the cost of traditional sources of electricity using organic fuel.

Capacity in the Republic's energy sector, as well as determined by the steady growth rate of electricity demand:

- for several years, the demand for electricity in the Republic has practically not increased. In these conditions, it does not make sense to focus on increasing the demand for electricity by developing traditional energy with large power units. This can lead to reduced reliability of power supply, as well as create additional problems and inefficient use of capacity during peak loads. From the above, we can conclude that the Republic has received a certain "time-out" for the development of traditional energy (excluding issues of modernization of existing power plants). During this period:

- the development of traditional energy is not only inefficient, but also unsafe from the point of view of reliability of energy supply;

- in these conditions, the Republic gets a good chance to develop energy based on the use of RES; in turn, if traditional energy in the Republic certainly suggests the import of power

equipment, for which the Republic does not possess the necessary scientific, engineering and technical basis, the development of renewable energy, by contrast, can contribute to the development of the national industry for the production of components and equipment for individual areas of renewable energy. In particular, it can be hydro turbines of medium, small and micro power, wind and solar power plants, complexes, power plants.

The experience of European countries shows that, despite the fact that the primary objects for renewable energy are consumers located in areas with a complete lack of centralized electricity supply, the largest amounts of energy production from RES can be obtained only when they work on the common network. For example, large wind turbines require reactive energy for their operation, which they can consume from centralized power grids. Also, the stochastic nature of wind and solar energy requires the use of backup power supply, which causes the connection of such installations to centralized power supply networks [2].

## CONCLUSION

In general, there are all the necessary prerequisites for the development of renewable energy in the Republic: environmental, economic, social and energy. However, further development of innovative energy in the Republic requires the following measures:

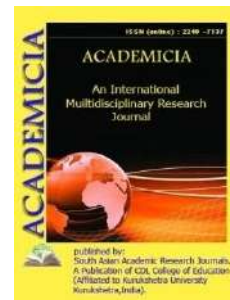
- state subsidies (as a measure that cannot be avoided at the initial stage) for research on renewable energy, for the creation of pilot and demonstration projects on the use of renewable energy, for stimulating the attraction of private investment funds;
- creation of a special Fund for the development of renewable energy, combined with the Fund for saving fuel and energy resources;
- the inclusion of mandatory business plans for new investment projects - energy users, a separate section providing for the establishment of a local source for renewable energy that cover the needs of the consumer in energy in the amount of not less than 5% (and possibly more depending on the region) of the contracted capacity connection to Central or electric heating system (this system is offered in return for serving in other countries, establishing appropriate fees for connecting new plants to the power networks);
- introduction of a point system (LEED) that allows you to quickly evaluate buildings for compliance with requirements (recommendations, proposals) for energy conservation, develop appropriate measures for buildings with different scores to use renewable energy to partially cover their own energy needs.

Thus, the adoption of these measures should stimulate the accelerated development of innovative energy in the Republic of Uzbekistan, which in turn will contribute to the sustainable development of not only the fuel and energy complex of the Republic, but also the national economy as a whole.

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## USE OF MECHANICALLY ACTIVATED COMPONENTS IN ROAD CONSTRUCTION

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### ABSTRACT

*The results of researches for the first time the developed effective compositions of the composite materials filled with the mechano activated natural sands and other ingredients allowing increase in strength properties, heat resistance, a stability shift and crack resistance and in general working capacity and durability of asphalt concrete composite coverings of roads, bridges and airfields are given in article.*

**KEYWORDS:** *Physic Mechanical Properties, Heat Resistance, Composition, Fillers, Mechanoactivation of Ingredients, Stability Shift, Crack Resistance, Working Capacity, Durability, Asphalt Concrete Compositions.*

### 1. INTRODUCTION

In the Republic of Uzbekistan great state, strategic and economic value is attached to technical condition of transport network. In the general transport system of the Republic of Uzbekistan the dominant position is allocated for highways on which about 90% of economic loads and up to 95% of passengers of all volume of the transportations made by all means of transport are transported. The network of highways of the republic, including bridges, makes more than 147 thousand km, of them 50,7 thousand km of the road with asphalt, concrete pavements and 96,3 thousand km with petromineral and crushed-stone coverings. Construction of the steel concrete roads more than 10000 km long passing through desert and mountain regions of the republic is in the long term planned. In the republic there are 11 airfields with a total area of 600 hectares covered with concrete and asphalt concrete.

Sharply continental climatic conditions of Central Asia essentially affect a state and terms of operation of asphalt concrete roads. The durability application of asphalt concrete and oil mineral coverings of roads in the conditions of Uzbekistan because of their insufficient stability shift at high summer positive, and crack resistance - at low negative winter temperatures usually doesn't exceed 2-3 years. [1]. In recent years creation and receiving highly effective composite asphalt concrete coverings of roads, bridges and airfields is of broad interest.

Researches of a number of scientists have created the road-building composite materials capable to be operated in the range of temperatures from - 300C to + 70-800C. However these compositions and mastics not completely meet the requirements of climatic conditions of the Republic of Uzbekistan and in general Central Asia because of the low temperature of fusion of bitumen, decrease in adhesive interactions in system mineral-bitumen, formations of edges and cracks on the surface of asphalt concrete and mastic.

In the world literature are extremely insufficiently lit and there are practically no data on a research of a possibility of increase in heat resistance, a stability shift and crack resistance and, respectively, durability of composite asphalt concrete coverings of roads, bridges and airfields. It, first of all, is caused by lack of evidence-based approach to creation thermo, frost, crack-proof compositions with the improved technological properties. The solution of this problem demands essentially new approach to selection of ingredients taking into account their polyfunctionality, by the preliminary mechanoactivation of their surface promoting improvement of superficial interaction between filler and the dispersive environment, leading to different formation of polystructures in bitumen - polymeric composition. [4-6].

In this regard carrying out researches on creation and receiving import-substituting and export-oriented highly effective, composite materials on the basis of the mechanoactivated and chemically modified ingredients from local and secondary raw material resources of organic and mineral origin for asphalt concrete coverings and the pressurizing mastics for filling of deformation seams concrete and cracks of asphalt concrete roads, bridges and airfields for the purpose of increase their warm and frost-resistant, the shift of steady both crack-proof properties and, respectively, increase in terms of operation in the range of temperatures from - 250C to + 1200C is very current problem.

## 2. Subject and Methods of Research

Creations of effective compositions of import-substituting and export-oriented composite materials with vyoky physic mechanical and operational properties for coverings of the asphalt concrete roads capable to be operated in a wide interval of temperatures from -25 to + 1200C, on the basis of local mineral and secondary raw material resources of organic and inorganic origin.

**Object and methods of researches.** Objects of a research are bitumens of the BN-90/10 (BNI-V) brands, BN-70/30 (BNI-IV), BND-60/90, a rubber crumb, gossypol pitch, hydrolytic lignin, secondary polyvinylchloride, extinguished lime, basalt fibrous filler and activated fine wollastonite, chinaz and

Chirchiq river, yazjyavan and yangiyerbarkhan sandsand compositions on their basis. [1-2].

Object of research was establishment of physical and chemical regularities of interaction of components of model mixes and multiphase compositions from the organic, modified and mechanoactivated mineral and secondary raw material resources; definition of themechanism of



mechanoactivation of mineral ingredients; a research of physicommechanical and operational characteristics of the developed composite materials for asphalt concrete coverings and sealing of their deformation seams and cracks.

### METHODS OF RESEARCHES

Physical and chemical properties are investigated by means of IK-spectroscope. Physicommechanical properties of composition: - temperature of softening is determined by the KiSh method; - fragility temperature by the Fraasu method; - extensibility in accordance with GOST 11056; - durability of coupling with concrete on Tsh RUZ 4/14/2004; - depth of penetration of a needle in accordance with GOST 11501, water absorption in accordance with GOST 26589. [1].

### Results of researches and their discussion

We will consider results of researches of physic mechanical and operational properties and development of effective structures of compositions for asphalt concrete coverings of roads with use of the organic, modified and activated inorganic ingredients on the basis of local and secondary raw materials.

On the basis of results of physical and chemical researches of the modified bitumen's and gossypol pitch for creation of compositions of asphalt concrete coverings of roads we have developed bituminous compositions which structure and properties it is shown in tables 1 and 2. [3].

**TABLE 1 THE DEVELOPED COMPOUNDING OF BITUMINOUS COMPOSITIONS ON THE BASIS OF INGREDIENTS FROM THE LOCALRAW MATERIAL RESOURCES RECOMMENDED FOR APPLICATION IN COVERINGS OF HIGHWAYS**

Name of ingredients	Maintenance
BN-60/90 bitumen	40, 40,40
Gossypol pitch	35, 35,35
Secondary polyvinylchloride	20,23
Secondary polyethylene	23
Hydrolytic lignin	5
hydrated lime	2, 2
in total	100,100,100

**TABLE 2 PHYSICS - MECHANICAL PROPERTIES OF THE DEVELOPED BITUMINOUS COMPOSITIONS ON THE BASIS OF LOCAL RAW MATERIALS AND TECHNOGENIC WASTE**

Name of ingredients	Values of an indicator
Softening temperature, With, isn't lower (GOST 11505-66)	82, 79, 81
Fragility temperature across Fraas, With, (GOST 11507-65)	-20, -22, -20
Extensibility at 25 C, cm, not lower (GOST 11505-65)	4,2,4,1, 4,0
Durability of coupling with concrete, MPa (GOST 11508-65)	0,29,0,79, 0,30
Penetration depth to a needle at 25 C, mm-1 (GOST 11501-65)	30,0,28,0,32,0
Water absorption in 24 hours, %	0,18,0,20, 0,21

Water absorption in 24 hours, % mechanical properties of asphalt concrete compositions, mainly, depend on particle size distribution, extent of mechanoactivation of the fillers and properties knitting.

Considering it, we have conducted researches of properties before mechanical activation of inorganic ingredients on various equipment.

The conducted researches on mechanical activation of barkhan and river sands have shown that the most effective equipment is the dismembrator activator. It is established that such parameters of a dismembrator as a gap between a rotor and the stator, extent of loading and especially speed of rotation of a rotor have significant effect on extent of crushing and mechanical activation of ingredients of mineral origin. Being based on set of the conducted researches of influence of speed of rotation of a rotor, gap between a rotor and the stator and also extents of loading of a dismembrator, at mechanoactivation of natural river and barkhan sands it is possible to take for optimum parameters: speed of rotation of a rotor of 1500 rpm; a gap between a rotor and the stator - 0,20 mm; extent of loading - 3 kg/min. at which the necessary dispersion and the corresponding specific surface of river and barkhan sands and which meet the requirements to raw materials when receiving asphalt concrete coverings is reached. The mechanoactivation mechanism when processing minerals and natural sands in dismembrator installation occurs as follows. At the shock using-up processing mode activation happens generally due to formation of new surfaces to minor change of particle size distribution, and when processing in with great dispatch - raskalyvayushche - the using-up mode activation happens both due to change of particle size distribution, and due to exposure of new surfaces. Researches of influence of mechanoactivation on properties of natural sands have shown what after mechanoactivation of both river, and barkhan sands considerably changes their physical properties and by that they significantly become more active.

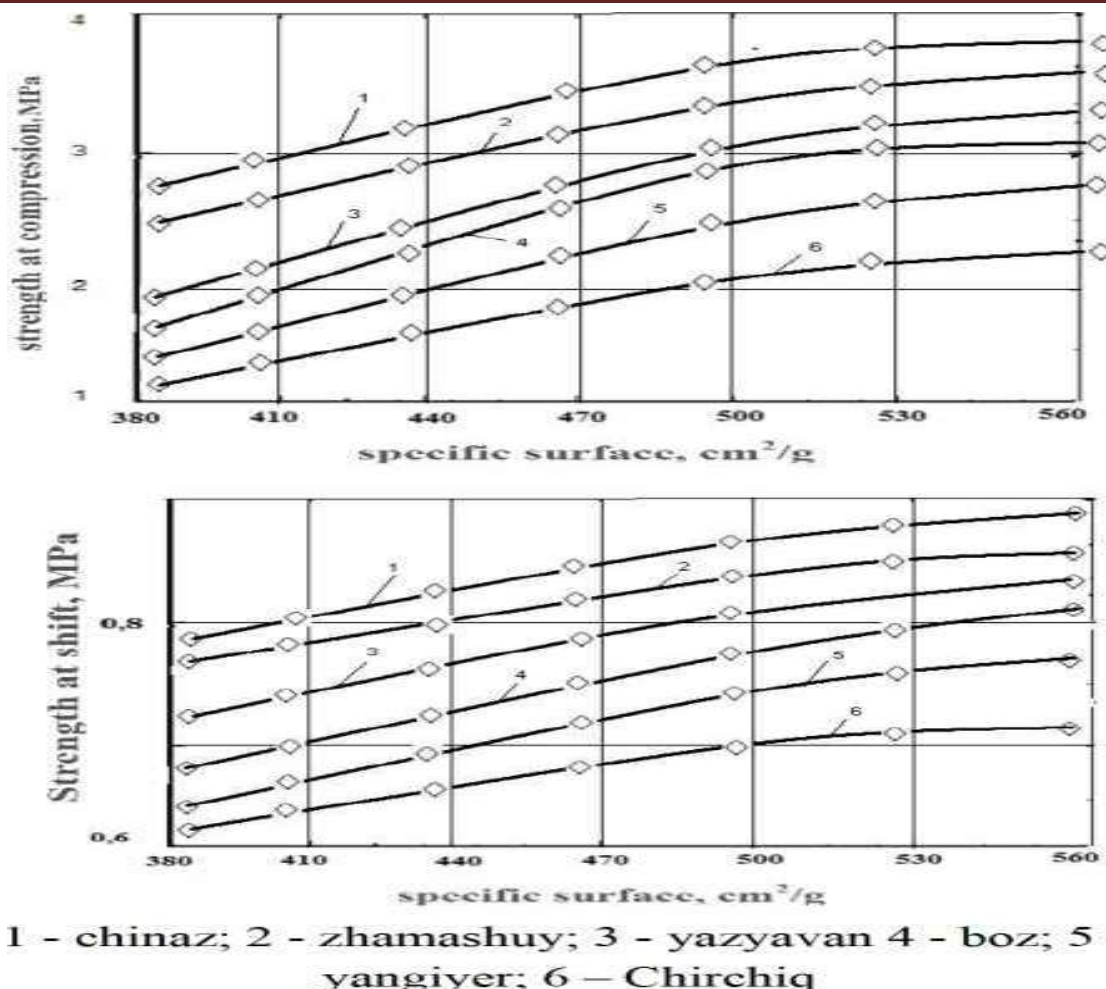
For development of the pressurizing mastics high-disperse particles with more developed specific surface are required. In this regard influence of speed of rotation of a rotor of a dismembrator on extent of crushing of a wollastonite concentrate has been studied. The obtained

data show that when processing a wollastonite concentrate on dismembrator installation with a speed of rotation of working bodies of 2900 rpm significant increase in its dispersion and, respectively, a specific surface is reached. It, in turn, leads to receiving the tonkoizmelchennymechanoactivatedwollastonite concentrate. So, if the initial wollastonite concentratecontains in the structure to 63,3% of particles fineness more than 200 microns, then at mechanoactivation with a speed of rotation of working bodies of 2900 rpm these particles are crushed to level below 200 microns and sharply the quantity of particles with sizes from 100 to 1 microns which 95,4% of the mass of an initial wollastonite concentrate are increases. In the course of mechanoactivation anisotropy coefficient thewollastonitekh of particles approaches unit, and indicators of oil-absorption power increase from 3 to 12 mg / 100 that demonstrates noticeable increase in a specific surface of a wollastonite concentrate after mechanoactivation in dismembrator installation. Therefore, that at mechanoactivation of natural sands on dismembrator installation under the influence of the shock splitting-using up effect there is an activation not only due to increase in a specific and adsorptive surface of the dispersed particles, but also due to formation of the reactive active centers, promoting improvement of interphase interaction which have significant effect on physicommechanical properties of compositions for asphalt concrete coverings of roads.

Proceeding from told and considering that the key indicators defining deformation shift stability coverings, are their durability at shift and compression, we have investigated influence of mechanoactivation on the specified strength indicators of asphalt concrete coverings. And strength properties of asphalt concrete composition, in turn, significantly depend on particle size distribution and, respectively, on the specific surface of mineral powder materials.

In this regard, dependences of strength at shift and compression from value of a specific surface of particles of sand at their mechanoactivation have been investigated and influence of mechanoactivation on durability of asphalt concrete coverings at shift.

Results of researches of durability at compression and shift of the asphalt concrete compositions received with the mechanoactivated natural sands are given in the figure 1 (and, b).



**Figure 1.** Dependence of strength at compression (a) and shift (b) of asphalt concrete composite materials from values of a specific surface of particles of themechanoactivated natural sands

Apparently from the course of curves of the figure 1 (and, b), when using at all mechanoactivated sands increase in durability at compression and shift of the asphalt pavements containing sands with increase in a specific surface of their particles is observed. The maximum increase in strength at compression and shift of asphalt concrete composition materials is observed at value of a specific surface of 550 cm<sup>2</sup>/g. At the same time strength increases from 1,3 to 3,9 MPas, and durability at shift increases from 0,6 to 1,0 MPas respectively.

Thus, introduction to structure of composition of mechanoactivatedsands, both river, and barkhan, allows to increase strength properties and, respectively, deformation shift stability the developed compositions for asphalt pavements of highways.

On the basis of complex researches and the revealed patterns of the received results the effective composition of composition materials with use of the mechanoactivated natural sands and organic ingredients is developed for asphalt pavements of highways, bridges and airfields.

Optimum structures of the developed compoundings of asphalt pavements are brought in tab. 3.

From data of table 4 it is visible that the compositions for asphalt concrete coverings received with use of the mechanoactivated sands modified by gossypol pitch in the place of mineral filler from BND 60/90 bitumen physic mechanical characteristics completely meet for all indicators the requirements of GOST 9128-97.

## CONCLUSION

Evidence-based approach to creation warm and frost-resistant, the shift of steady and crack-proof composite materials on the basis of local and secondary raw material resources for asphalt concrete coverings and sealing of deformation seams and cracks of concrete, asphalt concrete roads, bridges and airfields with the improved physic mechanical and operational properties, capable to be operated in extreme climatic conditions of the Republic of Uzbekistan is for the first time offered.

**TABLE. 3 COMPOUNDING OF COMPOSITIONS FOR ASPHALT CONCRETE COVERINGS**

Structure of an asphalt concrete covering	GOST 9128-97	The developed structures, an mass. %, with the content of sand			
		Chirchiq	Chinaz	Yazyavan	Yangiyer
BND 60-90 bitumen	6	-	-	-	-
BND 60-90 bitumen + Gossipolovaya smola 7% of bitumen weight)		6,042	6,042	6,042	6,042
road metal	45	45	45	45	45
The sand which isn't activated	41	41,058	41,058	41,058	41,058
mineral filler	8	-	-	-	-
The mechanoactivated sand	-	8	8	8	8
total	100	100	100	100	100
Brands developed compositions	-	БК-3-ЧчПП	БК-3-ЧзПП	БК-3-ЯзВП	БК-3-ЯнВП

Comparative characteristics of physicommechanical properties of the developed asphalt concrete coverings are provided in table 4.

The new effective way of increase in physic mechanical properties of asphalt concrete coverings by the introduction to their composition of the mechanoactivated mineral ingredients, in particular, natural river and barkhan sands based on with great dispatch the raskalyvayush which is using up, leading to formation of particles from the developed specific surface with the required geometrical and physical parameters due to polarization of particles at the molecular level, followed by emergence of the heterogeneous dipolar moments which promote improvement of adhesive properties with formation of hydrogen communications as with cationicly- active is developed, and it is anion - active agents what gossypol pitch and, eventually, to increase in interphase interaction between ingredients and bitumen is.

On the basis of the revealed regularities a number of brands of asphalt concrete composite materials is developed for a covering of roads - BK-Z-ChchRP, BK-3-ChzRP, BK-3-YazVP, BK-3-YanVP, the applied mechanoactivated sands differing from each other in the nature. For each specified brand of the developed composite materials the optimum technological modes of receiving their receiving (temperature of heating 150-1800C, mixture time 180 sec., mix temperature at release from the mixer within 120-1550C and temperature of mix by the beginning of laying 110-1200C) providing necessary physicomechanical and technical characteristics are defined.

**TABLE 4 COMPARATIVE CHARACTERISTICS OF PHYSICOMECHANICAL PROPERTIES OF THE DEVELOPED COMPOSITIONS FOR ASPHALT CONCRETE COVERINGS**

Indicators	GOST 9128-97	Norms on mix for dense hot asphalt concrete			
		Chir	Chi	Yazyav	Yangi
Porosity of mineral structure, volume %, for mixes of types:					
G, no more	22	21	21	18	18
D, no more	22	20	20	19	19
Water saturation, volume %, for mixes of types:					
G	1,5-4,0	2,5	2,6	2,0	2,1
D	1,0-4,0	2,0	2,2	1,9	2,0
Residual porosity, volume %	2,2-5,0	3	3,1	3,5	4,0
Strength at compression, MPa, at temperatures:					
+20 With, not less	2,2	3,8	3,5	3,0	3,0
+50 With, not less, for mixes of					
G	1,2	1,8	1,71	1,58	1,6
D	1,3	1,9	1,8	1,64	1,61
0 C, no more	12,0	9,0	8,8	7,91	8,0
Water proofness coefficient, not less	0,85	0,90	0,8	0,90	0,88

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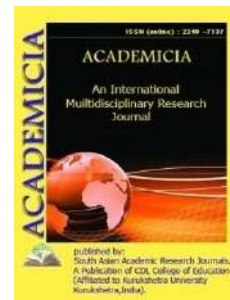
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## THE INFLUENCE OF THE EPIC POEM "ALPOMISH" TO THE MORAL AND ETHICAL EDUCATION OF STUDENTS

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### ABSTRACT

*In this article, the unique qualities of the heroes of the epic poem "Alpomish" reflecting the centuries-old traditions of the Uzbek people and the richness of the oral creativity of the Uzbek people, their special aspects in the upbringing of children were studied.*

**KEYWORDS:** *People's Oral Creativity, Epic, "Alpomish" Epic Poem, Narrator, Spirituality, Morality, Upbringing, Courage, Friendship, Commitment To The Covenant.*

### INTRODUCTION

The education of representatives of the younger generation, who are considered to be future owners in a period of today's globalization, information flow has accelerated and again their negative effects, as young people who can compete with their peers around the world for the development of the country, society in every field, continue the centuries-old traditions of their people, making their ancestors. It can be said that the issue of upbringing, in turn, reflects such concepts as spirituality, enlightenment in its own time. President of the Republic of Uzbekistan Sh.Mirziyoyev in his address to the Oliy Majlis in 2020 put forward idea that "the greatest wealth is intelligence and science, the greatest legacy is good education, the greatest poverty is ignorance". In fact, knowledge, morality is absorbed into the veins of the Uzbek people.

Look, the issue of youth education is recognized as the most outstanding issue in the history of mankind as a whole, and even this is reflected in the pages of our ancient history. In the name of the Uzbek people as a single nation and as a single nation, there is a great and invaluable heritage of the so-called oral creativity of the people, which is in solidarity with it and serves to reveal the

distinctive aspects of the representatives of the people from other nations, through this resource the representatives of the people are after all, as the first president rightly pointed out, "The most ancient stones and inscriptions created with the vision and genius of our ancestors, from the samples of oral creativity of the people, thousands and thousands of manuscripts stored in the treasury of our libraries today, valuable works related to the history, literature, art, politics, morality, philosophy, medicine, mathematics, mineralogy, chemistry, astronomy, architecture, a nation with such a large heritage is rarely found in the world" [1].

The oral creativity of the people is the most viable, ancient, virtuous and always updated of our national values, bringing strength from the yellowing of the artistic thinking of each generation to the bleaching. Ancient examples of oral creativity were preserved in written sources, in particular in the huge memory – "Avesto", which was created in our country, as well as in the works of historians and adiblama, in rock paintings (such as paintings of Sarmishsoy, Zarautsoy), in archaeological and architectural monuments, in labor weapons and household items in a peculiar way. The oral artistic work of the Uzbek people was formed in accordance with the lifestyle, living conditions and level of social work of our compatriots, passed from father to son, from teacher to shogird, from father to generation, continuously polished, perfected, becoming more and more traditional, and finally gained professionalism (professionalism) and reached us through live performance.

One of the largest genres of Uzbek folklore is the epic poems. "Epic poem" refers to the story, adventure, meaning of description and praise and to the story of interesting events, the meaning of praise. The word epic is described in the explanatory dictionary of the Uzbek language as follows: "epic - story. An epic work of poetry and prose about the heroes of the people, known stories of famous adventures that pass from mouth to mouth, rumor definition-descriptions" [2]

M.Saidov noted that the saga is a complex work of art, in order for it to be an epic, it is necessary to have a literary text, music, carefully mastered the art of singing hafizlik and know how to play the sound. [3]

As a literary term, it refers to folk oral creativity and large-scale epic works in written literature. However, the epic poems in written and oral literature differ sharply from each other in their different aspects. The first are the epic poems, which have been sung verbally by narrators in the oral creativity of the people for centuries. The second is the epics, invented by poets in written form. "Alpomish", "The birth of Gurugli" in the category of Gurugli, "Malikai Ayyor", "Ravshan"; "Kuntugmish", "Rustamkhon" and etc. are examples of oral epics. The works of Yusuf Khos Hojib such as "Kutadgu bilig", "Gul va Navruz" of Haydar Khorezmi, "Hayrat-ul-abror", "Farhad va Shirin", "Leyli va Majnun" are written works and should be separated from their mouths.

Folklore scientist Muhammad Saidov noted that the epic poem to be a complex work of art, to be its epic, to be the following required:

- a) Known literary text,
- b) Music corresponding to the text,
- c) Be a singing evangelical singer,

d) The fact that the singer knows how to play one of the musical instruments - the instrument.[3] One of these recipes complements the other. Therefore, even the epic poems it is considered a syncretic - genre.

Educating young people in the spirit of courage, honesty, courage, spiritually pure and a unique pearl of the oral creativity of the people in adolescence competently the old friend of epic poem "Alpomish" teaches us the qualities of patriotism provides. To be just and truthful, to guard their land, family, stronghold, to be friendly, to be honest, to be honest, to be honest, to be honest with any of the holy shrines of our fathers. Teaches to keep from encroachments, to be morally clean. The epic poem "Alpomish" is a vivid example of our creative thinking, spiritual wealth how deep our historical roots are, in what environment our people are bright description of the formation, development, how to overcome difficulties provides. We are spiritually harmonious, morally clean, conscientious Uzbek on the example of Alpomish we see the appearance of their sons.

In the epic, each hero can become an example for today's youth with his beautiful qualities. As a proof of our word, it is described very beautifully that the father of Alpomish as a Boyburi heard the talk of his son zakot, even if he had his own state, that is, so that the Boysari would not go out to stingy, as zakot said in the epic poem, it is described very beautifully that only one "goatling" asks, an Alp young man with the tongue of the Uzbek woman Qaldig'och can move the Alpomish.

About this, the literary scientist Kazakboy Yuldoshev in his work "interpretations of the Alpomish" says: "the words of the Qaldirgoch, despite his young age, are not thoughtful mind, punctuality, "boiling" is not accidental. In general, in the life of the species, the mind of a woman is decisive. The power of the Uzbek woman is not in the wrist, waist, but in the language of the head-eyes. The Uzbek woman is strong in her weakness. She almost always keeps in touch with the fact that he does not quarrel with a man, he is content because he does not receive for his sake, he does not go against a man. [4] The Qaldirgoch told his brother:

*Aytgan so'zning poyomini bilsang-chi,*

*Ko'z kuyugi, ey narmoda, o'lsangchi.*

*Kecha-kunduz Haqqa fig'on etmagan,*

*Qilichiga qirmizi qon qotmagan,*

*O'z moliga o'zin vaji o'tmagan.*

*...Qultoyning do'qidan qaytib kelasan,*

*...Sen ham odamman deb qanday yurasan?..*

The above remarks once again prove that the original Uzbek aspects such as Uzbek shame, courage, solemnity are characteristic not only of the guys, but also of the Uzbek girls, and today the woman-daughters she calls her to seriousness, awareness, reminding them that together with chastity they carry the shame of her and other people. It remains to be said that the landscape of the Qaldirgoch watching the Alpomish is also beautifully depicted in the scene, which in reality is reflected high respect for his network, so eagerly with the aim of giving him moral support, saddling the horse of his liver, who is currently on the journey:

*...G'arib qulga Egam bo'lgay mehribon.*

*...Sog' borib salomat kelgin Alpinjon.*

*...El ko'chirib Olatovdan oshirdim,*

*Borgin, emikdoshim, Haqqa topshirdim.*

At first glance, the view that the Alpomish ate a bitch from a horse can not, because his pride is strong, his sister tried not to report to the Qaldirgoch, the landscape that he had side by side with the earth can lead a person to the wrong dream. At the same time, Alpomish, embodying a deep meaning in the phenomenon, did something original with his upbringing, typical of Uzbeks, although Qultoy was a slave, his grandfather. After all, in Uzbekistan slaves were not treated like other peoples. After all, in Uzbekistan slaves were not treated like other peoples. Because we Uzbek tradition "respect the adult-he, little self-esteem" and did not know as slave that Qultoy Alpomish, put his respect in place. The same lines can be seen in the treatment of the founder of the Uzbek novel, Abdulla Qadiri, who made his slave Hasanali of Otabek in the work "Utgan kunlar". The samples of oral creativity and the rules of etiquette inherent in the Uzbek people are common in the masterpieces of our written literature.

One of the main heroes of the epic poem, chastity to Uzbek girls - it is not exaggerating if we say that the image that can become an example of decency takes place in the hearts of the readers with its distinctive character and upbringing Barchinoy. As we read the epic poem, we are sure that in different difficult situations everyone can become an example for the youth of all times with a thoughtful mind, thoughtful mind. In particular, Qorajon, who conveyed that his Alpomish had come, "If it comes to Alpomish, although it has come. As the Alpomish came, will I keep up with the skirt of the Alpomish?" if we observe cases of loyalty to the promise inherent in the Uzbek people and courage when he says that he meets four conditions and fulfills four conditions, we can know the kindness of Uzbek girls towards his father when leaving his father in country Qalmoq through the following sentences spoken in his language.

*Otam deb qilarman bul zamon faryod*

*Buzilsin, yiqilsin ul charhi noshod*

*Dunyoning g'amidan bo'lmadi ozod*

*Qalmoqlardan qutulmadi salomat,*

*Otama bo'ldi vahmi qiyomat.*

In the epic poem, we can again see the image of a true friend on the example of a Qorajon. Their trust, loyalty and affection for each other are of paramount importance to today's youth as well.

In the epic poem, the issues of brothers, relatives, liver are described in such a wonderful way that we can see these landscapes in the way that the Boysari of the Boyburi, the Alpom of the Qaldirgoch, and again in the way that the qalmoqs' did to the Qorajon. You can learn from the following words, which the brothers of Qorajon, who accepted another religion, said in a high tone, which gives the landscape of the status of those who want to punish, but do not allow their conscience to do so.

*Yig'ilib qalmoqlar zo'rlik qiladi,*

*O'ldirmoqqa ko'zi qiymay turadi.*

As we read the epic poem, we can be sure that the spiritual state of the Surkhail old woman, her suffering, is described at an extremely thorough level. She also wants to see the fullness of her mother and children with a soulful tongue, but on this path she also goes to the level of seduction of Toychikon. It is known to all that no mother can admit who has touched her child, and this, of course, is due to her boundless love for her child. Therefore, today, when the Uzbek daughter, as an educator of the original continuation of our nation, was able to show her child the right way, starting from the mountain road, it is necessary to realize that she could be proud, first of all, before her conscience, and then showing her child with a bright face before country, that this is my child.

In addition, negative images are also given in the epic poem, through which the readers draw the necessary conclusions about what should not be done, as they say, "The mistress is sickle". In particular: the brother of the Kukaldos looks at the Qorajon:

*Menga dushman bo'lgan odam o'ladi,*

*Xotinimni qaytib o'zbak oladi.* to say that it was unfair to everyone who had someone else's daughter and who has not yet become a wife to Barchinoy.

In the epic, not only the intelligence of people, but also the kindness and specific stubbornness of animals to the owner, are also beautifully described, which is reflected in the example of Boychibor and Kukdunan in the epic poem. With Boychibor false racing, you really notice the race. Therefore, the soul does not sit down to lie. After all, as the epic poem says, "in the game win really digs".

The first president of our country, Islam Karimov, who knows that "the spiritual perfection and enlightenment of the nation and the people should be regarded as a universal public policy" in the work of "High spirituality – invincible power" -, "of course, it has always been of great importance for us to put kindness to the child, to idolize their blood, but to bring our children to adulthood on failure to pay attention to this issue can be seen in many life examples not only for some parents, but also for the whole society," [1] the head of our state, Shavkat Mirziyoyev, today, having come out on the field as a logical successor of these works, laid the foundation for honorable and responsible work, bringing up the children of our people with rich spirituality.

## CONCLUSION

In summary, each hero of the epic poems "Alpomish", which is considered a cultism of the epic poems of the Uzbeks and these epic poem, whether he is a positive or a negative hero, affects the education of the original Uzbek Youth, keeps the centuries - old traditions of our people in himself, does not miss the leadership in carrying out the function of the program of action. After all, about the main hero of the epic poem Alpomish, the First president of our country Islam Karimov said that "The invincible power of our people – in the image of the Alpomish, we see the spiritual image of today's alpomish - our sons who are able to protect our homeland from evil eyes and troubles, and who, if necessary, are ready to sacrifice their lives on this path. I am sure that every generation will cherish this heroic epic and bring it to the next generations. Singing



this heroic epic, no power can overcome the nation that made it to its heart and to its consciousness” he was right when he said.

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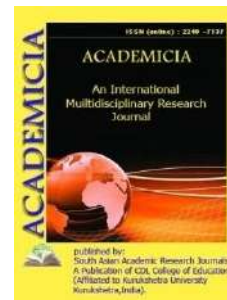
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## IMPORTANT FEATURES OF CASTING SYSTEMS WHEN CASTING ALLOY CAST IRONS IN SAND-CLAY MOLDS

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### ABSTRACT

*This article provides details on the laminar and turbulent flow of liquid metal from alloy cast iron to the production of quality castings in sand-clay molds. It was also important to properly select the composition, ductility, penetration, furnace and casting system of the alloy to obtain a quality casting.*

**KEYWORDS:** *Chromium, Manganese, Molybdenum, Casting System, Alloy, Riser, Sand-Clay, Mold, Supplier, Casting Cup, Laminar, Turbulent, Bucket.*

### INTRODUCTION

Nowadays, one of the most important issues is to provide the production and processing industries with various details obtained by high-quality casting. Because in order to obtain a quality casting, it is necessary not only to have quality molds, but also: at what temperature and in what furnace to liquefy the alloy; correct selection of the injection system and the temperature of the liquid alloy poured into the mold; the fluidity, ductility and geometric shape and size of the cast alloy must be taken into account.

According to the statistics conducted by professors and teachers of the department "Casting Technology", at present in many enterprises of mining, metallurgy, chemical engineering and other similar abrasive operating conditions for the production of many parts from alloy cast iron.

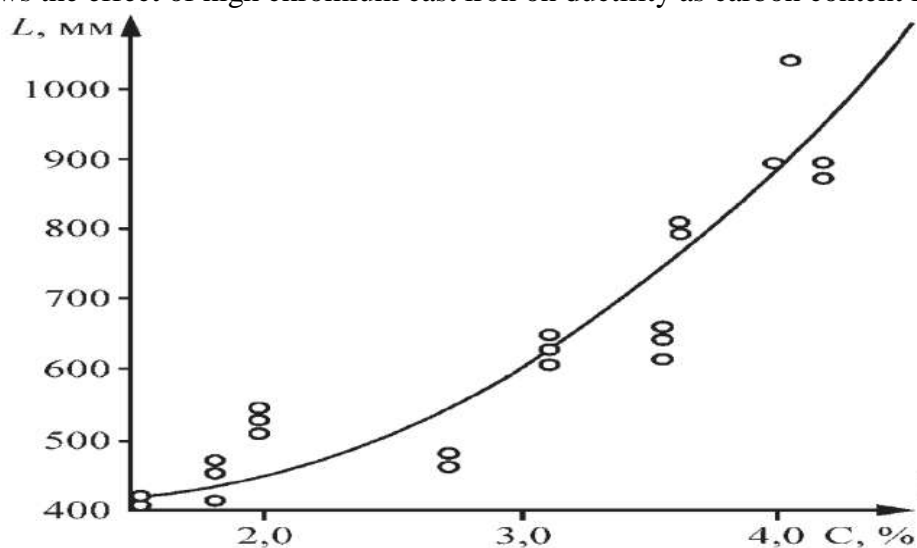
The main brands of cast iron are ChX16, ChX16M2, ChX22, ChX22S, ChX28D2, ChX32, ICh290X12M, 280X29NL and others. In this case, according to the instructions of GOST 7769-82, cast iron may contain the following alloying elements after the letter Ch: X-chromium, S-silicon, G-manganese, N-nickel, D-copper, M-molybdenum, T-titanium, P-phosphorus, Yu - aluminum. Alloy castings are mainly made of parts that work in operating conditions with high aggressive environments and abrasive wear. Therefore, there is great interest in these cast iron in the production and processing of our country.

Although alloyed cast irons have high performance properties, obtaining quality castings from them will improve somewhat. Because cast iron is alloyed with various alloying elements, especially chromium, its alloying properties improve depending on the amount of chromium[1]. In addition, the abrasion resistance of alloy castings is very sensitive to the formation of its microstructure, that is, when obtaining alloy castings, it is necessary to ensure not only the quality of the casting, but also the formation of microstructure that provides corrosion resistance of cast iron.

The corrosion resistance of cast iron is mainly provided by carbides with a structure of  $(C, Fe, Mn)_7 C_3$ . The reason is that this carbide is 1,5-2,0 times harder than cementite carbide. Another complication associated with this  $(Cr, Fe, Mn)_7 C_3$  is that the amount of chromium in cast iron, which has 3% carbon for the formation of carbides in the system, is very high, ranging from 12 to 27%.

To determine the optimal composition of white cast irons was studied the effect of carbon and chromium on the casting properties of these alloys. The content of these elements varied within 1,53 - 4,15% for carbon and 12,84 - 31,5% for chromium with constant the content of the remaining elements 1,4 - 1,6% Mo, 0,4 - 0,7% Si and Mn (table 1). All heats were overheated to 1500° C, the samples were poured at temperature 100° C above the melting point casting alloy.

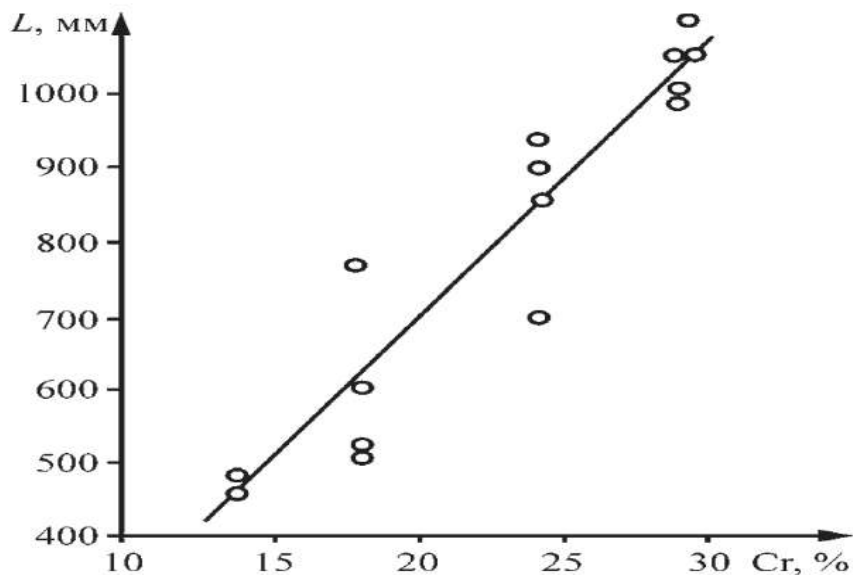
Figure 1 shows the effect of high chromium cast iron on ductility as carbon content increase.



**Fig. 1. The effect of changes in carbon content at 12 – 14 % Cr on chromium cast iron has been shown to affect ductility.**

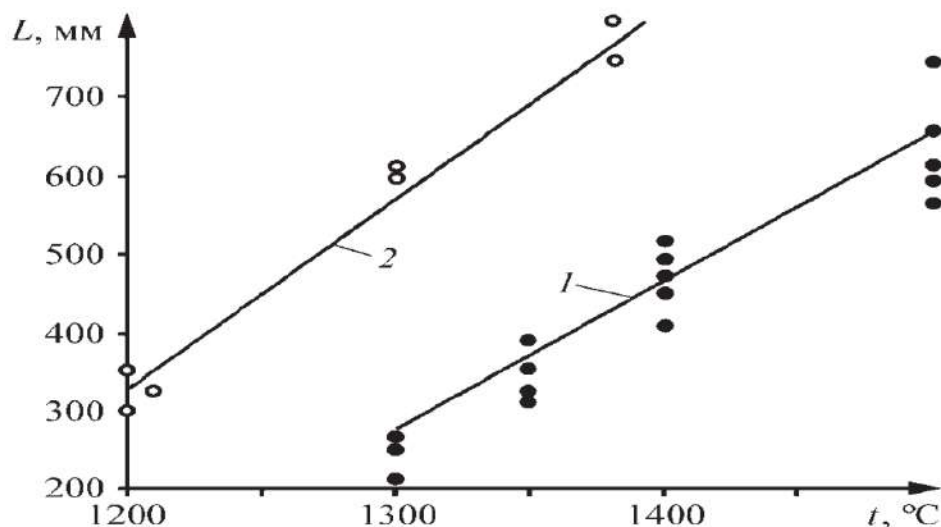
**TABLE 1. THE EFFECT OF CARBON AND CHROMIUM ON THE CASTING PROPERTIES OF HIGH-CHROMIUM CAST IRONS**

Amount %		Temperature, °C			linear contraction %	Fluidity, mm
Carbon	Cr	liquidity	solidus	Pouring temperature		
1,53	12,6	1410	-	1490-1500	-	415, 410
1,53	13,0		-		2,18	-
1,8	12,2	-	-	1440-1460	1,91	470, 460, 420
2,19	13,5	1335	1220		-	-
1,96	13,1	1370	-		1,8	550, 530, 520
1,98	13,6	1340	-		-	-
3,02	12,84	1265	1220	1370-1380	-	-
3,03	13,2	1285	1220		-	-
3,10	13,7	1280	-		1,74	650, 640, 610
3,6	13,0	1210,	1210	1310-1330	-	-
3,55	12,9	-	-		-	660, 650, 610
3,57	14,2	1230	-		1,64	820, 800
3,67	13,5	1225	-		-	-
3,94	12,1	1230	-	1320-1330	-	1050, 900
4,15	13,8	-	-		1,78	880, 900
4,0	12,3	1220	1180		-	-
2,86	18,1	1280	-	1390-1400	-	765, 610
2,78	18,8	1290	1230		-	-
2,84	17,9	1275	1250		-	-
2,85	16,4	-	-		2,13	520, 500
2,72	24,5	1280	-	1380-1400	1,99	850, 700
2,79	23,8	1280	-		2,0	-
2,84	24,3	-	-		1,98	930, 900, 850
2,80	29,3	1300	-	1390-1400	-	1100, 1000
2,84	31,5	1260	1260		2,12	-
2,92	29,0	-	-		2,08	1000, 1020, 1050



**Fig. 2. Fluid flowcast iron (2.8–3.2% Carbon) incontent dependentchromium**

Increased chromium content also increases the fluidity of cast irons (see Fig. 2). Increase the chromium content in the range of 18-30% practically does not affect linear shrinkage of cast irons. Increase fluidity with increasing carbon and chromium content in these alloys, apparently due to the increase in their heat capacity.



**Fig. 3. The fluidity of cast irons depending on the pouring temperature:**

**1 - cast iron ICh290H12M; 2 - gray cast iron**

With an increase in cast iron pouring temperature (from 3% carbon and 12% chrome) their fluidity linearly increases and at 1500° C reaches 600 mm in the Keri spiral (Fig. 3).

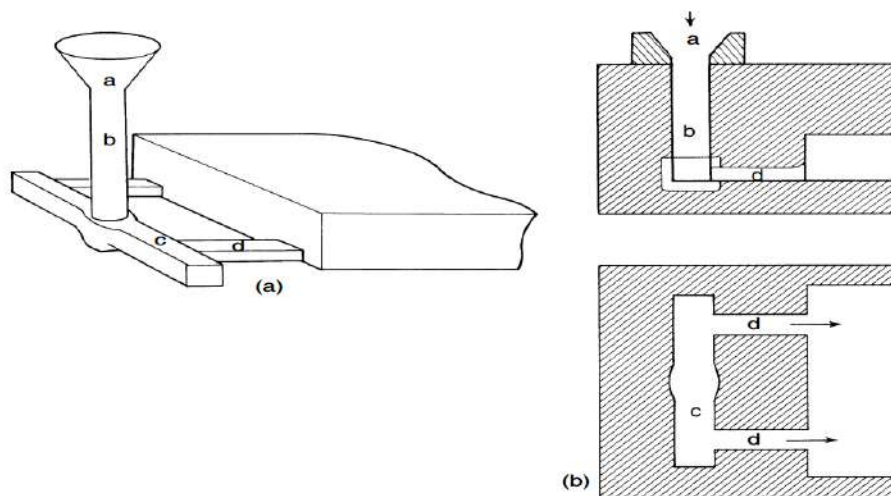
The fluidity of cast iron ICh290X12M (2.8–3.2% carbon; 12–14% chrome; 1.4–1.6% molybdenum; 0.4–0.8% silicon and manganese) is linearly related to its overheating temperature (see Fig. 3) [2].

As can be seen from fig. 3, high-chromium cast irons (12–14% Cr) have high fluidity close to that of graycast iron. This means that we need to choose the right casting system to get a quality casting, taking into account the ductility of alloy castings.

### Essential features of gating systems

In the simplest of all gating systems the metal is poured down an open feeder head situated at the top or the side of the casting. This technique is often followed for small castings, in which the provision of an additional system of mould passages would greatly lower the yield of useful metal; at the same time the temperature distribution is favourable and the distance through which the liquid metal must fall is short.

In most cases, however, a separate gating system is used, the metal being distributed through passages into selected parts of the mould cavity. The essential features of a typical system are illustrated in Figure 4. The metal is poured into a bush or basin, whence a downrunner or sprue descends to the required level. From the base of the sprue further runners conduct the metal to the ingates, through which it enters the casting impression. Entry may be directly into the casting or into one or more feeder heads. The gating system may consist of a single passage or the metal stream may be subdivided and directed into the casting at widely dispersed points. For very large castings more than one sprue may be required, the individual sprues then being filled either from separate ladles or from a common tundish or launder. In addition to these basic features the gating system often incorporates devices for the separation of non-metallic inclusions [3].



**Fig. 4. Principal features of a gating system. (a) Bush or basin, (b) sprue or down runner, (c) runner, (d) ingates**

Before examining gating systems in more detail, consideration should be given to the general nature of metal flow in foundry moulds.

The mould erosion tendency during casting is accentuated by turbulent as distinct from smooth or laminar flow of the molten metal. In turbulent flow, although the mass of a liquid may have a resultant direction, there are wide local variations of direction and velocity within the stream. Laminar flow gives way to turbulence when the mean velocity reaches a critical value for the particular combination of metal properties and mould dimensions.



The balance of conditions determining the type of flow is represented in the Reynolds Number. [4].

$$(Re) = \frac{Vd}{\nu} \quad (1)$$

where:  $V$  = mean velocity,

$d$  = linear dimension of the mould channel section,

$\nu$  = kinematic viscosity of the liquid.

Turbulent flow is associated with high values of  $(Re)$  and therefore with high velocity, large flow channels and low kinematic viscosity. The value of  $(Re)$  at which flow becomes turbulent depends upon the geometry of the system but normally lies within the range 2000–4000. Turbulence will occur at lower values if smooth flow is disrupted by sudden changes in the dimensions and direction of the passages. Under most foundry conditions, given the minimum passage dimensions and flow velocities needed to avoid premature freezing, turbulent flow is encountered; a primary function of the gating system is to minimize its violence by shaping a smooth path for the liquid and by using the lowest flow rates compatible with mould filling. Streamlined passages are thus ideal.

### Design of gating systems

Most modern studies of gating systems have been based upon consideration of two laws of fluid dynamics. The first of these, the Equation of Continuity, states that the volume rate of flow is constant throughout a system and is expressed by:

$$Q = A_1 V_1 = A_2 V_2 \quad \text{B.X.} \quad (2)$$

where:  $Q$  = volume rate of flow,

$A$  = cross-sectional area of flow passage,

$V$  = linear velocity of flow.

The linear velocity of flow in a system is related to other factors in Bernoulli's Theorem, which states that the total energy of unit weight of fluid is constant throughout a system:

$$\frac{V_1^2}{2g} + h_1 + \frac{P_1}{\rho} = \frac{V_2^2}{2g} + h_2 + \frac{P_2}{\rho} \quad \text{B.X.} \quad (3)$$

where:  $V$  = linear velocity of flow,

$h$  = height above the datum plane,

$P$  = pressure,

$\rho$  = density.

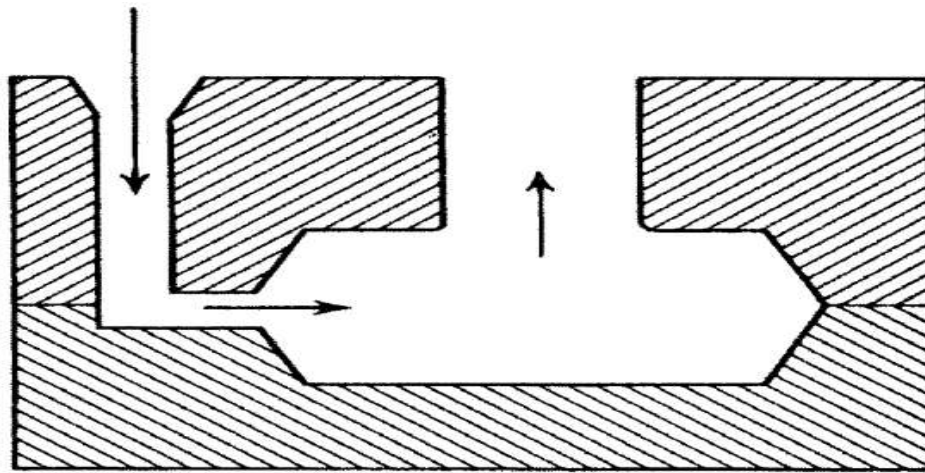
The successive terms in the equation represent the kinetic, potential and pressure energies respectively. Flow calculations based upon these laws are subject to errors arising from friction, from sudden changes in cross-section, and from sharp changes in direction at bends and junctions. Corrections can, however, be applied using experimentally determined loss coefficients. Research has indicated that such losses are not so high as was at one time thought and that they are in many cases negligible [5].

These principles may be used to estimate the velocities of flow in individual systems. The behavior of metal in the down runner, for example, may be deduced from consideration of the linear velocity attained in a metal stream falling from an initial point of rest in the absence of frictional resistance. In this case, under atmospheric pressure, the potential energy at rest may be equated directly with the kinetic energy at any point in the moving stream. Thus, using the point in the stream as datum, the Bernoulli equation 3 becomes.

$$h = \frac{v^2}{2g} \quad (4)$$

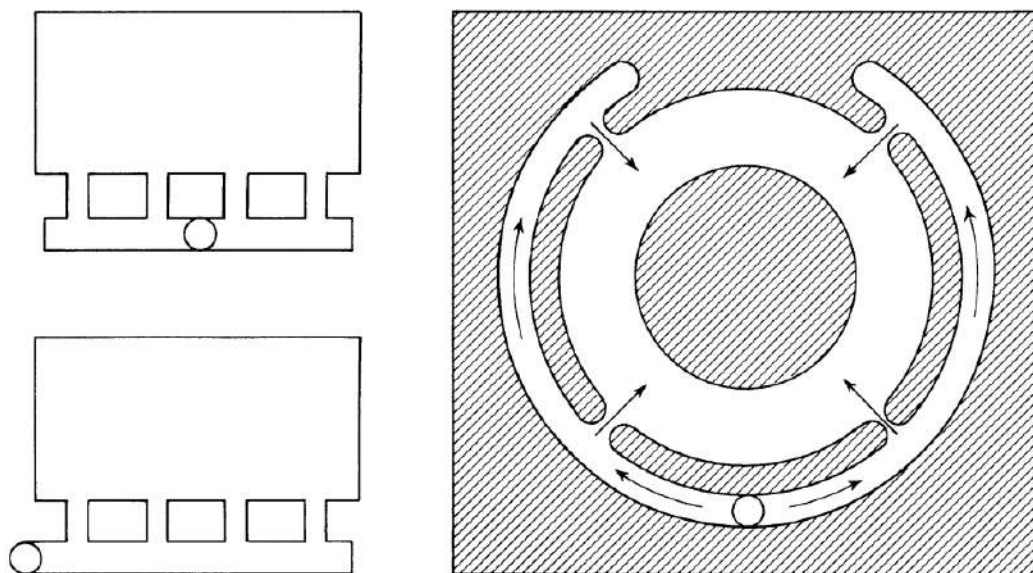
Thus,  $V = (2gh)^{1/2}$  and the velocity is simply related to the distance offal from the initial point of rest.

In order to get a quality cast, we definitely need to take into account the ductility of the cast iron. Due to the high ductility of gray cast iron, the amount of chromium in it significantly affects the ductility of cast iron. Therefore, we need to pour the desired casting in the side casting system to get quality in the sand-clay mold.



**Fig. 5. Side gating**

The purpose of choosing a side casting system is to be able to fill the mold cavity evenly and to provide a good supply of metal in the castings to account for the ingress in the castings. Due to this, we can reduce the consumption of excess metal. It is also recommended that we use multi-branch suppliers when obtaining large castings [6].

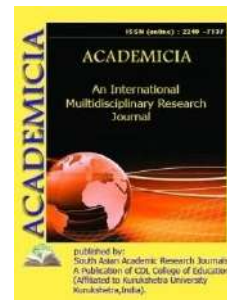


**Fig. 6. Multiple ingate systems. (a) and (b) parallel finger ingates, (c) circumferentially placed ingates**

The reason is that our liquid metal needs to fill the mold cavity well in a short time. To do this, it is advisable to use the following multi-branch supply injection system. Through this casting system we will be able to get the quality casting we need.

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## OPTICAL AND RADIATION TECHNIQUES OPERATIONAL CONTROL OF THE COCOON AND THEIR EVALUATION

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### ABSTRACT

*Highlights the urgent problem today operational control cocoons in their initial processing. The analysis of the optical and radiation methods of control of process parameters cocoons. The block diagram and principle of operation of the optical device to control the density cocoon shell based on measurements of the luminescence emission intensity upon irradiation of UV radiation and device for studying the light transmission cocoon shell. The principle of operation of the photoelectric control unit density cocoon shell. The block diagram and principle of visual-optical and radiation methods and devices for monitoring cocoon shell. It is established that the optoelectronic methods and process parameters control devices cocoons is more promising.*

**KEYWORDS:** Cocoon, A Process Variable Output Of Raw Silk, The Degree Razmatyvaemost, Shelkonostnost, Stiffness, Thickness, Shell Linear Density. Emitting Diode, A Photo detector Device, The Light Transmission, Luminescence, Nymph, Scattering, Absorption.

### INTRODUCTION

Development of technical equipment and automation, determination of process parameters and their sorting is an actual scientific and technical problem, a solution that will ensure filature quality raw materials. Quality control of raw silk, at all stages of its production, is a necessary and indispensable, particularly on a primary treatment stage cocoons.

Improving the quality of cocoons largely determines the degree of razmatyvaemosti silk weight of their shells, the output of raw silk reeling performance of equipment and labor, and ultimately increase revenues and profitability silkworm industry. With the existing technique acceptance from silkworm live cocoons on their total weight and determining the quality of the cocoon raw organoleptic through the shell characteristic - it is difficult to fight against the collection and delivery of cocoons immature and low quality [1,2,3].

The technology of silk production the largest share of manual labor associated with the lack of an automatic non-destructive testing methods and means of sorting cocoons in various quality parameters and defects.

It should be noted that the cocoons of silkworm, which is produced from natural raw silk, is a product of living, body, whose characteristic depends on Rearing conditions. Therefore, even within one species differ in the gauges cocoons, stiffness, power, shell thickness, defects, etc. [4].

To obtain a high yield of raw silk and preservation process rhythmicity cocoons before unwinding grouped in production batches with approximately the same process parameters, which require the same cooking mode and unwinding [5,6,7].

Development of optoelectronics and its elemental base, creation of new efficient semiconductor sources and detectors of radiation in the infrared region of the spectrum create preconditions for solving the problem of recognition of cocoons of process parameters cocoon [8,9,10].

**Main part.** The main process parameters during the initial processing of the cocoon is parameters such as thickness, hardness, density, power and vnutripyatnistost membrane [4,6].

### 1. Methods and means of control and sorting cocoon shell of density.

Density - is the weight of the cocoon per unit volume and given by the expression [6]:

$$\gamma_0 = \frac{m_0}{S_l l} \quad (1)$$

Where:  $m_0$  - the mass of the shell;  $S_l$  - shell area;  $l$  - the shell thickness.

Hitherto envelope density is determined in vitro by measuring the volume and weight of the shell.

In [11], the authors conducted a study to identify luminescence method envelope density. A block diagram of the device for carrying out the method is shown in Fig. 1. It contains a mercury lamp RL, collecting lenses SL1 ÷ SL4, filter SF1 (PS-7), controlled QA cocoon prism RPP, filter SF2 (OS-I7), photomultiplier photomultiplier tube (PMT-17), an electronic amplifier and power plant ammeter ICA.

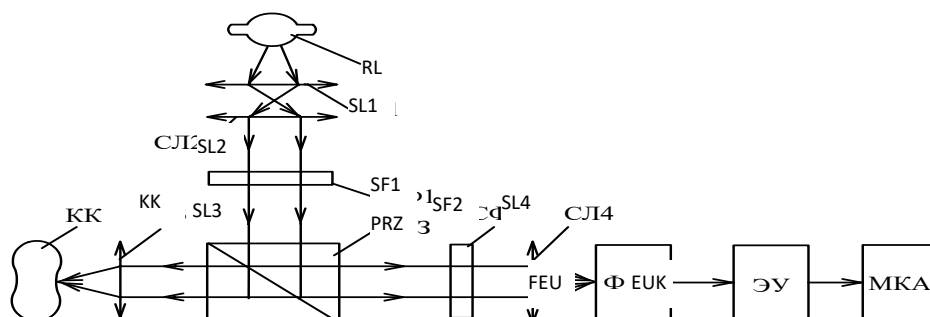


Fig.1. The apparatus of density determination method luminescent shell.

The apparatus operates as follows: UV radiation from the source is directed onto the surface of Controlled cocoon when exposed cocoon shell is excited and begin to emit luminescent radiation. Recently released via filter from the general background radiation and supplied to a light-sensitive area of the photoelectric multiplier, whose output is connected to an amplifier through an electronic micro ammeter. According to researchers, the intensity of the fluorescent radiation is proportional to the envelope of its density.

However, it should be noted that the luminescence of the inner layers of the shell can be absorbed subsequent layers towards the surface of the shell cocoon, which leads to a decrease in overall intensity of the luminescent cocoon radiation. In addition to the luminescence intensity significantly affects membrane contamination.

Thus, due to the high error and the unacceptability of this method is not widely used for automatic sorting of cocoons envelope density.

In [12] a light transmission cocoon shell studied and found that the degree of light transmission cocoon determines process parameters that directly affect the yield of raw silk.

A block diagram of devices for investigating the degree of light transmission cocoon shell is shown in Fig. 2.

The apparatus operates as follows: The test pod is cut by the equatorial cross section and half cocoon shell QoS is set between the slit and the monochromator SHM1 OM microscope lens.

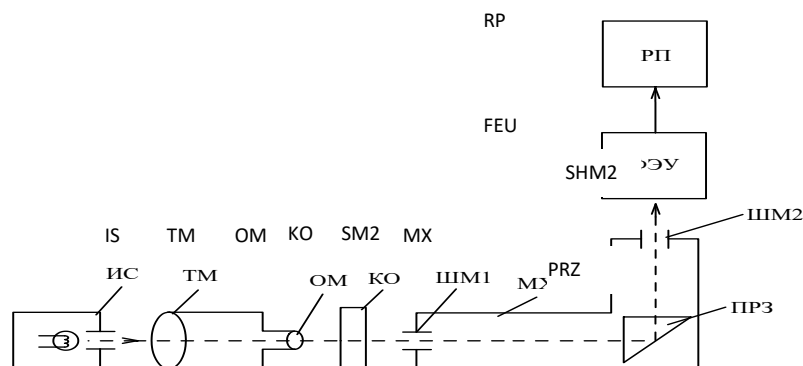


Fig. 2. Device for the study of light transmission cocoon shell.

Next, the light from the source IP, passing through the pipe TM microscope strikes the surface of the controlled section KO investigated cocoon. The light flux passed through the shell hits the



entrance slit ShM1 monochromator, SHM2 outlet slit, which is installed photomultiplier PMT. The output of the latter is amplified by an amplifier and supplied to a recording device RP.

Before determining the flow of radiation through the shell all cocoons were divided into three classes.

The experimental results showed that the highest flux is absorbed in a cocoon shell of the first grade. Current corresponding to the intensity of flux passing through the cocoon is 29  $\mu\text{A}$ . Shell II-th grade stream is passed ahead I-th grade and less than III-th kind, a corresponding current flow rate is 41  $\mu\text{A}$ . Skins cocoons III-th grade passed stream is greater than the other grades and the corresponding current is 55  $\mu\text{A}$  microammeter.

This method is not acceptable for the automatic inspection and sorting of the cocoons. Since it is carried out destructive method.

Based on the optoelectronic method, first, we have developed a device for automatic and NDT sorting cocoons of shell density [13]. The principle of operation is based on measuring the weakening of the intensity of radiation transmitted through the sheath flow cocoon.

Past the radiation flux through the cocoon based on [14] is defined;

$$\hat{O}_\tau = \hat{O}_0 \exp(-\lambda_c / \gamma) \quad (2)$$

Where:  $\lambda_c = [P(\lambda) + \alpha(\lambda)](m / \Delta S)$  - spectral coefficient; (3)

$P(\lambda)$  - dissipation factor;  $\alpha(\lambda)$  - absorption coefficient cocoon shell;  $m$  - the mass of the shell;  $\Delta S$  - the area is illuminated by a shell portion;

$\gamma$  - density of the envelope.

Solving equation (2) yields:

$$\gamma = -\frac{\lambda_c}{\ln \frac{\hat{O}_\tau}{\hat{O}_0}} \quad (4)$$

The output voltage of the photodetector is defined as: [15]

$$U_\tau = \hat{E} \hat{O}_\tau \quad (5)$$

$$U_0 = \hat{E} \hat{O}_0 \quad (6)$$

where:  $K$  - conversion coefficient photodetector.

Then, the expression (4) with (5) and (6) has the form:

$$\gamma = -\frac{\lambda_c}{\ln \frac{U_\tau}{U_0}} \quad (7)$$

A block diagram of apparatus implementing the method is shown in Fig. 3.

The apparatus operates as follows: The master oscillator - MH generates a sequence of rectangular pulses which control the switch emitting diodes - and KID switch photodetectors CFP CFP and CDS switches serially connected to a power source opton pairs emitting diode and photodetector ID AF. Streams emitting diodes passing through controlled cocoon - QC on different parts of the shell are applied to photodetectors - OP1 ÷ FP7.

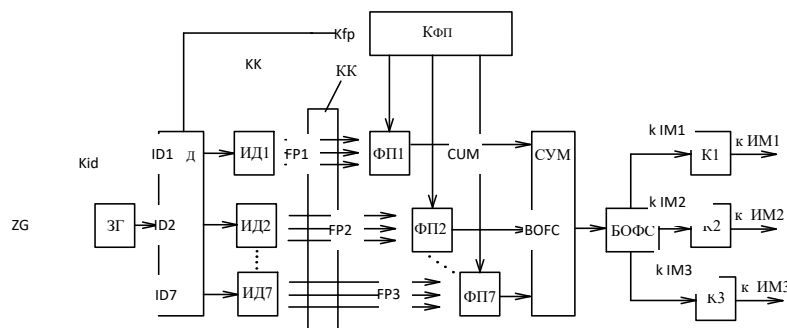


Fig. 3. The optoelectronic envelope density control device perimeter.

Photoelectric signals photodetectors are fed to the adder SUM, which is connected to the output of the photoelectric signal processing unit - BOFS. Appropriate control signals from the output BOFS served on electronic keys - KI ÷ Short circuit, which is controlled by three executive IM1 mechanisms ÷ IM3, are triggered depending on the shell density (minimum, average and maximum density).

A block diagram of a more advanced embodiment of the device shown in Fig. 4. It comprises a rectangular pulse generator - GOP pulse distributor - RI, pulse shapers - FI1 ÷ FI1, amplifiers - U1 ÷ U3 emitting diodes - ID1 ÷ ID3, control zones - QC, photodiodes - PD1 ÷ FD3 adder - MSA, the threshold device - SP, matching device - SU and electromagnets - EM.

The difference of this apparatus from the previous in that the photoelectric signal processing unit is designed as a threshold device connected in series and a matching device, and operating principle similar to the apparatus shown in Fig. 3.

Determination shell density cocoon listed devices are based on the expression (7).

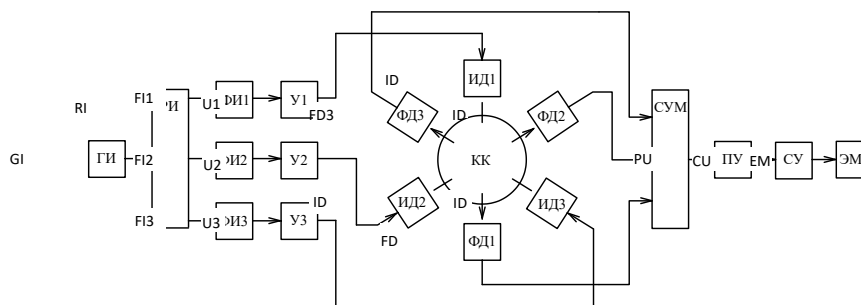


Fig. 4. Improved optoelectric density control device casing perimeter.

Further investigation of the above methods and tools showed that the use of the expression (7) to determine the density, leads to significant errors.

In expression (3) an integral part of the  $m / \Delta S$  - capacity (areal density) of the skin, and it is not constant and varies from 0.010 to 0.25 mg / mm<sup>2</sup>. Besides, the envelope density is insufficient

characterizes shelkonostnost, i.e. yield raw silk, i.e. two shells cocoon having the same density at various thickness can have varying degrees shelkonostnosti.

Thus, on the basis of the analysis and the expression (1) we can conclude that envelope power as compared with the density is more precise process parameter determining shelkonostnost.

## 2. Power Control Methods shell.

More accurate parameters shelkonostnosti, the output of raw silk and cocoon razmatyvaemosti length continuously, the power envelope is defined by the expression [16,17].

$$M = \frac{m_0}{S_l} \quad (8)$$

Where:  $m_0$  - the mass of the shell;  $S_l$  - membrane area.

From (8) we see that the power - it is the mass of the shell per unit surface area and in the physical sense reflects the areal density. Power envelope determined in practice only in laboratory conditions, weighing 5-7 mm diameter disk cut from the cocoon shell. Power cocoon shell can be determined with high precision optoelectronic monitoring method [12].

At the core of an optoelectronic power control method is based on the principle of measuring the proportion of radiation energy absorbed in the shell comprising a certain mass [11,12].

On the basis of [11] that has passed through the radiation flux cocoon can be described by the expression:

$$\hat{O}_\tau = \hat{O}_0 \hat{a}^{-m \hat{E}_\lambda} \quad (9)$$

Where:  $\hat{O}_0$  - the radiation flux incident on the surface of the cocoon shell;  $m$  - mass of the shell;  $\hat{E}_\lambda$  - shell of the absorption coefficient.

Solving the equation with respect to the mass of the shell, we obtain the expression:

$$m = -\frac{\ln \frac{\hat{O}_\tau}{\hat{O}_0}}{\hat{E}_\lambda} \quad (10)$$

Expression (10) through the envelope power based on (8)

It is described as:

$$M_l S_l = -\frac{\ln \frac{\hat{O}_\tau}{\hat{O}_0}}{\hat{E}_\lambda} \quad (\text{eleven})$$

it follows that:

$$M_l = -\frac{\ln \frac{\hat{O}_\tau}{\hat{O}_0}}{S_l \hat{E}_\lambda} \quad (12)$$

Where:  $S_l$  - the area of the irradiated portion of the shell.

If the irradiated area of the shell portion is constant, the following expression holds for the power;

$$M_l = -\frac{1}{\hat{E}} \ln \frac{\hat{O}_r}{\hat{O}_0} \quad (\text{thirteen})$$

Where:  $\hat{E} = S_l \hat{E}_\lambda$  - constant.

From the expression (13) shows that for a constant area irradiated portion of the radiation passed through the sheath flow characterizes its capacity.

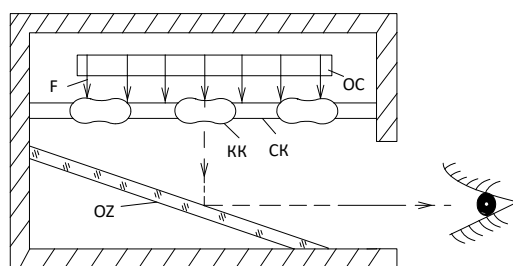
### 3. Methods and means for monitoring vnutripyatnistosti shell.

The output of raw silk except shelkonostnosti also affects vnutripyatnistost shell [18,19,20]. Vnutripyatnistye cocoons is soiled silkworm body fluid, decomposed inside the cocoon. Cause of death is vnutripyatnistosti silkworm cocoon shell inside a cocoon stage larvae or pupal stage [21].

To determine vnutripyatnistosti shell used a variety of control methods, which are based on irradiation of the cocoon and the body is detected, created internal spots.

One method is the optical-visual method. On the basis of the method developed by the authors of [17] to determine the device vnutripyatnistosti shell, the operating principle of which is based on the irradiation luminous flux cocoon shell and inner spots visual detection method. A simplified block diagram of the device shown in Fig.6.

Fig. 6. An apparatus casing vnutripyatnistosti visual inspection.



QC controlled cocoon mounted on special cassettes SK. Streams F illuminator radiation irradiated OS controlled QC cocoon, and passed therethrough on the light fluxes OZ reflecting mirror projection spots formed inside the cocoons that are detected by visual means.

The main disadvantage of this device is unacceptable for automation cocoons sorting shell vnutripyatnistosti.

It is also known to determine the shell vnutripyatnistosti by irradiating X-rays and recording the transmitted radiation flux through the cocoon [22,23]. A block diagram of an apparatus realizing this method is shown in Fig. 7.

The apparatus operates as follows: X-ray emission from III source, passing through controlled cocoon CC and lead aperture diabetes, strikes the radiation receiver PI, the output of which a signal through the electronic power PP is supplied to a recording device RC.

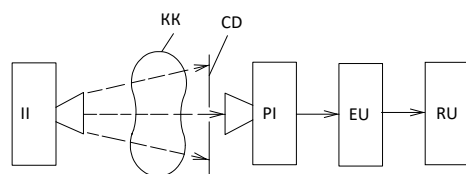


Figure 7. Radiation monitoring device vnutripyatnistosti shell.

The disadvantage of this device is the low accuracy of measurement due to the influence of fluctuations in the controlled cocoon zone control and change the diameter of the largest casing for monitoring result.

In [24] a method of determining vnutripyatnistosti shell, which is based on luminescence analysis using an ultrahigh pressure discharge lamp.

Controlled cocoon irradiated with UV - radiation and luminescence radiation is determined vnutripyatnistost cocoon. In this case, if the cocoon shell has an internal stain on the background fluorescent light shadow will appear.

The disadvantage of this method is the low accuracy due to the influence of other types of membrane contamination and unacceptability of the process.

It is also known an apparatus for sorting Japanese cocoons of vnutripyatnistosti shell [17] that is based on a controlled irradiation cocoon  $\gamma$  - beam and comparing the shapes of the absorption of waves transmitted flux through the net and vnutripyatnistye cocoons.

The block diagram of the device shown in Fig. 8.

The device operates as follows: Controlled cocoon QC irradiated  $\gamma$  - rays AI source. Radiation passing through the cocoon flow through the lead aperture SD falls on the radiation receiver PI and converted into an electrical signal which, via a system unit SP is supplied to the air valve VC. Further cocoon by a conveyor T of the air valve reaches the area BK and BK is sorted into a special tank.

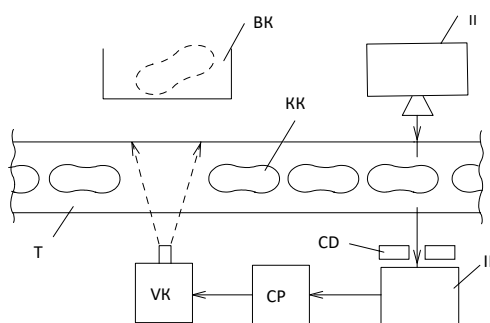


Fig. 8. Radiation sorting device through the shell vnutripyatnistosti cocoons.

The disadvantage of this device is the low accuracy due to the influence of fluctuations in the controlled cocoon during irradiation on the inspection result.

Analysis of the various methods and means for the control of process parameters cocoons shows that the promising control methods are optoelectronic.

## CONCLUSIONS

Analysis of the optical and radiation techniques and technological parameters control devices cocoons possible to establish:

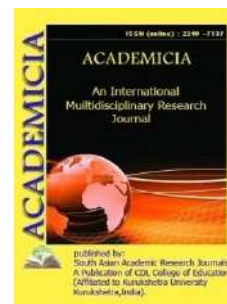
- lyuminestsenty method of determining the density of a cocoon shell has a high accuracy due to the influence of contamination significantly shell on the luminescence intensity.
- on the basis of this analysis it can be concluded that the capacity of the shell as compared with the density is more precise process parameter determining shelkonostnost.
- the main drawback of fiber-optical and radiation control method vnutripyatnistosti shell cocoon is the unacceptability of these methods to automate cocoons sorting process parameter.
- Optoelectronic methods and automatic control devices of process parameters cocoon is more promising.

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## **STUDY ON DECENTRALIZED BUDGET DISTRIBUTION MODEL PRESENTATION FOR COUNTRY'S RESEARCH ORGANIZATION'S SUBSIDIARIES**

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### **ABSTRACT**

*This is in question whether decentralized budget distribution among organizational subsidiaries and their distinctive activities are critically defendable or not? Undoubtedly, a series of varying discrete budget distribution procedures designed and modeled; in essence, budget distribution is based on Equal Distribution Patterns or Program Distribution Patterns which can be distributable as per of ratio each and every organizational units' past activities weight to cost centers. The purpose of this article is to present a model regarding a fair distribution of decentralized credit into each of ACECR's (Academic Center for Education, Culture and Research) affiliated units by using Analytic Hierarchy Process (AHP)<sup>1</sup>. This is a descriptive survey that is of respective statistical samples having ACECR's units and research centers. The importance of each contributor to budget distribution has been oriented by both group decision-making process and Analytic Hierarchy Process (pair-wise comparison matrix). The results indicate some meaningful relations concerning recruitment type, education level, members' activity area, the proportion of organizational positions occupied to adopted, the amount of fixed*

*assets and new investments and finally per capita revenue to subsidiaries' cost centers and units annual credit.*

**KEYWORDS:** *Budget, Credit Distribution, Analytic Hierarchy Process And Group Decision-Making Process.*

## INTRODUCTION:

Developments and complexities of the modern era highly require organizations to take an array of reasonable and particular measures including proceeding to proper planning, decision making and scientific management in terms of subsections requirements and subordinate units in organizations. Applying modern methods of credit distribution not only does prevent from slow pace of administrative units and waste of public funds, but it also is effective apropos socioeconomic ends advancements; in this way, organizations can fairly distribute their resources among the preferred targets. An economic development—in both part and regional facets—requires having a thought-out comprehensive pattern based on policy goals.

Obviously, budget is an essential tool in achieving the organization objectives. Division and equitable allocation of financial resources is one of the important management tools; furthermore, achieving a logical tactic for this purpose plays an important factor so as to avail organizations preset appropriate goals. Studies of credit distribution trend among departments and cost centers, especially in research centers, show that a majority of these centers do not take into account the proper criteria, indices, measurement tools and knowledge of fund allocation monitoring (Mehrabi, 2003)<sup>1</sup>.

Society progress associated with organizations development; consequently, it is entailed having efficient systems in resources allocation and also mechanism of controlling and planning will be posed. As a result, traditional budgeting methods go into advanced and modern science and research based methods (Namazi, 1999).

Current research aims at identifying and ranking effective contributors regarding decentralized credit into ACECR's (Academic Center for Education, Culture and Research) units and subsidiaries then. In this study, respectively, factors affecting the credit distribution are recognized based on experts' opinions; the importance of each and every factor – by decision-making methods – determined.

Therefore, division and allocation of budget resources, fairly and reasonably, will be extended to the ACECR's senior management; and it also provides homogeneous and consistent growth along with preset goals.

## Principles and Research Literature

### Studies reviews

Using a series of mathematical models, particularly by emergence of "Planning Programing budgeting System"(PPBS)<sup>2</sup> in 1965 and "Zero-Based Budgeting" (ZBB)<sup>3</sup> in 1973, were wildly spread (Seng Lee,1979)

It is worth mentioning that, between 1920 and 1935, cost monitoring was highly regarded; while, budgeting played just a controller. At this stage, budget was prepared on the basis of seasons, materials and costs (Azar, Seyed Isfahani, 1995).

In the last two decades, several mathematical models have been extended in regard with eco-financial budgeting and planning (Buddy and Morton, 2002), such as utopian economy model for Nigeria which was presented by "Y.A.H"<sup>4</sup>

(M & W, 1998)<sup>5</sup> conducted researches and questionnaires for different States of the U.S., in order to find out how they can make it possible to develop a utopian model for budget distribution based on operation and specific indices. Afterwards, their findings indicated that all wide nation but three states had owned their specific requirements in terms of budget distribution, moreover, a majority of these states enacted regulatory field since 1990's then.

(J & H, 1999)<sup>6</sup>, the state budgetary executive authorities' survey results implied that budgeting distribution is based on some incentive-effective operative indices.

(A.R 2004) <sup>7</sup>has shown that it is likely to maintain a fair budget distribution based on some operative indices in a number of the states of which authorities hold professional competences, in their domain, for those changes needed. (B & L, 2004)<sup>8</sup> found that using indices of effectiveness and efficiency rates slightly decreased in a span of ten years (1990-2000). They also found that in periods when levels of financial resources had changed, yet the stated indices were greatly improved. (B.E, 2011)<sup>9</sup> in her article "The budget for education-research centers; International experience and policy lessons", has answered three following questions:

1. What are the budgeting formulas differences among governmental education-research centers?
2. What are the indices in budgeting models?
3. What are the lessons due to the international experience & policy?

This research shows that in sample countries, education-research centers being financially granted in accordance with purposeful pattern in juxtaposition to current policies of higher education.

(D, ET all, 2011) <sup>10</sup>in his study "European universities budgeting and financial independence" addressed 200 active research-based universities in 33 European fields of research(Including: 27 member countries and Croatia, Iceland, Israel, Norway, Switzerland and Turkey); these countries, which had been being public financially resources paid, affecting under control of a specific framework. The results show that European higher education system has been undertaken an array of changes in less than ten years, which mostly ends with far independence. In other words, more independence of a university, in essence, brings about an ability to achieve its budget from distinctive resources such as competitive budgets, contracts with private companies and nongovernmental organizations' financial aids. In this case, research and educational institutes not only do less depend on a single stream of revenuebut they also are more prone to gain environmental consistency.

(Entezaari & Mahjoob, 2013) Iranian researchers in a study titled "a suitable mechanism and a proper method to allocate general resources in higher education" have investigated both desirable mechanism and system availability, and the question of what an appropriate mechanism for Iranian Higher Education System. To achieve this goal then they take some actions in sequence:

to begin with, different systems and mechanisms of financing beside their criteria are recognized by qualitative meta-analysis; in the following framed spectrum, often mechanisms are evaluated based on financing regulations. Analytic hierarchy process results–based on six contributors via process evaluation method– proclaim that the best financial resources allocation mechanism to higher education, in the world, can be income contingent loan for students surrounded by higher education services market.

"The introduction of template required financial resources assessment for macro goals of the Science, Research and Technology out of public resources", Gharoon (2013), in his article estimated the government sources needed to achieve a certain level of outputs by using the Neural Network Method. Statistical population consisted of the universities and the research centers affiliated but Azad Islamic University and non-governmental colleges. Results of the implementation model showed that networks, exchanges between educational and research activities with resource constraints in the existing system, and also indicated the existence of some economic scales at the micro level significantly; thus an appropriate framework for estimating the resources required without detailed descriptions and parametric relationships between inputs and outputs are created. "Examines how the allocation of budget credits using Fuzzy goal programming model" Mohammad Namazi (2002); Issued and studied preparing model for ideal distribution of budget in the industry and mining, agriculture, the private sector, cooperatives and government agencies based in the of Fars province. The aim of this study was to provide preparation and management of scientific model to determine the appropriate mechanism to determine the allocation of financial resources.

Jamshid Babaei (2006) in her graduate thesis dealt with entitled "Analysis of the structure and budgeting process in the Police systematic approach" and the general trend in the wake of research has confirmed the importance of scientific model of budget distribution.

Seyed Esmaeil Hashemi (2014) in their study provided a budget distribution model for administrative systems in Golestan Province; it has been the aim of this study to provide a suitable and efficient scientific budget distribution model in line with the needs of Golestan province executive agencies.

Therefore, in this study the principles of budget distribution collected and expressed its strengths and weaknesses conceptual model for the implementation of decentralized budget presented in ACECR.

### **Budget and the evolution**

Since the advent of budget terms, of numerous definitions have been conducted. According to the peoples' perception and attitude, the budget issue is different. In the beginning, the budget merely meant a budget computing. That is why the definition of the term is available, meaning budgeting associated in the minds (Yousefnejad, 2007). The concept and definition of the budget from both the perspectives of scientific and legal points of view can be considered.

Budget, from the viewpoint of customary and commonly, includes the definition that has been proposed by connoisseurs and experts of economics. For example, in the definition of the budget: to keep the budget income and expenditure account of a balance between income and expenditure to the budget deficit not arise (Babaei, 1381).

Legally in the matter of public accounting act first enacted in September of 1987 the budget has been defined as follows: "The entire of the country budget is the government's financial plan prepared for a financial year and contains forecasting revenues and other sources of funding and estimating costs for operations that lead to the achievement of policies and legal objectives, Of three parts are composed as follows " (Sheikh Wadud, 1382).

In general, before and during the rule of constitutional monarchy in Iran, monitoring of the budget was minimal and kings were in power, how to tax the people was done by them as well. With the advent of the constitutional revolution, legislation was introduced in the budget which was derived mainly from French laws. After the constitutional revolution in Iran, the first budget in new approach to directing in 1289 solar calendar carried out by Sani'odowleh, being prepared and submitted to parliament. This procedure continued until the year 1320 Hijri (1941) Likewise; the administration of the budget of the Ministry of Finance was responsible for. In the year of 1948, with the current budget, budget preparation and operation of state companies were submitted to Parliament. In 1340, all matters related to the development budget were assigned to the planning organization; in addition, all affairs relating to the regular budget were transferred to the finance ministry. The task of preparing, since 1967 then, operating budget and development were prepared separately at the headquarters of planning and budget organization was awarded to a new unit called "central office and budget plan". Fourth five-year plan was approved in 1968 and the Fifth five-year development plan was implemented in 1973 and continued until 1977 (Ahmadi, 2003).

From the 1979 to 1988, coincided with the revolution and the war, because of problems emerged, practically important event--in the process of preparation of the state budget--has not been forthcoming. In 1989, the first development plan approved by parliament after the Islamic revolution and continued until 1994. In a span of these years, budgetary purposes continued in a form of five-year programs; In 2005, the authorities was emphasized operational budget preparation method. The 1385-circular budget was prepared on the same basis and communicated to all the executive agencies and ultimately to Parliament and approved. Fortunately, since 2014 the country's budget bill has been on the agenda of the planning and budgeting organization despite changes and developments in recent years of the country budgeting system; "budgeting based on operations and determining criteria and triggers" (Kordbacheh, 1395).

### **Goals and benefits of budget distribution to cost centers**

Ensuring and strengthening accountability at various management levels, achieving output oriented approach, granting authority to managers in the selection of inputs needed to produce the desired output, underlying continuous performance appraisal of managers and performance results as one of the criteria for allocating funds and decision-making in evaluating managers' performance, producing transparent financial management information for decision making in relation to the increase, decrease budget allocation, escaping from routine life and achieving the long-term planning and spending on programs, enhancing the capability of managers in the management of financial resources, physical, human and information, reducing corruption and bribery at different levels of management and decision-making, providing a proper basis for making decisions about resource allocation, determining measurable results expected, decision-making process focusing on the most important problems and challenges which administration



faces with and creating a logical process for making decisions regarding budget which are directly related to the process of planning, implementation, monitoring, evaluation and reporting on performance, considered the most important goals and benefits of fair distribution of budget and credits among the cost centers.

### **Challenges in the budget distribution among cost centers**

The budget distribution among organizations and cost centers of which belong to administrative agencies subsets takes time and entails an effective- efficient leadership. Executive challenges of this system can be left behind, provided that these challenges are well understood and actively investigated and dealt with (Babaei, 1386). The most important of these challenges are as follows:

1. The difficulty of defining the indicators and activities.
2. The complexity of identifying the cost of activities.
3. Difficult to justify budget in each and every index and activities.
4. Resistance by managers of subsidiaries.
5. The complexity of improvement process in technology systems information.
6. Lack of coordination among the areas related to preparation and making the necessary preparations.
7. Not justified levels of planning and budgeting as well as managers and experts subsidiary.
8. Lack of hardware system and software programs along with experts in the field of finance.

### **ACECR budget<sup>11</sup>**

ACECR as one of the research centers with the aim of creating a bridge between academia and industry and services have been created, about twenty percent of its annual budget from credits approved in the budget law of the country is obtaining. The remaining eighty percent of its annual budget revenues from professional services and research, in technical fields - engineering, medicine, science, agriculture, humanities, etc. as well as long and short-term specialized training acquired. Public credit of this institution absorbed budget from legal validity of the rows which is divided into two categories:

#### **A: centralized budget:**

Part of the state budget during the year towards the various assistance programs and policies, domain or the organizational units assigned to their activities.

#### **B: decentralized budget:**

Part of the state budget to pay for personnel costs, staff and maintenance of equipment and buildings, the units assigned.

In this study, efforts have been made to identify indicators presented mathematical model based on distribution of the decentralized budget credits among affiliated units and centers to seem reasonable. Therefore, questionnaire has been adjusted in two stages for managers, research institutes, experts and informed people so as the proposed model has been developed based on these studies.

### Hypotheses development

Considering the fundamentals and peer-reviewed research literature, per capita income variables, Posts occupied in the proportion of positions adopted by the organization and communicated, the fixed assets and new investment, the quantity and quality of human resources, have influenced on the distribution of decentralized subordinate units and included in this study.

- Indicators of human resources: In order to meet part of the costs of staff members working in the unit is considered. This index is based on three main factors:

A: Activity (in ACECR, there are five areas of activity: research, education, culture, support and the presidency)

B: The level of education (education at five levels: diploma, associate degree, undergraduate, graduate and professional degree and Ph.D.)

C: The type of employment (type of employment manpower in ACECR is divided into three categories: formal, alliance and contract)

- The ratio of approved posts to occupied ones: Since the move in order to match the current organization with approved organizations including ACECR is one of the establishment objectives. Thus, in order to propel the current situation and research institute forming unit by forming approved, these indicators are considered.

- Fixed asset index: Fixed asset-specific rate of revenues as an indicator to determine the validity of decentralized units are considered. The first objective of the Index is to provide the cost of maintaining fixed assets and secondly, increasing motivation for the development of physical spaces and equipment.

-The amount of fixed assets includes: A) land and buildings B)Property, machinery and equipment C)Vehicles.

- Specific income per capita index: Considering the fact that about eighty percent of ACECR budget is provided by dedicated revenues, so in order to motivate the subordinate units to increase private incomes, these indicators have been considered. Also per capita income divided specific organizational unit of the special revenue into the number of workers considered in that unit. Thus implications of these research hypotheses are presented as follows.

### 3. Research hypotheses:

Hypothesis 1: The number of workforce (disaggregated by type of employment, education and activities) with decentralized credit relationship is established.

Hypothesis 2: a significant relationship is between the amounts of fixed assets with decentralized credit.

Hypothesis 3: There is a significant relationship between per capita incomes with decentralized credit.

Hypothesis 4: There is a significant relationship among the proportion of posts occupied positions adopted with decentralized credit.

Hypothesis 5: there is no significant difference between the ranking factors by hierarchical analysis and comparison means.

#### 4: RESEARCH METHODOLOGY:

The method used in this study is a descriptive study and the purpose of the study is applied, as is oriented towards practical application of knowledge.

According to the study, the population of this research consists of managers, administrators and experts within departments and ACECR research Institute affiliated. In this study, managers and specialized professionals with at least five years' work experience in the field of ACECR have been considered. In order to achieve the desired sample multi-stage sampling technique was used on three levels. At the first level, the units considering the extent of the record and development activities were divided. According to determined population size and by using the (Cochran formula) of success for society at large, the sample size was 96. Considering the 25 selected branches, on-probability sampling method of judgment for the selection of the sample (95% confidence level and error ( $\varepsilon = 5\%$ )) was used that 3 to 4 people in each unit and the Institute were selected. Of course, in the process of conducting research, based on data, 94 questionnaires completed was diagnosed valid and usable.

$$n = \frac{z^2 pq}{d^2} = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} \approx 96$$

In this study, from two questionnaires were used to collect data. The first questionnaire based on review of literature and considering the views of experts in the field of taxes and the plan was developed, includes 15 questions which identify important factors on the distribution of decentralization. As mentioned, these factors have been divided into four groups as follows: Human factors, factors relating to the structure, factors relating to the assets, and the factors related to per capita income. Scale used in the questionnaire is a five-point Likert scale.

Using data extracted from the first questionnaire and the related statistical analysis, the final factors affecting the distribution of decentralized recognized then the second type of the questionnaire was set on the first basis. In this questionnaire, respondents were asked to conduct paired comparison (two by two) according to the instructions given, human factors, together with its subsidiaries, factors related to the structure (the proportion of approved posts to occupied), Factors related to both fixed assets and per capita income to determine the order of importance of these factors.

For determination questionnaire validity, first the experts and tutors' opinions were used. The second component factors of the statistical analysis of the questionnaire obtained data then. Also The experts and financial experts and planning in terms of the development of this questionnaire, which confirms its validity. Reliability of the questionnaire was assessed by Cronbach's alpha test. The mean alpha spectra obtained for about 84 percent of all variables that showed high validity of the questionnaire.

#### Data analysis and hypothesis testing

For ranking 18-fold factors, from average comparison and AHP methods are used as a supplementary for first approach. In the wake of hypothesis, in order to analyze the data from different statistical methods are used, the results of which are presented below:

**Ranking factors: Hierarchical approach (AHP)**

The required data for the comparative test was conducted by hierarchical approach; priorities for each group of factors as well as factors were the higher level, the results obtained are the following tables

Relative Weight	Human Resources Factors	Rank
0/1500	Employment Type	1
0/5500	Education Level	2
0/3000	Activity Area	3

**TABLE1. RANKING FACTORS AFFECTING THE DISTRIBUTION OF MANPOWER  
(SOURCE: FINDINGS)**

Relative Weight	Human resource factors - Employment Type	Rank
0/1430	Official hiring	1
0/1570	Employment alliance	2
0/7000	contractual employment	3

Table1-1. Ranking factors affecting the distribution of Human resource by the type of employment (Source: Findings)

Relative Weight	Human resource factors - Education Level	Rank
0/1000	Diploma	1
0/1200	Associate Degree	2
0/2200	Bachelor	3
0/3000	Professional master's and Ph.D.	4
0/2600	Postdoc	5

**TABLE2-1. RATING BASED ON HUMAN RESOURCES FACTORS AFFECTING THE  
DISTRIBUTION OF EDUCATION LEVEL (SOURCE: FINDINGS)**

Relative Weight	Human resource Factors - Activity Area	Rank
0/3100	Research	1
0/2400	Cultural	2
0/2100	Educational	3
0/2400	Support	4

**TABLE 3-1. RANKING FACTORS AFFECTING THE DISTRIBUTION OF HUMAN  
RESOURCE TO SEPARATE ACTIVITY AREA (Source: Findings)**

Relative Weight	Structural Factors	Rank
0/1000	The Proportion of Approved Post to Filled Posts	1

**TABLE 2. RANKING FACTORS AFFECTING THE DISTRIBUTION THE PROPORTION OF POSTS APPROVED BY THE FILLED ON CREDIT (SOURCE: FINDINGS)**

Relative Weight	Factors Related to Fixed Assets	Rank
0/5000	Fixed assets (land, buildings, vehicles, property, machinery, etc.)	1
0/5000	The new investments during the fiscal period	2

**TABLE 3. RANKING FACTORS AFFECTING THE DISTRIBUTION OF CREDIT RELATED TO FIXED ASSETS (SOURCE: FINDINGS)**

Relative Weight	Factors Related to Specific Income per Capita	Rank
0/5500	Research	1
0/1500	Cultural	2
0/2500	Educational	3
0/5000	Support	4

**TABLE 4. PER CAPITA INCOME RANKING THE FACTORS AFFECTING THE DISTRIBUTION OF FUNDS DEDICATED TO THE SEPARATION OF ACTIVITY AREA (SOURCE: FINDINGS)**

The ranking and the weight of higher-level factors in Table (5) is shown.

Relative Weight	Factors	Rank
0/3000	Factors related to human resource	1
0/1000	Factors related to approved posts to filled	2
0/2000	Related to fixed assets	3
0/4000	Per capita income of dedicated	4

**TABLE 5: RANKING HIGHER LEVEL FACTORS AFFECTING THE DISTRIBUTION OF CREDIT DECENTRALIZED (SOURCE: FINDINGS)**

Finally, the contribution of each unit and the institute of the decentralized credit upon points scored of that unit and research institute the introduced indices are calculated acquired. Total

stipulation by which an organizational unit can obtain from criteria in four main sections are summarized as follows:

$N$  = Points per unit of human resource index.

$P$  = Score of each unit of the approved posts index.

$D$  = scores asset value per unit of the index.

$E$  = Points per unit of per capita indicators from dedicated income.

The total score for a unit equal to the sum of the scores in each of the above criteria and it is calculated by the following formula:

$$T = N + P + D + E$$

Since human resources index itself is influenced by several other factors, so as follows:

$$\text{Human resources index weight} \times N = (A + B + C)$$

$A$  = Total score of the Employment Type

$B$  = Score of the level of education

$C$  = Total score of activities area

The scores for each factor are calculated from the following formulas:

Formal, alliance and contract

$$\begin{aligned}
 A = & \left\{ \frac{\text{the number of unit formal members}}{\text{the total number of formals in ACECR}} \times \text{formal weight factor} + \frac{\text{the number of alliance staff in each unit}}{\text{the total number of alliance ones in ACECR}} \times \text{alliance weight factor} + \right. \\
 & \left. \frac{\text{the number of contracts in each unit}}{\text{the total number of contracts in ACECR}} \times \text{contract weight factor} \right\} \times \text{Operating weight, Employment Type} \\
 B = & \left\{ \frac{\text{the number of diploma holders in each unit}}{\text{the total number of diploma holders in}} \times \text{diploma weight factor} + \frac{\text{the number of associate holders in each unit}}{\text{the total number of associate in ACECR}} \times \text{associate weight factor} + \right.
 \end{aligned}$$



## ACECR

$$\begin{aligned}
 & \left( \frac{\text{the number of bachelors in each unit}}{\text{the total number of bachelors in ACECR}} \right) \times \text{bachel or weight factor} + \left( \frac{\text{the number of masters in each unit}}{\text{the total number of masters in ACECR}} \right) \times \text{master weight factor} + \\
 & \left( \frac{\text{the number of Ph.Ds. in each unit}}{\text{the total number of Ph.Ds. in ACECR}} \right) \times \left. \begin{array}{l} \text{The weight factor,} \\ \text{Ph.D.} \end{array} \right\} \times \left( \text{research weight factor} \right) \\
 & Q = \left\{ \left( \frac{\text{the number of research units}}{\text{the number of research personnel in each unit}} \right) \times \text{Research Weight Factor} + \left( \frac{\text{the number of culture staff in each unit}}{\text{the number of culture staff in each unit}} \right) \times \text{culture weight factor} + \right. \\
 & \left. \left( \frac{\text{the number of education staff in each unit}}{\text{the total number of ACECR's education staff}} \right) \times \text{educati on weight factor} + \left( \frac{\text{the number of support staff in each unit}}{\text{the total number of ACECR's support staff}} \right) \times \text{support weight factor} \times \left( \frac{\text{the weight of operating post areas}}{\text{the weight of operating post areas}} \right) \right\}
 \end{aligned}$$

Given the scores of each unit of human factors related to manpower index, so other scores of the units should be calculated from other indices.

Since other indices have acted independently and not be affected by other factors; thus, they will be more straightforward computation than manpower index, and each of the following equations is calculated:

$$N = (A+B+C) \times \text{manpower weight factor}$$

$$P = \frac{\text{The unit posts filled into the unit posts approved}}{\text{the total filled posts into approved posts}} \times \text{approved posts weight factor}$$

$$D = \frac{\text{the unit fixed assets}}{\text{the total fixed assets of ACECR}} \times \text{fixed asset weight factor}$$

$$E = \frac{\text{The special per capita revenue of unit}}{\text{the total special per capita revenue of ACECR's units}} \times \text{special revenue weight factor}$$

And thus the share of each unit and research center calculated from the total amount of ACECR decentralized credit.

### Measuring causal relationship hypotheses

In order to assess the causal relationship, which had been stated earlier in hypotheses, claims that if the amount of sig in the table of correlation coefficient among variables is less than 05/0, so the regression is deemed meaningful. The final results are in accordance with Table (6).

per capita income	Assets	Posts	Manpower	Decentralized Credit		
0/681** 0/000 94	0/732** 0/000 94	0/537** 0/000 94	0/341** 0/004 94	1 0 94	Pearson's correlation coefficient Significance level Sample size	Decentralized Credit
0/614** 0/000 94	0/201** 0/000 94	0/309** 0/000 94	1 0 94	0/641** 0/004 94	Pearson's correlation coefficient Significance level Sample size	Manpower
0/354** 0/000 94	0/202** 0/000 94	1 0 94	0/309** 0/000 94	0/198** 0/000 94	Pearson's correlation coefficient Significance level	Posts

					Sample size	
0/340 ** 0/000 94	1 0 94	0/418 ** 0/000 94	0/201 ** 0/000 94	0/732 ** 0/000 94	Pearson's correlation coefficient significance level Sample size	Assets
1 0 94	0/301 ** 0/000 94	0/225 ** 0/000 94	0/401 ** 0/000 94	0/581 ** 0/000 94	Pearson's correlation coefficient significance level Sample size	per capita income

**TABLE6. MATRIX OF CORRELATION COEFFICIENTS BETWEEN THE VARIABLES AFFECTING THE DISTRIBUTION OF DECENTRALIZED CREDIT OF ACECR (SOURCE: FINDINGS)**

The results of validity and appropriate fitness of criteria is reflected in table 6. These factors indicate that the dependent variable (decentralized funds) and the independent variables are statistically significant positive relationship with a confidence interval of 99 percent. That is to say that by increasing the level of each and every of the independent variables, the share of the decentralized budget increases as well. These findings may provide a descending perception. Due to the absolute value of the correlation coefficient, strength of these connections (Since the absolute value of the correlation coefficient is equal to 198/0, the strength of this relationship is at a medium level) except in the relationship between the posts and the decentralized budget is ranked high. So the hypotheses of the first, second, and third are approved.

So as to carry out the fifth hypothesis study, Friedman's analysis of variance is used. Since there was clear boundaries in the hypothesis of present study, the claimed hypothesis (both methods used to rank the factors are the same) in  $H_0$ , and its contradictory in  $H_1$  appeared. The calculated value obtained is 36.6512 that is larger than chi - square in table (26.2962). Therefore, assuming the claim was rejected (both methods used to rank the factors are the same).

In other words, there are significant differences, between the ranking of factors, by two methods of hierarchical approach and comparison of means.

## 6. DISCUSSION AND CONCLUSION

In this study, factors affecting the decentralized funds, by attitude and in particular on research units and centers in ACECR was conducted. According to the statistical analysis: There is a significant relationship between manpower factors, factors related to posts, factors related to fixed assets and factors related to per capita income with amount of the decentralized budget which shows the importance of these factors to strengthen the relationship between ACECR and its subordinate units.

Data analysis has showed that all factors affect amount of the decentralized budget. Exclusively, the effect of these factors is greatly different from one another. Generally the results of this study are described as follows:

A: According to a number of hypotheses related to manpower (first hypothesis), ACECR administrators are suggested that, given the effects of these factors on decentralized budget, In their policies, the degree of importance of these factors should be taken into their account and continue to take the necessary amendments and revisions.

(B) Based on the amount of hypothesis by the indices of fixed assets (second hypothesis), since the hardware is the part of top factors in distribution of decentralized funds, the physical environmental factors in ACECR should be taken into the managers' plans and strategies, then as tangible, the quality and quantity of supplies and equipment should be improved and also more maneuvers in a logical and effective investments related to the objectives of the development plan be put into practice.

A: According to the findings of the third hypothesis, per capita income will have a high impact on the quantity and quality of decentralized funds. Due to the synergistic effect of attention to these factors, ACECR is needed on long-term policies and programs, all aspects taken into consideration in order to be strengthened in competing with other research institutions. If the individual factors of rankings being considered then, factors of manpower number, amount of fixed assets, per capita incomes have earned high ratings; which shows the importance of these factors and their impact on the decentralized budget in ACECR units and research centers subsidiaries.

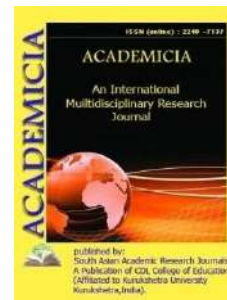
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## IMPROVING THE OPERATIONAL RELIABILITY OF EQUIPMENT USED IN THE TRANSPORTATION OF HIGH AND LOW TEMPERATURE OIL PRODUCTS

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### ABSTRACT

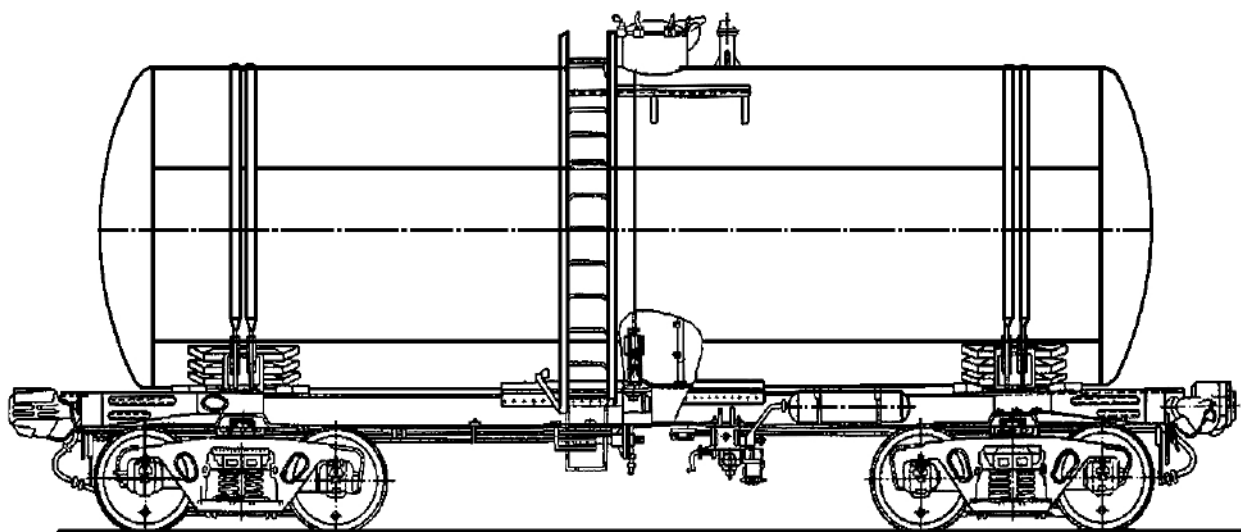
*In this article the transportation of oil and oil products, the types of the transportation will be discussed. Besides, improved reliability of equipment which used in this process is also examined.*

**KEYWORDS:** *Oil, Oil Products, Water Transport, Rail Transport, Equipments.*

### INTRODUCTION

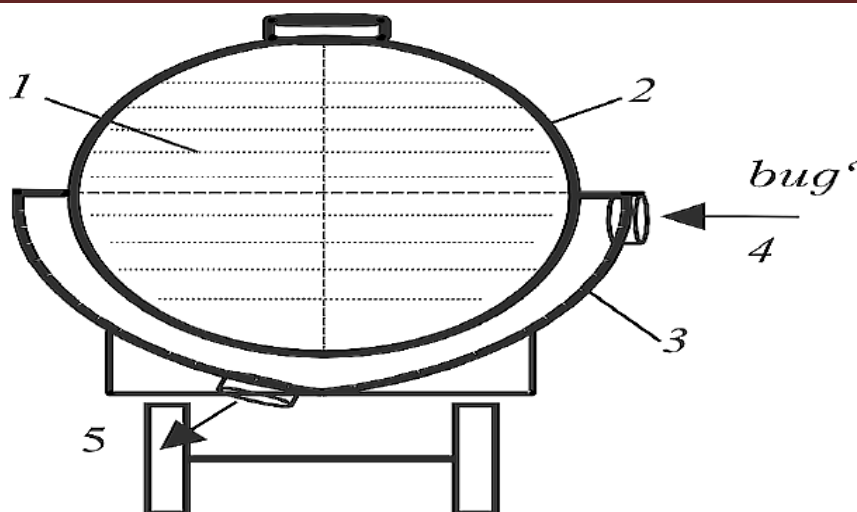
Various vehicles are used to transport oil and oil products. For example, rail transport, water transport plays an important role in the transportation of oil and oil products. Rail transport transports more than 40% of total oil and oil products. These products are mainly transported in wagon-cisterns, including about 2% in barrels and containers. The caravans have a carrying capacity of 25, 50, 60, 90 and 120 tons, the most common of which are the 60 and 90 ton tanks (Figure 27). The tank car is equipped with a universal pouring device, a safety spring valve, a hatch and a ladder. The safety valve is located at the top of the tank and regulates the pressure inside the tank. The hatch is also located at the top of the tank. It is used for repair, cleaning,

pouring and heating of products. The universal pouring device (d-200 mm) is located at the bottom of the tank through which the product is drained.



#### General drawing of a four-axle (60t) tank car

The built-in spinners come in a variety of designs, some of which are equipped with heaters. For example, the universal pouring machine (UTQ) is designed for pouring products without heating. Water vapor and electric heaters (UTQP and UTQPE) are used to heat the products. UTPQ - uses steam, UTQPE - uses electricity to heat the products in the tank. Currently, automated pouring devices ASN-7V6, ASN-8B6 and SPG-200 are used for unloading products from tank cars. ASN-7B is used for liquid, ASN-8B for thick and SNP-200 for high viscosity petroleum products. High-viscosity and high-temperature curing oil and oil products tank cars will be equipped with external heating "shirts" or internal heating devices. Heating of high-viscosity oil and oil products is carried out by injecting water vapor into the heating pipe sections installed inside the tank cars. The outer surface of the tank is covered with a thermal insulation coating to prevent the temperature from falling, and its surface is covered with a metal layer. Such tank cars are also called special "Hermos" tanks. In addition, the products inside the tank cars are heated using a steam "jacket" formed on their outer surface. The heating jacket is mounted on the bottom (half) of the tank and is supplied with water vapor (Figure 28). Heavy lubricating oils, lubricants with a carrying capacity of 2.5 and 5 tons. Heavy lubricants and lubricants are transported in 2.5- and 5-ton cisterns. They will also be equipped with a heating steam jacket. Packaged petroleum products (barrels, cans and various polyethylene containers) are transported in on-board wagons.



Heating the product inside the tank using a steam jacket:

- 1 - Petroleum product;
- 2- Cistern;
- 3 - Warming "shirt";
- 4 - Ingress of water vapor;
- 5- Water condensate outlet.

Oil, gas, and petroleum products are transported by water, rail, pipeline, road, and in some cases by air. The solution of the specific task of importing petroleum products, ie the choice of the mode of transport, the presence or absence of transport routes operating in the transport area, their employment rates play a major role. In addition, the choice of mode of transport is influenced to some extent by the volume of products transported and the distance of transportation, physical properties of petroleum products (liquefied gas, solids), reserves, prospects for the development of the oil industry in the regions.

**Rail transport.** Its main technical and economic advantages are: Universal transport; can transport all types of oil and its products in any volume. The presence of a railway network in densely populated industrial and agricultural areas allows products to be delivered directly to consumers. Transport Railway transport is more uniform and faster throughout the year than water transport. Disadvantages: Large capital investment in construction of new railways, repair of old ones; high operating costs compared to other oil transport vehicles; low efficiency of moving capacity (cisterns return empty); waste of oil and oil products; the need to set up special loading and unloading points and tank wagon cleaning points.

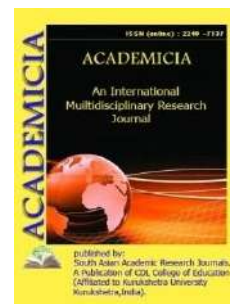
**Water transport.** This type of transport can transport a large number of products (carrying capacity: 5000-45000; 450000 and 1 million tons in tankers and barges) by water; about 70 percent of the total weight of transport is transported products. The opposite is true of rail transport. Disadvantages: seasonality; the inability to transport the product directly to any point, the need to create a large number of additional containers at the pouring points. Pipeline transport. The main advantages of this mode of transport over other modes of transport are: - it is the main means of transport for natural gas; - low cost of transportation; - specific capital costs

per unit of transported product are small and quickly recoup construction costs; - transportation is uninterrupted throughout the year, practically independent of any climatic conditions; - high labor productivity; - Loss of product while driving is very low; - several types of oil and oil products can be transported through one pipeline; - The capacity of the pipeline can be increased by building additional pumping stations, etc. Disadvantages: construction and commissioning requires a lot of capital and a lot of metal; must have a stable load for a long time; oil and oil products flow rate is not high (5-10 km / h); small quantities of products cannot be transported, etc. Motor transport. The technical and economic advantages of this mode of transport include: rapid transport of small batches of oil and oil products over various distances; it is possible to arrange scheduled transportation; fast completion. Disadvantages: high operating costs; the cost of transporting goods by road is 10-20 times higher than by rail; tank trucks have a small carrying capacity; depending on the availability and technical condition of the road. Growth capacity is not fully utilized (cisterns return empty in one direction, etc.)

In conclusion, Transport work is an integral part of oil and oil production, and the timely delivery of goods and materials is of great importance. In agricultural production, the transportation of goods amounts to billions of ton-kilometers. In this regard, oil product supply and environmental safety of these works are of great importance.

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## IN TERMS OF METHODOLOGICAL FEATURES OF SOME STYLISTIC MEANS

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### ABSTRACT

*The article touches upon the problem of elaboration of the theory of tropes hyperbole, its antipode anti-hyperbole, litotes, and meiosis. It is dedicated to the linguo-conceptual field of anti-hyperbole and expressed with verbalizers that realize the field of "conceptual semantics of anti-hyperbole" compared in English and Uzbek languages. The distinctive features of anti-hyperbole, litotes, and meiosis are illustrated with examples, supported with the opinions of scholars' research work. The novelty of the article is the mixture of tropes gives new 'mixed (syncretic)' stylistic devices.*

**KEYWORDS:** *Hyperbole, Anti-Hyperbole, Verbalizers, Linguo-Conceptual Field, Litotes, Meiosis, Anti-Hyperlitotes, Anti- Hypermeiosis, Anti-Hypersimile.*

### 1. INTRODUCTION

It is well known that the formation and development of all beings in existence on the basis of contradictions is recognized as a philosophical law. In the same way, all linguistic phenomena revolve around similarities and differences, as noted by linguist F. de Saussure. In particular, the existence of the phenomenon of hyperbole in linguistics requires an anti-hyperbole, which is its opposite.

An anti-hyperbole is the opposite of hyperbole that is both a trope and a speech figure that serves to deliberately overemphasize certain realities (quality, degree, quantity) in objective reality. While hyperbole greatly exaggerates the reality of objective existence, anti-hyperbole diminishes or reduces it through extreme semantics. These concepts therefore represent a mutual contradiction.

In particular, anti-hyperboles expressed by expressions (phrases) have a unique structural-semantic nature, which, with their linguo- ethnoculturological features, occupy a special place in

the system of verbalizers, which characterizes the field of "conceptual semantics of anti-hyperbole." Therefore, it is not an exaggeration to call them "linguo-culturemes" [6; 36.35;], ie "linguo-ethnoculturemes".

The translation of the verbalizers that characterize the field of "conceptual semantics of anti-hyperbole" from one language to another is done strictly within the existing system of field members in each language.

Each language has its own system of verbalizers –antihyperbolemes in the field of "conceptual semantics of anti-hyperbole", which differ in quantity and quality. This indicates that the morphological and syntactic status and system of the members of the field of "conceptual semantics of anti-hyperbole" in languages are different. In Uzbek and English, "over-minimization" is realized through the following specific means - invariant types of verbalizers:

1) morphemes:

In English

in Uzbek

booklet

(бола)ча

girlie

(қиз)ча

weakest

энг кучсиз

2) lexemes:

In English

in Uzbek

Extremely, deadly (short)

ўта, роса, нихоятда бенихоя (қисқа )

3) phrases

In Uzbek:

*Биртомчиқони(м)дан кечмоқ*

*Бирогизсўзайтмоқ*

*Биртомчисувгазорбўлмоқ*

*Ўзингбирқаричсан-ку, лекинақлингхамманилолқолдиради.*

In English:

*A woman of pocket size. She is a woman of a pocket size, but her heart is strong.*

*Just a second*

*to have half a word with somebody*

4) taxonomies (monotaxes, polytaxes):

In Uzbek:

a) monotaxes

*Бирогизгапайтсамбўладими?*

*Бугапларунгазаррачатаъсирқилмади.*

b) polytaxes

*Сенингбуолаётганбилимингденгизданбиртомчихолос.*



*Агарижозатберсангиз, сизнингбирсониявақтингизниолсам.*

In English:

a) monotaxes

This is the tiniest creature

This is riot of handful of people

I can't say less

Can I have a word with you?

b) polytaxes:

If you allow me, I want to have a couple of words with you

Do I deserve the slightest respect when I am here?

5) phraseology:

In Uzbek:

*Биртомчиқонимданкечинг, шоҳим.*

*Упашаданфилясяпти.*

In English

*He is making a mountain out of a molehill.*

6) Texts:

In Uzbek:

Тоғниурсаталқонқиладиганйигитнингсичқонданқўрқиниқара!

Нима?Охиргинафасингниоляпсанми? Жонингчикибкетяптими?

In English:

Look at the man.He can face the devil, but he is afraid of a mouse. What? Are you taking your last breath?

All of the above mentioned verbal means show that there is a conceptual field in the languages being compared that is expressed by over-minimizing emotional-expressive coloring.

Anti-hyperbole, in turn, requires the exaggeration of small concepts [10]

Eg: *Wait just half a second.*

*Фақат ярим сония кутинг.*

*He will come in a moment.*

*У бир сонияда келади.*

*They will come in a little while!*

*Улар бироз вақт ичида келади!*

*A storm in a tea cup. (Proverb)*

*Чой пиёласидаги бўрон. (инглиз мақоли)*

*She wore a pink hat, the size of a button.[12.59]*

*У тугмача ўлчамидаги,пушти ишляна кийган.*

*An unfortunate man would be drowned in a tea cup. (Proverb)*

*Бахтсиз одам чой пиёласида чўкиб кетади. (инглиз мақоли)*

*I have not had a wink of sleep these last two nights.[14.187]*

*Сўнгги икки кечада мен заррача ҳам кўз юммадим.*

*He didn't even open his lips, though he was well aware of the mess.[14.211]*

*У хатто лабини очмади, гарчи у холатдан яхши хабардор бўлса ҳам.*

*Half a loaf is better than no bread.*

*Йўқ нондан кўра ярим нон яхшироқдир.*

In the example of "Wait just half a second", it can be notified that the speaker does not wait long, his request is fulfilled in a short time. In this regard, it is possible to give examples of "фақатгина бир сония", "just a moment", "бир лаҳза ичида", "in a little while". Admittedly, in real life, this kind of events can't happen so fast. In doing so, the speaker tries to reassure the listener, that is, to point out that it is not expected much.

Methodology includes stylistic devices such as litotes and meiosis, which are qualitatively close to anti-hyperbole, which also serve to ensure that the meaning is conveyed to the listener quickly, emotionally and expressively by exaggerating, reinforcing and softening the speaker's opinion during speech.

The characteristics of other tropes are also taken into account when systematizing hyperboles. In this context, it is necessary to mention the similarities of hyperbole and anti-hyperbole with litotes.

## 2. RESEARCH METHODOLOGY

The tropes aforementioned are structurally similar, but they have semantically distinct-contrasting properties. In particular, while hyperboles serve to exaggerate object-events, anti-hyperboles, on the contrary, provide exaggeration of expression by over-minimizing. Nowadays, many linguistic scholars have tried to define anti-hyperbole, in which more structural-semantic and stylistic aspects are taken as the basis. Accordingly, T.A. Dorogova, S.V. Lopatkina, X.B. Nurgalina, J. Koraboev, G. Satibaldieva were the first to apply the term anti-hyperbole in their scientific works. T.A. Dorogova, S.V. Lopatkina, and Kh.B. Nurgalina contrast the anti-hyperbole with the hyperbole and introduce the tropes that are closer to hyperbole: litotes and meiosis under its name. In contrast, Y.M. Skrebnev, S.E. Nikitina, N.V. Vasileva, T.S. Dronyaeva, N.I. Klushina noted that hyperbole is expressed through the semantics of over-exaggeration and that the stylistic means of expressing its contradiction are meiosis- over-minimizing and litotes- negation of the opposite. We try to shed light on the fact that the "extreme" semantics present in hyperbola do not occur in litotes and meiosis and that overstatement is the hyperbole, and its antipode understatement is anti-hyperbole, agreeing with the views of J. Korabaev and G. Satibaldieva in our research work.

Litotes - (gr. Litotes - from the word simplicity) - In fiction, the method of depicting something, an event or a character, diminishing and weakening. In ancient literature, litotes was considered as a state below moderation. The creator depicts an appropriate thing or an event in a way that is inferior to its glory and power. For example:

The implication of this word is so warm that,

The sun is like a little candle next to it. (Uygun)

Бу сўзнинг мазмуни шу қадар иссиқ,

Куёш бир кичик шам унинг ёнида.

(Уйғун)

In order to emphasize the importance of peace to humanity in the applied litotes, and even the fact that the meaning behind this word is hotter and more pleasant than the sun, the poet describes the giant cosmic -sun as a small candle. [7.166]

In "Encyclopedia Britannica" litotes was described as: "Litotes, a figure of speech, conscious understatement in which emphasis is achieved by negation... Litotes is a stylistic feature of Old English poetry and of the Icelandic sagas, and it is responsible for much of their characteristic stoical restraint..."

In "Oxford English Dictionary" "was depicted as "ironical understatement in which an affirmative is expressed by the negative of its contrary. (I shan't be sorry for I shall be glad)"

In "Collins English Dictionary" litotes was described "understatement for rhetorical effect, esp. when achieved by using negation with a term in place of using an antonym of that term, as in "She was not a little upset" for "She was extremely upset."

In the "Dictionary of Linguistic Terms" by O.S.Akhamanova there are two different interpretations of the litotes. In particular, litotes is defined as a stylistic tool used as a trope, a rhetorical appeal, often inverted by denying any description. Secondly, according to the author, litotes overlaps with meiosis. Therefore, the reason why litotes is sometimes interpreted as a "denial of opposition" is that there is a meaning of denial based on it: useless (фойдасиз), without saying a word (бир сўз айтмай).[1.213] On the one hand, the denial of denial is equivalent to affirmation, but on the other hand, according to Y.M. Skrebnev, the meaning of litotes is weaker than affirmative statements.

For example, litotes:

*notwithouthelp* - не без помощи - ёрдамисизбўлмайд

*do not consider useless* - не считать непригодным- фойдасиз деб хисобламаслик

In the affirmative meaning:

*withhelp*- с помощью - ёрдами билан -

*считать пригодным- фойдали деб хисоблаш* - *consideras useful*

it is clear from the above examples that the meaning of the phrases expressed by litotes is weaker than the affirmative meaning. [5.118]

The concept of understatement – anti-hyperbole is caused by the exaggeration of small concepts. This, in turn, indicates that the composition of the hyperbole and litotes opposite. Anti-hyperbole serves to over small concepts, while the composition of litotes is to minimize through negation. According to Y.M. Skrebnev, the technique of expression of hyperbole and litotes is different, it consists of a partial negation of one concept of litotes. It should be noted that the semantic mechanism of the anti-hyperbole overlaps with the semantic mechanism of the hyperbole. J.Koraboev, G.Satibaldieva also distinguished anti-hyperbole as the anti-pod of hyperbole. Moreover, litotes and meiosis are tropes close to anti-hyperbole.

There is also the term "meiosis" in linguistics. In accordance with J. Korabaev, the word form is significantly reduced, meaning that it is manifested in a relatively reduced form of quality or

degree, rather than in a severely reduced form. For example, “*Иноқ ўйнашяпти*” “*They are playing friendly*” instead of “*Яхши ўйнашяпти*”, “*They are playing peacefully*”, “*Ёмон танқид қиляпсан*”, “*Яхши танқид қиляпсан*” and so on. In these examples, there is no denial that must be used in the litotes, in which case “*Ёмон танқид қилмаяпсан*” “*you are not criticizing in a bad way*” would be in the form of “*Яхши танқид қиляпсан*” “*you are criticizing well*” instead of “*Ёмон ишламадик*”, “*We haven't done badly*”, it would be “*Яхши ишладик*”, “*We have done well*”. [10]

The examples show that in meiosis there is no “over-minimizing” or even anti-hyperbolic element, to be a form of opposition to hyperbole, even semantically, because hyperboles especially anti-hyperboles include exaggeration and diminution in relation to quality, quantity, degree, behavior, objects, individuals, animals, and other beings, which is not observed in meiosis and litotes. From this, we can see that the opinion of the researchers, who considered litotes and meiosis to be a manifestation of hyperbole, has not been proven, hyperbole and the stylistic figures mentioned above are different concepts when summed up, we can see that they are only partially close to each other from a stylistic point of view.

The relationship between anti-hyperbole and litotes on the one hand and anti-hyperbole and meiosis on the other is also noteworthy. It should be noted that in this respect the difference between the anti-hyperbole and the litotes is proportional to the difference found between the hyperbole and the litotes. That is, it is not a form of hyperbole, but a troop close to hyperbola and anti-hyperbole, in which there is no “extreme” semantics, and this distinctive feature also applies in part to meiosis. In meiosis, the word form occurs in a significantly reduced form, i.e., in a relatively reduced form of quality or degree, rather than in a very reduced form. Therefore, if we assume that there is a semantic contradiction between hyperbole and litotes (also meiosis), in the case of “over-magnification” - “over-minimizing”, in this case there is a partial semantic similarity between the anti-hyperbola and litotes (also meiosis), that is, they are forms of speech in which the quality and degree of the object of existence are greatly diminished (in anti-hyperbole) and only diminished (in meiosis and litotes). An important fundamental difference between anti-hyperbole and lithotomic (also meiosis) is that anti-hyperbole is characterized by the expression of the semantics of over-minimizing, but this is not characteristic of litotes and meiosis.

The stylistic description of other tropes is also taken into account when systematizing hyperboles. In this context, we will first try to consider hyperbole and anti-hyperbole, as well as their interactions with meiosis and litotes, which are similar to them.

1) Hyperbole is a means of exaggerating a certain description:

*Мен сенга уни қилма деб юз марта айтдим.*

*I told not to do it a hundred times.*

2) Anti-hyperbole is a means of over-minimizing and lessening a certain characteristic:

*Яримта сўз ҳам сизмайди!*

*Don't utter even half a word!*

3) Meiosis is a means of minimizing and reducing the particular characteristic with culturally, politely:

*Мен уни ақлли деб айта олмайман.*

*I can't say he is clever.*

4) Litotes is a type of expression in which any description is reduced or diminished, in which in most cases any description is interpreted inversely by negation.

5) *-У жуда бой одам.*

6) *He is a very rich person.*

7) *-Биз ҳам камбағал эмасмиз. (lithota)*

8) *-And we are not poor either.*

9) *Кўриниши ёмон эмас.*

10) *She is not bad looking.*

11) *У мен биладиган энг тоза одам эмас.*

12) *He is not the cleanest person I know.*

13) *Мен сизнинг нуқтаи назарингиз билан, норози бўла олмайман*

14) *I cannot disagree with your point of view.*

15) *Мишليون доллар кичкина миқдор эмас.*

16) *A million dollars is not a little amount.*

17) *Сизнинг хонадонингиз носарамжон эмас.*

18) *Your apartment is not unclean.*

19) *У чиройли малика эмас.*

20) *She is not a beauty queen.*

21) *I fear I am not in my perfect mind... (W.Shakespeare, King Lear)*

Anti-hyperbole is divided into structurally pure and mixed anti-hyperboles:

Pure anti-hyperboles, in turn, are words that have only an over-minimizing semantics:

*Бир оғиз зан.*

*Half a word*

*A woman of pocket size*

If the description of something by means of language is represented by meiosis and litotes by overminimizing or reduction, in which a mixture of meiosis and litotes is observed with anti-hyperbole. It is appropriate to call it "anti-hyper meiosis" or "Anti-hyper litotes".

*Мен бу ҳақда бир оғиз бир нарса дейишга ҳам истиҳола қиламан.*

*I will abstain from saying even just half a word about it. (anti-hyper meiosis)*

"Anti-hyperlitotes" can also be found on the language

*Not at all a drop in the ocean.*

*He is not at all a tiny creature.*

*She is not at all stupid in her manners.*

*Сизга бу нарсалар жуда ёқиб тушмаса керак.*

*It is not the tiniest creature I have ever seen. (anti-hyperlitotes)*

*They do not seem the happiest couple around. (anti-hyperlitotes)*

*The ice cream was not too bad.* (anti-hyperlitotes)

Also, anti-hyperbole can be mixed with metaphor, metonymy, synecdoche, oxymoron, antithesis, epithet and simile.

*Кўнглим сал тинчиди.* (anti-hyperbolicomparison)

*Кўнглимга қил ҳам сизмайди.*

*Кўнглига қўл солиб кўр.* (anti-hyperbolic synecdochal metaphor)[11.57]

*Кўнглимда заррача гумон йўқ.* (anti-hyperbolic synecdoche)

*Синчалак деган қушни биласизми, оёғи ундай.... Шу қуш “Осмон тушиб кетса ушлаб қоламан” дебоғини кўтариб ётар экан.* (anti-hypersimile)[11.45]

In this example, extreme reduction is used in conjunction with comparison. The thinness of the leg is reduced to a "thread" and, as a result, becomes an "anti-hypersimile" mixture.

### 3. CONCLUSION

Since hyperbole, anti-hyperbole, and meiosis are associated with enhancing (enlarging) or decreasing (lessening) the description of objects in life, their main difference is that while hyperbole and anti-hyperbole are always exaggerated, there is no “extreme” semantics in litotes and meiosis, but their mixture gives us ‘anti-hypermeiosis’ and ‘anti-hyperlitotes’, which are new ‘mixed (syncretic)’ stylistic devices. All of this suggests that hyperbola, litotes, and meiosis are not the same, that they are different stylistic forms, but that they are semantically partially close to each other.

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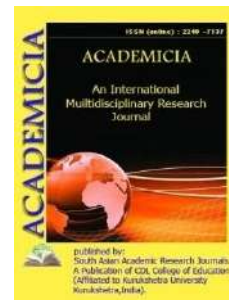
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## CRIMINAL LAW CHARACTERISTICS OF CRIMES IN THE FIELD OF FOREIGN ECONOMIC ACTIVITY

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### ABSTRACT

*The article outlines the reforms carried out on the integration of the Republic of Uzbekistan into the world economic community, also analyzes the legal doctrine and legal norms that allow the concept of foreign economic crimes to be revealed. The author formulates the signs and definition of foreign economic crimes in the field of foreign economic activity. The formulated concept will provide competent qualification of crimes by the law enforcer.*

**KEYWORDS:** *Crime, Legislation, State, Republic Of Uzbekistan, Foreign Economic Activity, Customs Crimes, Customs Border, Customs Authorities.*

### INTRODUCTION

In the context of the formation of market relations, the issues of improving foreign trade activities in view of the globalization of the world economy are put to the fore. At the same time, the formation and development of its own management system for export-import relations, the development of principles for determining the ways of integration, is associated with the reduction of administrative barriers, the application of international legal acts and market instruments for regulating foreign trade in General. The solution of these issues involves the development of scientifically-based recommendations for the development of the functioning of the customs system that meets international norms, standards and rules. Formation against the background of major transformations in the Republic, as well as global, far-reaching changes in the world, emphasizes the need for scientific understanding of the nature, essence and prospects of the ongoing processes and trends in the state.

An increase in the flow of goods transported across the customs border of the Republic of Uzbekistan requires constant monitoring by the state in terms of ensuring the development of the economy and ensuring the safety of citizens and the state itself. The economic policy of the Republic of Uzbekistan includes many directions for the implementation of the main state tasks formulated in the Constitution of the Republic of Uzbekistan, legislative acts, international treaties and a number of other documents. The main law in this direction is the Law on Foreign Economic Activity.<sup>1</sup> For the implementation of foreign economic relations, the framework conditions for concluding international agreements in the field of foreign economic activity were created. The legislation of the Republic was enshrined execution and protection of economic interests of Republic, legal entities and citizens of Uzbekistan, to establish legal guarantees for activities of foreign investors on the territory of the Republic.

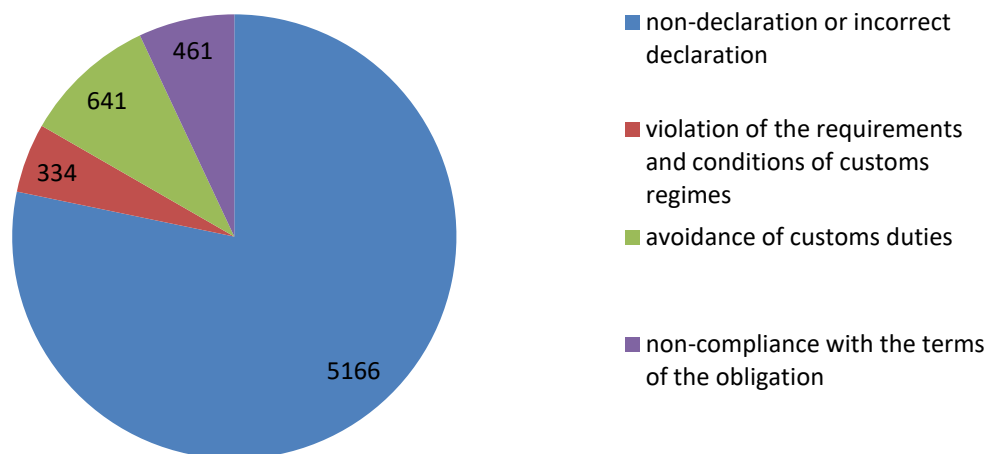
The democratization of foreign economic policy has made it possible for domestic entrepreneurs to establish relations with foreign contacts. However, changes in the economic life of the country have contributed to the emergence of foreign trade offenses that have negative consequences for the development of the Republic.

Economic security of the country is one of the most important national priorities in many countries of the world, as it is a guarantee of the country's sovereignty and a condition for stable and productive life of the population. The stability of the economy determines economic security. When conducting economic reforms, criminalization in the sphere of foreign economic activity is particularly difficult.

On the territory of our country, the State Customs Committee of the Republic of Uzbekistan and its territorial customs departments carry out targeted comprehensive measures to identify facts of violation of customs legislation. So, as a result of measures taken in this direction, according to official statistics, for the period of 2019, customs authorities revealed 16,433 (2018 - 12,836) offenses, with the seizure of goods worth 193.1 billion (145.1 billion) sums, among which 514 (452) criminal cases were instituted, and administrative cases were instituted on 15,266 (12,103) facts<sup>2</sup>.

Of these, 7,031 violations were detected in the sphere of foreign economic activity (4142 in 2018), and goods totaling 77.2 billion rubles were seized (detained). sum (60.2 billion), additional customs duties were charged in the amount of 198.2 billion rubles. in 2019, 91 (104) criminal cases were initiated against participants in foreign economic activity, and 6802 (3972) administrative cases were considered.

### Identified offenses in the field of FEA detected in 2019



In the current criminal legislation of the Republic of Uzbekistan, foreign economic activity is not accepted as a separate object of a crime, since the object is what the socially dangerous act of the subject is aimed at or what the crime is capable of causing harm, namely, “public relations protected by criminal law, which, as a result of criminal encroachment is harmed or a real threat is created”.<sup>3</sup>

On the basis of the generalization of the interests of the criminal law protection, the general, tribal, species and direct objects of crime are distinguished.<sup>4</sup>

A common object forms the totality of all socially significant social relations protected by criminal law. They are listed in part I of article 2 of the Criminal Code of the Republic of Uzbekistan.

The generic object of criminal encroachment refers to a group of homogeneous social relations, which are encroached upon by crimes provided for in articles included in the same section of the Special part of the criminal code, for example, section III “Crimes in the sphere of economy”.

The species object unites an even narrower and more similar in nature group of social relations, protected by a more specific (in comparison with the section) set of norms of the Special Part of the Criminal Code, which constitute a separate chapter, for example, included in Section III of Chapter 12 “Crimes against the Fundamentals of the Economy” (art. Art. 175-1852 of the Criminal Code of the Republic of Uzbekistan).

Finally, the immediate object is a type of social relationship that is violated as a result of a separate specific criminal assault. The specific features of each crime are determined primarily by the nature of the immediate object of the attack.

One of the elements of economic activity is foreign economic activity. Chapter 12 of the criminal code of the Republic of Uzbekistan provides for crimes related to foreign trade, investment and

other activities. In order to improve the criminal legislation in this area most effectively, we believe it is worth finding out what foreign economic crimes are and how they are characterized.

In legal doctrine and judicial investigative practice, there is no single position on resolving this issue. Also, unfortunately, Uzbek scientists as a separate object of scientific work on crimes in the field of foreign economic activity have not conducted research. According to some Russian legal experts, crimes in the field of foreign trade are not distinguished, these criminal infringements are customs<sup>5</sup>.

However, the doctrine and current legislation do not have a common understanding of customs crimes, which introduces some uncertainty in the concept of foreign economic crimes.

Of course, the system-forming group of crimes in the sphere of foreign economic activity is represented by acts that infringe on the established procedure for moving goods and other valuables across the customs border of the Republic of Uzbekistan (crimes in the field of customs control when moving goods and other valuables across the customs border).

In the content of the Criminal Code of the Republic of Uzbekistan, customs crimes are not separated into a separate group. At the same time, the substantive content of the relevant social relations, which are encroached upon by customs crimes, allows us to distinguish such norms of the Special part of the criminal code of the Republic of Uzbekistan as art. 182 ("violation of customs legislation"), 184 ("Evasion of taxes or other mandatory payments"), 246 ("Smuggling"), as well as, 130 ("Manufacture, import, distribution, advertising, demonstration of pornographic products"), 130<sup>1</sup> ("Manufacture, import, distribution, advertising, demonstration of products promoting the cult of violence or cruelty"), 244<sup>3</sup> ("Illegal manufacture, storage, import or distribution of religious materials"), 244<sup>4</sup> ("Illegal import, sale, acquisition, storage or the use of unmanned Aerial vehicles»), 246 ("Contraband") and 250<sup>1</sup> ("Illegal turnover of pyrotechnic products") in terms of violation of customs legislation. In addition to the Criminal code of the Republic of Uzbekistan the legal regulation of customs offences also has a number of laws and decrees of the President of the Republic of Uzbekistan, resolutions of the Government of the Republic of Uzbekistan and other regulations.

Other scientific concept is the identification of the customs offences and crimes in the sphere of foreign trade. There are also options for combining all the crimes considered by us as a whole crime in the field of foreign trade and customs control<sup>6</sup>.

A different position is held by legal experts who oppose the designation of foreign economic crimes as customs, arguing that the customs authorities are a kind of tool for the implementation of foreign economic policy of the state, which makes it difficult to recognize the activities of customs authorities as the object of the analyzed crimes, since their essence is aimed at higher - order public relations-relations in the sphere of foreign economic activity, which are a component of public relations in the sphere of economic activity<sup>7</sup>.

In essence, "foreign economic crimes" and "customs crimes" are completely different concepts and should not be identified, since customs crimes can be taken as one of the types of foreign trade crimes.

Despite the existence of various options for defining the concept we are interested in, we see the need to develop a definition that defines crimes in the field of foreign trade, based on the norms of legislation and the established legal doctrine.

In order to determine the meaning of crimes in the external economic sphere, first you need to know what is meant by the term "foreign economic activity". One of the official definitions of this activity is given in the Law of the Republic of Uzbekistan "on foreign economic activity" dated May 26, 2000, No. 77-11, in which the term "foreign economic activity" is defined as the activity of legal entities and individuals of the Republic of Uzbekistan aimed at establishing and developing mutually beneficial economic relations with legal entities and individuals of foreign States, as well as international organizations.

In-depth study of the law "on foreign economic activity", you can find the basic concepts that make up the essence of foreign economic activity. According to article 6 of this law, foreign economic activity may be carried out in relation to goods, works (services), any property, including securities, currency values, electric, thermal and other types of energy, vehicles, intellectual property objects that are objects of sale or exchange, except for those prohibited by law for use in foreign economic activity.

This law also defines the main directions of foreign economic activity in particular:

- International economic and financial cooperation;
- Trade activity;
- attracting foreign investment;
- Investment activities outside the Republic of Uzbekistan.

International economic and financial cooperation - the implementation of foreign economic activities aimed at establishing and expanding mutually beneficial relations of the subjects of foreign economic activity of the Republic of Uzbekistan by legal and natural persons of foreign States and international organizations in the field of production, Finance, banking and insurance activities, education and training, tourism, healthcare, scientific-technical, cultural, environmental, humanitarian and other spheres in the manner prescribed by law.

Foreign trade activity is business activity in the field of international trade in goods, works (services).

Foreign trade activities are carried out by exporting and importing goods, works (services).

Export of goods is the export of goods from the customs territory of the Republic of Uzbekistan without the obligation to re-import them, unless otherwise provided by law.

Import of goods is the import of goods into the customs territory of the Republic of Uzbekistan without the obligation to re-export them.

Export of works (services) is the performance (provision) of works (services) by a legal entity or individual of the Republic of Uzbekistan to a legal entity or individual of a foreign state, regardless of the place of their performance (provision).

Import of works (services) is the performance (rendering) of works (services) by a legal entity or individual of a foreign state to a legal entity or individual of the Republic of Uzbekistan, regardless of the place of their performance (rendering).

Foreign investment in the territory of the Republic of Uzbekistan is recognized as all types of tangible and intangible goods and rights to them, including intellectual property rights, as well as



any income from foreign investment invested by foreign investors in objects of business and other types of activities that are not prohibited by law. The forms and procedure for foreign investment in the territory of the Republic of Uzbekistan are determined by law.

Also, the law provides for investment activities outside the Republic of Uzbekistan, which is recognized as a set of actions of subjects of foreign economic activity related to the investment of tangible and intangible goods and rights to them in the objects of business and other activities outside the Republic of Uzbekistan.

Investment activities outside the Republic of Uzbekistan may be carried out in accordance with the procedure provided for by law by:

- Creation of legal entities or equity participation in authorized funds (capital), including through the acquisition of property and shares;
- Establishment of representative offices, branches and other separate divisions outside the Republic of Uzbekistan;
- Purchases of securities, including debt obligations issued by residents of foreign countries;
- Acquisition of concessions, including concessions for exploration, development, production or use of natural resources;
- Acquisition of property rights, as well as the right to own and use land and other natural resources.

Investment activities outside the Republic of Uzbekistan may also be carried out in other ways provided for by the legislation of a foreign state and the legislation of the Republic of Uzbekistan.

We find certain shortcomings that do not allow the full disclosure of the essence of foreign economic crimes, despite the variety of options for their formulation. Taking into account all the above, we will try to determine the main features inherent in crimes in the sphere of foreign economic activity:

- Signs stipulated in article 14 of the criminal code of the Republic of Uzbekistan, defining these acts as crimes;
- A special area of protected public relations, namely the procedure for foreign economic activity;
- A special way of doing;
- implementation of transactions in the field of import and export of goods, works (services), any property that is objects of sale or exchange, except for those prohibited by law for use;
- implementation of the above actions by directly crossing the customs border of the Republic of Uzbekistan, as well as using information and telecommunications technologies.

The form of guilt in the sphere of foreign economic activity, taking into account the characteristics of the objects of all crimes, refers to intentional acts.

Based on the above characteristics, it should be noted that foreign economic crimes are committed by directly crossing the customs border of the Republic of Uzbekistan, as well as

using information and telecommunications technologies, deliberate socially dangerous acts that infringe on the procedure for carrying out foreign economic activities.

Thus, we have considered the norms of international, criminal and civil legislation, as well as analyzed the doctrinal sources that together helped us achieve our goal - to understand the essence of foreign economic crimes and formulate a definition, which is a necessary condition for improving relations in this area.

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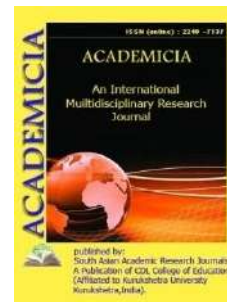
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## METHODS OF TEACHING LITERARY MATERIAL AT ACADEMIK LYCEUMS ACCORDING TO THE PROGRAM

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### ABSTRACT

*Such stage-by-stage forms of work are improving the students' skills and abilities, solving problematic problems in literature, and analyzing specific situations. As the study showed, positive results in the implementation of the tasks were achieved by highlighting the communicative skills and abilities, and therefore, special attention was paid to ways of improving the culture of oral and written speech, the types of essays and assessment criteria. At the same time, the organization of systematic and focused work on improving the formation of key concepts and skills, such as building a definition in a given form, evaluating and maintaining one's own position, evaluating and fixing the position of the interlocutor, reaching a general conclusion remained as the most important reserve for the development and improvement of skills for analyzing literary text.*

**KEYWORDS:** *Method, The Process Of The Lessons, Literature, Specialist In Literature, Poetry, Character, Writing, Training, Extra Classes, Exhibition Corner.*

### INTRODUCTION

In the 21st century, in the fastest updating of information all over the world, it is extremely difficult and important to form moral and ethical qualities in the education and upbringing of students of secondary specialized and professional educational institutions of the Republic of Karakalpakstan.

That pays attention to such methodological problems as forms of teaching Karakalpak literature and curricula for teaching Karakalpak literature at academic lyceums. All teachers are required the legal organization of the educational process, to have a creative attitude to each lesson. In order to draw up a curriculum, literary programs, educational standards in accordance with the

requirements of the law, the main direction of the study was to achieve the improvement of the results and quality of education.

In pedagogy according to the teaching methodology, several scientific studies, educational and methodological textbooks have been published. Studies on the use of innovative technologies in teaching have been carried out by such scientists as, these include monographs, dissertations, methodological works of B.S.Blom[1], J.Bateson [2], *Eigler Pierre, Langeard Eric* [3], *Gronroos Christian* [4], P.Skarzynski and R.Gibson [5], Paul Trott. [6], Tidd J and J.Bessant[7] along with the traditions of education and upbringing, the organization of new educational forms, attention is also paid to pedagogical thoughts. At academic lyceums, basic concepts are studied according to the methodology of teaching Karakalpak literature, the relationship of programs with subjects, the principles of teaching, the organization and planning of classes, interactive methods, the analysis of works of art, the study of the writers' work, the conduct of extracurricular activities. It is important to study in a comparative way the point of view of scientists on current problems of teaching literature, to outline the development of the direction of methodological and theoretical opinions. The methodological studies indicate the opinions of S.Dalimov [8], S K.Yuldoshev [9], A.Pakhratdinov[10], K.Khusanbaeva [11], K.Yusupov [12] and others on the problems of teaching literature at schools.

Considering age and psychological features of students on the materials included in the program on Karakalpak literature, it is necessary to familiarize students with the best examples of Karakalpak literature, literature of related people and world literature, to instill a sense of love for the motherland in the hearts of young people, a national feeling, and also an awakening of a sense of respect for national values and the ability to express one's opinion by studying the poetic characteristics of fiction. It is also necessary to consider that the materials included in the literature program are selected literary works, and therefore it is necessary to take into account the peculiarity of the language, psychological and pedagogical requirements of students.

Analysis of works of art and requirements for them, discussion of the text, types of analysis and methods will be studied in the course of classes under the program intended for academic lyceums. By analyzing the works of art, the students are explained the educational, moral, aesthetic, spiritual tasks of upbringing, that each people is strong in its high culture and spirituality. These program materials will be studied with the help of new types of classes: seminar, game, competition, test, conference and discussion. Teachers will need pedagogical and methodological abilities while teaching Karakalpak literature. Each lesson in literature should be held in connection with philosophy, linguistics, literary criticism, history, aesthetics, pedagogy and psychology.

Attention is paid to the features of using the methods of pedagogical technology in various types of classes on Karakalpak literature at academic lyceums: a conference, a lesson to test the knowledge and desires of students, mixed, combined and new educational lessons, attention is paid to the relationship between teacher and student, the need to change their tasks, on pedagogical technologies, having expressed opinions about the technological features of the interactive method, attention is paid to the use of such interactive methods in the lessons of the Karakalpak literature as "Brainstorming", "Cluster", "Corners strategy", "Three-stage interview", "Round table", "Zig-Zag method", "Insert", etc. methods and games. In addition to

them, the purpose and principles of teaching in the analysis of works of art, scientific analysis, didactic analysis and the problems of using these types of analysis in practice are studied.

Also, during classes it is necessary to observe an individual approach with each student, it is necessary to conduct individual work with capable, talented and poorly performing students, it is necessary to instill the habit of independent work, to independently acquire knowledge, to develop the consciousness and ability of students.

Teaching Karakalpak literature with the help of new educational lessons, conferences, disputes are considered the most important methodological task. We considered it necessary to dwell on the methodology of the conference. The methodologists reasonably determined the purpose and objectives of the conference: "A lesson-conference is one of the types of classes in and out of the lesson. We study the materials of the lesson-conference for the following purposes. It's necessary to have a concept of the material being conducted, a deep knowledge of scientific and theoretical materials, and the development of an understanding of the topic being studied." There are few methodological opinions on this type of lesson. Therefore, attention is paid to the content of the lesson conference and the way they are taught, to the problem and the peculiarity of teaching the materials of the lesson conference presented in the program.

Conducting lessons increase interest in the lesson through the various types of activities given in the program. Also methodological suggestions and opinions on the conduct of the lesson are given, an exchange of views, the purpose and objectives of the lesson, the organization of the lesson, and ways to assess the knowledge of students in the lesson. Exchange of views lesson develops the ability of thinking, the opinions of students and increases interest in literature.

At secondary schools and academic lyceums there are features of the use of lesson forms. Firstly, at schools during the lesson it will be advisable to use such types of lessons as a blended lesson, a joint lesson, introducing students to a new educational lesson, an introduction lesson, a repetition lesson, and a game lesson. Secondly, you need to take under the guidance the age-specific features of students, the time of each lesson, and the principles of compiling materials from an easy level to a difficult one. Thirdly, at academic lyceums such types of lessons as a conference, an exchange of views lesson, a lecture, and a seminar increase the students' thinking ability and interest in the lesson. As a result, a spiritual, philosophical, aesthetic feeling and a sense of beauty are formed in the students' minds.

Explores the problems of using innovative technologies in teaching Karakalpak literature, introducing innovation into the educational system of the Republic of Uzbekistan, tasks based on the development of methods that give quick and good results in practice, new methods and ways of education that are consistent with world achievements. The use of interactive methods in the teaching of Karakalpak literature has its own goals and objectives. It is necessary to constantly pay attention to the issues of rules and regulations of interactive technologies used in classes on Karakalpak literature. In addition, students are given freedom of speech and the need to respect each other and ethics of communication are explained. When dividing into groups, it will be useful to give students the right to choose, and then apply the principle of random choice. Based on the results of interactive technologies in the classes on Karakalpak literature, the teacher of literature should take stock and give the participants of the groups appropriate marks.

Opinions are expressed on the methodological issues of using problematic, monographic, moving lectures in teaching Karakalpak literature at academic lyceums, and the methods of



organizing lecture classes are implemented on the basis of materials given in the program of teaching technologies. Through the use of interactive technologies when teaching on the material given in the program on Karakalpak literature, a sense of humanism, love for the homeland and mutual respect is formed in the students' minds.

On the analysis of a work of art and its tasks and role, gives philological and methodological opinions from scientific works of famous scientists such as A. Kankalik, V.I.Khazan, B.G. Tolybaev, D.Azizov, G.Usova, A.Lilov, K.Yuldoshev, S.Matzhanov, K.Khusanbaeva and others. In the methodology of teaching Karakalpak literature, there is a peculiar order of analysis of a work of art and work on it, by purpose, task. A study of the work of each writer is required in connection with peculiar features.

By analyzing works of art under this literature program, students can familiarize themselves with its ideological content, images, and genre qualities. Along with this, one must be guided by the main principles of the analysis of a work of art. Studying the topic, the idea of a work of art. The event described in it and what period they relate to, it is necessary to pay attention to the writer's view of the present. In the course of analysis of an artwork, students form such knowledge and skills as mastering the form and content of the work, determining the genre variety and the main problems posed in the work, knowledge of its plot, compositional elements, and world of images, artistic and ideological features.

Studying by students of such works given in the program as "Aral qushaginda" by O.Ayzhanov, "Akdarya" by K.Sultanov, "Amudarya boyinda" by J.Aymurzaev, "Dastan about Karakalpaks" by T.Kayipbergenov and Sh.Seyitov's novels are one of the necessary methodological tasks. Therefore, it is necessary to know the content and ideological orientation of the work, to determine its plot, to understand and fully reveal the characters of the heroes, to determine the portraits of the heroes, to know the landscape and art details, to determine the figurative world of the work of art, to reveal the composition of the work.

As a result of this, firstly, students of academic lyceums get a wide idea of works of art, their aesthetic level, and the depth of events in them, the epic presentation and their conditions, historical periods and images and psychology of heroes. Secondly, students will try to read prose works by certain authors. Images of heroes will have a positive impact on the upbringing of the younger generation. Thirdly, during the analysis of prose works according to the program of Karakalpak literature, students develop ideas about the plot and images of the heroes of the work. As a result, their interest in literature grows and their vocabulary is enriched, as well as the development of knowledge of folk history and their cultural and aesthetic level.

Studying the biography and work of the writer while teaching Karakalpak literature at academic lyceums is one of the important methodological problems. On this issue, methodological opinions are presented in the works of such scientists as N.Yu.Postalyuk, L.B. Khvan, F.Iskhokov, K.Yusupov, etc. According to the program on Karakalpak literature, a lot of material on the biography of the writer is given. It is advisable to study the biographies of writers according to the program from a methodological point of view sequentially.

The study of the biography of each writer is considered as a presentation and introduction of his works. Studying the biography of writers, students take an example from the deeds they have done for the good of the homeland and people, from their humanism and courage. Therefore, it is necessary to take into account the educational aspects when studying the biography of writers.



When explaining the biography of the writer, respectively, each lesson provides information about important moments in the life of the writer, about the truths of that time, about his attitude to the environment where he was born and raised.

When studying the biography of the writer at academic lyceums, methodological issues such as a brief definition from the biography of the writer, as well as stories and essays about the biography, are taken into account. At the same time, it occupies a special place to study the life and work of the writer, the disclosure of the ideological and artistic quality of works and historical and literary tasks. The effectiveness and quality of conducting a lesson related to the biography of a writer, first of all, depends on the teacher's preparedness, as well as on collecting material and drawing up a good lesson plan. Therefore, the teacher must use the writings of writers on the life and work of writers.

When teaching the writers' creativity in the classroom of Karakalpak literature, students have an interest in the fact that each writer is mysterious in his own way, his inner world, that psychological experiences in the creative process are completely different. This is also stated in the writings of such writers as Z.Kabdolov, K.Yuldashev, K.Mambetov, K.Kamalov, A.Pakhratdinov, K.Allambergenov, K.Orazymbetov and others. For example, the writer Z.Kabdolov cites many mysterious and interesting facts related to the letters of writers during their creative activities. If you pay attention to them, it is said that the famous writer Ernest Hemingway could not write without standing at the podium, and some wrote lying down, and some wrote while leaving home, traveling or in creative houses, and some could not create except at the desk of their house. It is interesting to talk about such things to students, interest depends on the experience of the teacher. As a result, students, studying writers according to the program of Karakalpak literature, form in their minds a sense of patriotism, humanism, honesty, hard work, conscience, overcoming difficulties and they will increase interest in fiction.

Methodological study was conducted on the organization and content of extracurricular activities in Karakalpak literature. It notes the need to study some literary materials in extracurricular activities due to the fact that studying the material in the program is not enough. On this issue, opinions are indicated on the methodological importance of the methods of organizing and conducting extracurricular activities to improve the knowledge and skills of students in the methodological studies and works of T.R.Niyazmatova, M. Mirkosimov, SafoOchil, A. Abdurazokkov, I.Kalmikov. Conducting extracurricular classes in literature makes it possible to consolidate the knowledge gained, to further develop the students' worldview. From this point of view, it will be correct to conduct extracurricular activities in accordance with the program, not limited to regular classes in literature. In terms of purpose and content, extracurricular work on Karakalpak literature is divided into several varieties. The necessity of paying special attention to extracurricular activities while improving students' knowledge, while educating them with worthy citizens of the homeland is noted. Extracurricular activities at academic lyceums: circles, organization of shows, literary travels, literary magazines and newspapers, literary conferences develop spiritual qualities and interest in each student. During extracurricular activities, students should study folklore materials, the history of Karakalpak literature of the ancient period, Karakalpak literature of the 18th, 19th, 20th, 21st centuries. One of the still unexplored varieties of extracurricular activities carried out in order to increase students' interest in literature is the corners of visualization.

The tasks completed by students then serve as visual aids for the teacher. In addition, this kind of extracurricular work leads not only to increasing student's interest, but also adorns the cabinet of literature and enriches it with visual aids. Therefore, it will be advisable if teachers - writers will carry out such work, not during, but after school hours. Wall newspapers and magazines published in academic lyceums are considered to be a creative center that provides information about news in the community, literary news, and articles written by students on various topics, stories and poems. [13]

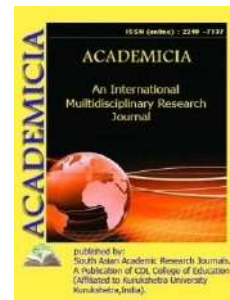
If the organized corners of shows on Karakalpak literature increase the aesthetic feelings and research abilities of students, then wall newspapers and magazines form their ability to express their thoughts and creativity in writing. Defines the results of experimental and practical work on Karakalpak literature conducted at academic lyceums as follows: were studied the possibilities of organizing experimental work, their analysis, and indicators of the level of effectiveness of their results were examined. The organization of experimental work on the basis of a certain order and program ensured their effectiveness. The program of experimental work defines the criteria, indicators and development methods, the results of the study of fiction during the lesson.

Analysis of the research theory, as well as the results of experimental work, allowed us to draw the following conclusions: The current state of student learning at academic lyceums is determined not only by the specifics of the lyceum. But also with modern requirements for teaching students, which involves a review of teaching and upbringing methods. Increasing the level of knowledge requires the appropriate organization of not only classroom, but also extracurricular activities. To this end, we first determined the purpose and objectives of the lesson, the content of the material, and made an analysis of the specialized literature, which allowed us to single out the complex of extracurricular activities as a discussion. Literary travel, country study circle, independent work, etc., as well as a set of modern interactive methods that can be applied during extracurricular activities, such as brainstorming, cluster, insert, three-story interviews, round table discussions, zigzag, business games, disputes, discussion. The use of new pedagogical technologies in teaching helps create favorable conditions for interlocutors and facilitates the assimilation of extracurricular material. In this connection, the purpose and objectives of the lesson, the content of the material were studied. The basis for the formation of educational tasks is the question of the aesthetic and spiritual education of students on the basis of a reassessment of the values, traditions of the people, their culture and spiritual wealth, which require a systematic approach to highlight the ways and techniques of intellectual work.

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## ORGANIZATION OF CREDIT OBLIGATIONS AND MONITORING OF COMMERCIAL BANKS

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### ABSTRACT

*Stability of the socio-economic conditions in the country, the rule of law, the size of the domestic market, rich natural resources, high intellectual potential, stability of the banking and financial system, development of infrastructure and logistics, flexibility of tax policy, participation of foreign investors in the privatization process, foreign capital privileges and preferences, such as the provision of additional facilities to the enterprises with the participation of foreign investors it serves as an important decision in favor of Development and strengthening of the banking system has always been in the focus of our attention, and this is giving its positive results. The country's banking system demonstrates stability and stability. This is explained by the high level of reliability of banks and the lack of reliance on foreign sources of financing, and the negative impact of external shocks. Investment activity of commercial banks is increasing. More than 75% of commercial banks' investments are long-term investment loans for over three years. In general, it should be noted that over the past ten years, lending by the banks to the real sector of the economy has increased 7 times. The unconventional approach to transfer the economically insolvent enterprises to the balance sheets of the banks has justified and proved effective. At present, out of 164 bankrupt enterprises transferred to the banks, 156 have fully restored their production activity, 110 have been sold to new investors. Commercial banks invested 275 billion soums in the technical re-equipment and modernization of such enterprises, resulting in over 22,000 jobs. The role of banks is particularly important in their investment policies for*

*modernization, technical and technological re-equipment of leading sectors of the economy, housing construction, transport and infrastructure communications development. In this regard, commercial banks of the country have problems with the mechanism of lending, monitoring and repayment of loans and the need to develop scientific proposals and practical recommendations aimed at solving these problems.*

**KEYWORDS:** *Commercial Banks, Credit Obligations, Monitoring, Banking System. Purpose of The Study. Economic Relations Related To The Mechanism Of Lending By Commercial Banks Are Also Emerging In The Practice Of Increasing The Efficiency Of Monitoring. Research Methods. Systematic And Factor Analysis, Comparative And Structural Analysis, Statistical Grouping, Inductive And Deductive, Monographical Observation, Expert Evaluation, Abstract Thinking And Other Methods Were Used In The Study.*

## I. INTRODUCTION

Development and strengthening of the banking system has always been in the focus of our attention, and this is giving its positive results. The country's banking system demonstrates stability and stability. This is explained by the high level of reliability of banks and the lack of reliance on foreign sources of financing, and the negative impact of external shocks.

President of the Republic of Uzbekistan Sh.

For example, for the first time, world-renowned rating agencies Fitch Ratings and Standard & Poor's set the country's sovereign credit rating. These ratings have a "Stable" outlook, which means that this indicator is likely to decline over the next 12-18 months.

Commercial banks credit investments to reach 58 trln. As of January 1, 2018, the amount increased by 110.6 trillion soums, or by 110% (32% in 2016). and the share of credit investments in GDP increased up to 44.4% (26.4% in 2016). while the share of credit investments (net) in total assets increased from 61.9% to 65.1%.

**TABLE 1 CREDIT INVESTMENTS OF COMMERCIAL BANKS (IN PERCENT)**

Types of banking	2016		2017		2018	
	Total loans	From this in foreign currency	Total loans	From this in foreign currency	Total loans	From this in foreign currency
Banks with state share	84,2	94,7	88,4	94,3	88,0	—
banks with no state share capital	15,8	5,3	11,6	5,7	12,0	—

Source: Report of the Central Bank of the Republic of Uzbekistan, [www.cbu.uz](http://www.cbu.uz)

At the end of 2017, commercial banks accounted for 88.4% of total loan portfolio of commercial banks, which fell by 0.4 percentage points in 2018. At the same time, almost all (94.3%) foreign currency credit investments during the year 2017 were financed by state-owned commercial banks.

The rapid increase in consumer and investment demand in the economy in 2018 is also due to the significant increase in bank loans to the economy.

In particular, the total volume of loans to the economy in January-September 2018 increased by 1.8 times or 34.1 trillion soums compared to the same period of 2017. 69.9 trillion soums soums, and its share in GDP increased from 19.3% to 28.6%.

However, a sharp gap between the growth of loans and the growth of the money supply, and the high rate of change in the share of loans allotted to GDP, imply that part of the domestic demand created by these loans is covered by imports.

The banking system of the Republic of Uzbekistan is an important and dynamically developing sector of the country's economy. With particular emphasis on this area, it has been selected as one of the priority areas for the development of the national economy.

Dear President Shavkat Mirziyoyev in his Address to the Oliy Majlis:

“Today, the main problem in the banking system is that the majority of their capital, 83%, is state-owned. This, in turn, hinders healthy competition in the banking sector and adversely affects the quality of service.”

Analysis of the current state of the banking system of the Republic of Uzbekistan shows that during the past period commercial banks have achieved certain successes, which are a driving force in the development of the economy. At the same time, further development of the country's banking system will largely depend on the quality and variety of banking services provided.

## II. LITERATURE REVIEW

A number of legislative acts of our state are the laws of the Republic of Uzbekistan. Decrees and resolutions of the President of the Republic of Uzbekistan, resolutions of the Cabinet of Ministers strengthened the legal framework for the activities of commercial banks.

Financial and banking relations have been studied by a number of world scholars and experts, and a great contribution is made by foreign researchers, scientists of our country. Several on the study of bank concept and its theoretical aspects

Economists have been working for centuries. Examples include world scientists D.Polfremen, E.D. Dolon, J.Skinki, J.Matuk, D.Macnoton, K.Barltrop, I. Reed, and Philip Ford. Russian economists OI Lavrushin, Yu. Babicheva, Zharkovsky S. Efimova MR In Kovalev VV, Kolesnikov VI, A. Simanovsky, A. Vikulin, V. Usoskin, G. Tosunyan, G. Beloglazova, G. Panova, L. Lavrushin, B. Buhwald, E. J. Bregel, K. Gaval, The theoretical and practical issues of development of commercial banks activity by J. Stuffle, Tam and GG Korobova were thoroughly researched.

Among the economists of Uzbekistan engaged in banking are Sh. Sh.Z.Abdullaeva, Mullajonov F.M. Abdullaev YA, Bobokulov Abduganiev BA, A. Vakhobov, O.Iminov, N.Jumaev,

T.Koraliev, S.Norkobilov, U.Ortikov, D.Saidov Theoretical and practical aspects of development of commercial banks.<sup>1</sup>



### III. RESULTS

The President of the Republic of Uzbekistan signed a decree on 9 January 2018 on measures to radically improve the activity of the Central Bank of the Republic of Uzbekistan in order to facilitate the achievement of the goals through the full utilization of the monetary policy and banking regulations. Decree of the President of the Republic of Uzbekistan “On Measures for the Protection of Children” According to it, the strategic objectives of the Central Bank are: price stability; stability and development of the banking system; stability and development of the payment system.

However, to date, the banking and financial services and the interbank competition environment for customer engagement do not fully meet the requirements of the time. At the same time, the services sector in rural areas is still underdeveloped. A serious problem is that the management system in the economy is outdated and the effective mechanisms for supporting innovative ideas are not implemented in a timely manner.

On March 23, 2018, the President of the Republic of Uzbekistan Sh.Mirziyoev signed the Resolution “On Additional Measures to Increase Banking Accessibility”. It was noted that as a result of the ongoing reforms, the banking system has introduced the market mechanisms for the provision of services, expanding its range and increasing financial transparency for entrepreneurs and the public.

Organization of lending involves the combination of mutual obligations and interests of two subjects of credit relations - bank and borrower. The standard document of the banks' activity as a creditor is reflected in the credit policy. Commercial banks independently form a credit policy.

An important aspect of the bank's lending activity is the formation of a credit policy by each bank, taking into account its political, economic, organizational and other aspects. The credit policy of the commercial bank is the basis of credit management.

According to the Regulation of the Central Bank of the Republic of Uzbekistan dated March 2, 2000 "On the requirements of credit policy of commercial banks", the bank's credit policy is defined as follows: is a document that provides employees with guidance on how to effectively manage their loan portfolios. Credit policy should clearly state and specify the objectives of the bank's credit activities.

Credit policy of commercial banks is the basis for effective credit management. This policy defines objective standards and criteria for lending to bank employees and managing the bank's credit portfolio. Properly developing and pursuing a credit policy, a clear understanding of the purpose of this policy by all departments is the basis for proper management of credit standards, avoidance of high risks, and proper identification of banking opportunities.

A well-developed credit policy is a good way to manage and mitigate credit risk.

The need for a credit policy is that the bank should have a policy, whether large or small, with little or no employees. This policy ensures the implementation of the general rules and principles of credit, as well as the sequence of operations. The credit policy of the bank should be the same for all employees of the bank - from the junior staff or the chairman of the bank's management. That is why a set of credit policies is a set of rules and solutions.

Lending policy and its effectiveness can be successful if the right credit price is established.

In order to effectively pursue a credit policy, bank employees need to be well aware of who can use their bank clients' funds.

The bank has to decide what loans, how much, in what form, to whom and on what terms. There are such types of business that a bank may find it difficult to grant. Therefore, it is important to remember that each activity is at risk. The Bank's credit policy requires preventing possible hazards in its operations, by balancing the ratio of deposits and loans, the balance between bank liabilities and equity and other indicators. Rational credit policy improves the quality of loans. Therefore, the main purpose of credit policy should include such elements as management processes, adequacy of funds, quality risk categories, credit portfolio balance sheet, separation of liability components. As for banking policy, bank policy is a combination of bank deposit policy, credit policy, interest rate policy, currency policy, customer service policy and other banking services, bank liquidity policy, and personnel policy. Thus, the activity of banks consists of the following basic elements:

To find out more about the essence of the credit policy, let's look at what it is.

The content of the Bank's credit policy is as follows:

Issues related to the identification and formation of the Bank's loan portfolio (types of credit, terms of repayment, quantity and quality);

List of powers assigned to the Deputy Chairman of the Bank responsible for credit activities, Chairman of Credit Committee and Credit Inspector (maximum amount and types of credit);

Bank's lending rights and total commitment to provide information;

Description of credit check-in and decision-making system;

The list of required documents to be attached to the loan application and the list of documents that must be kept in the credit file (the borrower's financial statements, the credit agreement, the pledge agreement, the pledge agreement, etc.);

Detailed information about who is responsible for safeguarding and checking credit cases and when and under what circumstances;

Provision of the credit and the basic rules of its acceptance, evaluation and implementation;

The description of the norms defining the quality of all loans;

Determining and demonstrating the maximum credit concessions (ie the ratio of loan amounts and total assets of the bank);

Banking region, industry, sector or sector where the major part of credit investments is used; Structure and analysis of problem loans, showing how problems can be solved;

The rest of the documents describe the types of loans that are prohibited or unsuitable (borrowers who are questionable or who do not provide a complete list of documents).

Qualified credit policy is implemented at all levels, from the bank's head to the operator, which enables the bank's management to make the right decisions, to avoid excessive risks and to

properly evaluate bank loans. At the same time, credit policy should be more flexible, taking into account political, economic and legal conditions.

#### IV. DISCUSSION & CONCLUSION

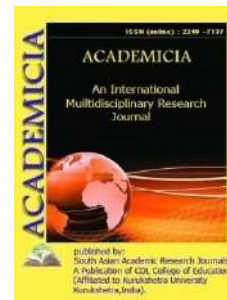
Stable growth rates and quality of key indicators of the country's banking system, consistent implementation of monetary policy, lowering interest rates, increasing intellectual potential, improved access to banking services for the population and businesses, effective banking supervision, financial reporting based on international standards; targeted use of investments, minimization of investment risks are important factors of improvement of the investment climate in the system is calculated.

The Bank will need to systematize monitoring plans for all projects to ensure systematic monitoring and implementation of projects. At the same time, a project monitoring plan for the implementation of the project will be developed. Provided that credit protection is established, a monitoring plan is created for the entire credit period between the loan officers (experts) and the monitoring department specialists. At the same time, the monitoring plan envisages that a bank employee visits the inspection sites at least once every quarter.

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## FEATURE OF TECHNICAL SURVEY OF OBJECTS UNFINISHED CONSTRUCTION OF BUILDING OF DIFFERENT PURPOSE

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### ABSTRACT

*The article sets out the result of a technical survey of unfinished four-story residential building. It developed a recommendation to strengthen individual load-bearing structures and indicated measures to further continue installation work on putting the facility into exploitation.*

**KEYWORDS:** *Technical Condition, Reinforcing, Technical Survey, Impact, Building Construction, Unfinished Building.*

### INTRODUCTION

In recent years, due to the rapid development of the construction industry, investors did not disregard unfinished construction projects (unfinished), frozen during the period of decline in industrial construction.

However, the necessary conservation of facilities during the suspension of construction in those days, as a rule, was not carried out.

Long-term environmental impact does not pass for structural elements of a building or structure without a trace. In this case, a number of factors play a negative role: natural - such as precipitation, temperature drops, etc., man-caused - for example, dynamic loads from rail traffic (nearby metro lines, tram, railways, etc.). In addition, during this time, changes in the geological and hydrogeological situation of the built-up area could occur.

Given this, even at the planning stage, the resumption of construction is necessary survey an existing building or structures, determine the current technical condition of structural elements, provide, if necessary, measures to restore or strengthen structures and give a forecast about the

possibility of further exploitation of a building or structure (sometimes it is not economically feasible to continue the construction of such objects).

A detailed engineering and technical survey of the unfinished building (structure) will answer the question about the possibility of its completion and safe further exploitation.

Identification of the technical condition of structural materials, supporting and enclosing structures of a building (construction), as a result of the survey, will help to make a concrete decision about the future fate of the object.

As a rule, if there is a long interruption in construction, the unfinished building or structure is adversely affected by the environment: excessive moisture, freezing or thawing, heating and cooling. Building structures that are not designed for such effects are subject to various damages and deformations.

In order to resume construction, it is required to conduct detailed surveys of existing structures, to identify and assess damage resulting from a break in their construction. According to the survey, measures are being developed to eliminate damage, to prevent defects that may appear as a result of construction and installation works. It is also necessary to conduct geological engineering studies, sometimes there is a need to develop new completion project object with the introduction of structural elements.

The periodic effect of precipitation and melt water on the soil of the base leads to excessive water logging (for example, sometimes water can stand for a long time in the pit), thereby reducing the bearing capacity of the soil. Most often this happens on clay soils. If construction resumes on frozen heaving soils, then at the beginning of the summer period, large non-uniform precipitation can be expected. In this case, you should wait for the thawing process and only then begin construction and installation works. Excessive soil moisture and freezing, backfilling of foundations is not carried out, there is no external layout, windows do not close in the basements, there is no heating system in the winter - all this can lead to the destruction of the whole building. Unfinished objects after a certain time begin to deform, the result is the appearance of cracks on the walls, foundations, slabs. These cracks increase in size after each freezing and thawing cycle, which renders a certain part of the building or structure unusable.

During a long interruption of construction and installation work, it is necessary to carefully assess the damage that was caused to building structures, a prerequisite is the assessment of reduced quality indicators of the soil base.

After the construction work resumes, it is necessary explore the properties of the soil base and then develop measures that will depend on existing soil conditions.

If a dug pit is open before the break, then when starting new construction and installation works, it is necessary to deepen to those soils that were not exposed to any factors.

In long breaks in construction work (in the event that the structures were not preserved), severe damage is primarily manifested in the brickwork of the walls, in floor slabs, concrete structures with existing defects, such as poros, mother-in-law, etc.

In cases where acidic gases are present in the air, then reinforced concrete building structures consisting of dense concrete and steel structures are also subjected to corrosion. There is a danger of rotting and warping of wooden structures.



Adverse effects of long interruptions in construction will affect the building or structure during excavation during construction of foundations.

It is imperative to develop measures to eliminate the consequences, and for this it is necessary to conduct high-quality examination or unfinished building structure.

### **Survey of the building, after a break in construction (unfinished).**

This survey necessary when resuming construction work at facilities whose construction or reconstruction was discontinued several years ago. During a long break in construction, unfinished buildings and structures are subject to constant adverse environmental effects: humidification, freezing and thawing, heating and cooling. Building structures not designed for such impacts receive various damages.

Main challenge inspection is to determine the possibility of further exploitation of materials and the use of individual structural elements as part of a single building structure. During the examination, if necessary:

- Identification of changes in the quality indicators of building structures;
- A thorough instrumental analysis of the physical and mechanical properties of materials with sampling in the laboratory;
- Probes are made to determine the condition of hidden structures and materials;
- a geodetic survey is being carried out to determine the deflections, movements of structures;
- a cartogram of defects is compiled, on the basis of which the defects are classified in accordance with the regulatory framework and verification calculations are performed to assess the bearing capacity of structural elements.

### **Description of the object**

The surveyed object is located at the address: Tashkent city, Sergeli district, Sputnik-2 massif, Davlatobod street.

### **Characteristic of the construction area**

Construction area - Tashkent city, seismicity - 8 points; the estimated seismicity of the site is estimated at 9 points, the capital of construction is II class, the durability class is II class, the degree of fire resistance is II class, non-stop soils with rated resistance  $R = 20$  kPa are accepted, soil category by seismic properties is II, groundwater is non-aggressive to concrete normal permeability in Portland cement, the standard depth of soil freezing is 0.68 m, the depth of seasonal soil freezing is 0.7 m, groundwater within the area is uncovered at a depth of 2.8 m from the ground.

### **Space-planning scheme and structural design of the building**

Object unfinished four-story brick building with basement. This building is “square” in plan and with axial dimensions of 30.9 m - 11.22 m. The height of the building is 3.00 m from floor to floor. The building under examination was launched in the early 1994s of the last century according to design estimates. However, at the time of the examination, these documents were not submitted by the customer, i.e. they are not preserved.

The surveyed building, over the past period a long time there was atmospheric precipitation (without a roof). Measured survey work showed that the building has the following structural solution.



Photo. 1. The appearance of the unfinished construction of a residential building

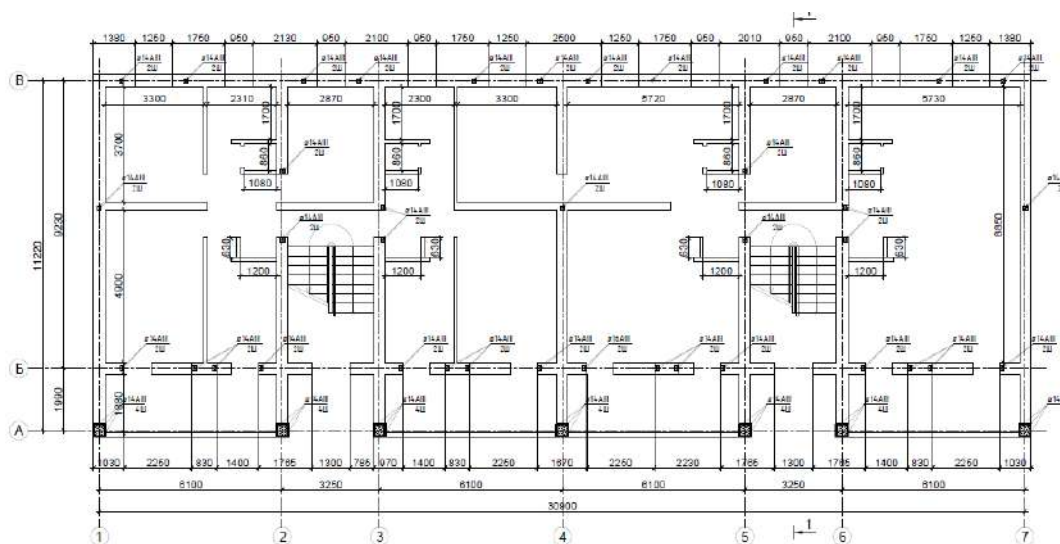


Photo. 2. Floor plan of a four-story residential building

## SURVEY METHODS

1.1. Technical inspection of building structures was carried out by the visual-instrumental method, in accordance with KMK 2.01.15-97 "Regulations for the technical examination of residential buildings", "Recommendations for the examination and assessment of the technical condition of large-panel and stone buildings. TSNIISK them. V.A. Kucherenko, Moscow, 1988" and other regulatory documents.

1.2. During the inspection, the actual dimensions between the center axes of the building, the spans and sections of the structures, as well as the defects of the elements and assemblies that were allowed during the design, manufacture, transportation, installation and appeared during exploitation, were determined.

### 1.3. Tools and instruments used in the examination:

- Plumb - to measure deviation or displacement from the vertical;
- metal roulettes 3 and 5 m long in accordance with GOST 7502-89 - for measuring linear dimensions;
- vernier caliper according to GOST 166-80 - for measuring linear dimensions;
- Probes - for measuring the size of gaps, depth and width of crack opening;
- Laser roulette BOSCH DLE 50, for measuring linear dimensions;
- Canon digital camera - for fixing defects in construction

### Constructions;

- ONIX-2.5 concrete strength meter for determining the grade and class of concrete.
- measuring concrete protective layer POISK-2,5
- Adhesive strength meter in masonry ONIKS-OS-2.

1.4. To determine the actual laying depth and the configuration of the foundations, a control passage of pits was made.

1.5. To establish the actual strength characteristics of the brickwork, laboratory tests of the masonry mortar and brick selected at the facility in the testing laboratory were performed.

1.6. A photograph was taken of the object with the fixation of individual structures, their elements, nodes and defects.

### The results of the survey.

Grounds and foundations. The foundations of the building are tape, reinforced concrete, monolithic. The width of the soles of the foundations of the longitudinal walls is 0.9 m, transverse -2.0 m. The depth of the sole is -3.32m from the floor level ( $\pm 0,000$ ) or from the ground level -1.20m. on reinforced concrete foundation pillows, foundation walls are constructed from prefabricated factory concrete blocks FBS 24.0x0.6x0.4. On the outside, the foundation walls have a bitumen coating. When digging a pit on October 4, 2014, the soils under the soles of the foundation are dry, compacted. During construction, they are soaked. Violations of the integrity of the foundations of the walls are not observed.

### The technical condition of the main building structures;

The foundations of the building are tape, monolithic, reinforced concrete and made of prefabricated concrete blocks of factory manufacture. The lower, monolithic part of the foundation is a reinforced concrete pillow with a width of 0.9 m (longitudinal) and 2.0 m (transverse bearing) and a height of 0.32 m. On a monolithic reinforced concrete foundation along the axes, FBS 24.0x0.6x0.4 with a width of 400 mm, external and 400 mm internal, longitudinal and transverse, are laid. All precast concrete blocks are laid on a cement-sand mortar, followed by reinforcement. Reinforced by reinforced mesh with cells 100mm x 100mm Ø6 VR.

The depth of foundation is -3.32 m from the level of the clean floor of the first floor (0.00) or -1.20 m from the natural level of the earth. Floor levels below 3.32m are reinforced concrete monolithic concrete pillow, concrete walls are laid down to the floors of the 1st floor, drawing No. 4. Concrete class of monolithic sections, i.e. walls B 20 (Table 1.). Blocks are not arranged around the perimeter of the building. Water under the foundations is not recommended. Waterproofing is done. Backfill made of construction debris and partially gravel.

At the time of the survey, soil deformations of the foundation or foundations are not observed. In constructions, damage or defects whose dimensions exceed those regulated by standards are not established.

The walls of the examined building with a thickness of 380 mm (1.5 bricks) along the perimeter of the buildings and 380 mm along the stairwell and 250 mm along the middle longitudinal axes of the buildings are laid from solid clay burnt brick on cement - lime-sand mortar. They are reinforced with masonry mesh 100x100mm - Ø5 VR. Partitions 120 mm thick are reinforced brick. The tests performed showed that the adhesion of the mortar to the brick is good. The normal adhesion of the mortar to the brick on non-tied seams averaged 1.2 kg / cm<sup>2</sup>. This value corresponds to the laying of category I (requirement of clause 3.5.4. Table No. 1 of KMK 2.01.03-96 "Construction in seismic areas").

On all longitudinal and transverse walls, masonry nets of Bp Ø5 were laid with cells 100mm x 100mm wide 30cm. They are stacked for every 40-50cm in height.

The step of the transverse walls at an 8-point zone according to table No. 3.1 KMK 2.01.03.-96 point No. 5 of the I-category of masonry should be no more than 12.0 m, but in fact they should be no more than 6 m and no reinforcement is required. On all perimeters, internal and external walls, strapping belts are arranged. Such buildings are complex construction. A technical examination revealed that when leveling, the horizontal deviation from the 1st axis to 7 axis 3cm. Verticality deviates up to 4cm.

Partitions are made of burnt clay brick 120 mm thick laid on cement - lime sand mortar. They are reinforced from wire rod BP Ø5 in one row on each 50-60 cm high. In many places, partitions and middle walls with a thickness of 250 mm are dismantled, these sections should be dismantled to the end and re-laid.

Reinforced concrete columns. At the corners of the balcony, reinforced concrete columns with dimensions of 300mm x 400mm were released from the foundation pillow. They are reinforced in the basement of 4 AIII Ø20 with clamps Ø6 AI and with clamps Ø6 AI with a pitch of no more than 25 cm, and from the first floor they are reinforced with 4 AIII Ø16 and clamps AI1 Ø6 with a pitch of no more than 25 cm. Concrete brand B25.

The lintels above the entrance doors are reinforced concrete, monolithic and they are reinforced with 6-AIII-Ø14 with clamps Ø6-A-1 with a pitch of 250 mm. Dimensions of jumpers 40cm x 40cm. The jumpers in the partitions and partly in the doorways are made of fittings, but they are currently dismantled. It is necessary to arrange jumpers in partitions and some doorways.

The reinforcing belt can be reinforced with 4 AIII-Ø14 and with clamps AI-Ø6 with a pitch of at least 250 mm. Concrete brand B20.



Reinforced concrete antiseismic belts 22 cm high are constructed along all longitudinal and transverse walls, meeting the requirements of current building codes. KMK 2.01.03.-96. Clause-3.5.10 and 3.5.11.

Reinforcement of seismic belts is made of 2Ø14A-III and clamps Ø6 A-1 with a pitch of 250 mm. Class of concrete in compressive strength B20 (table. 1.). reinforced concrete they are reinforced with 2 AIII-Ø14 and with clamps AI-Ø6 with a pitch of at least 250 mm. Concrete brand B20. At the edges of the transverse wall they are in the body of a brick and the width is not more than 14 cm. Antiseismic belts are not arranged along the length of the building, since the strapping belts work as antiseismic belts.

Overlapping reinforced concrete, prefabricated, hollow, factory-made. The average value of the strength of monolithic floors, determined by the non-destructive method ONIX-2.5 with a reliability of 92%, corresponds to the concrete class of compressive strength B 25. At the time of the examination, defects or damage, indicating a decrease in the bearing capacity of structures, have not been established. The design meets the requirements for stiffness and strength. Deflections of floor slabs within the limits allowed by building codes. The nodes supporting the floors correspond to the requirements of building codes, except along the transverse walls and stairwells and along the middle axes according to the drawings. They rely on this axis on 1 and 18 axes on a strapping belt and have an anti-seismic belt on a brick body 12 cm thick, and should be 25 cm, SNIP "Construction in seismic areas" KMK 2.01.03-96 paragraph 3.5.11. It is necessary to strengthen these sites according to the recommendations. In the stairwells, the same is also done. On the middle axes, the axis of these sections does not correspond to the standard length, since they should be 6.0 m and actually 7-10 cm more. But they rely on reinforced-concrete strapping belts with a brand of at least B 20 and work like reinforced-concrete crossbar in frame buildings and do not need reinforcement.

Stair flights and prefabricated platforms, reinforced concrete, factory-made. Two marching stairs.

### **Instrumental surveys results. Determination of concrete strength**

To determine the actual strength of concrete foundations, a shock-impulse meter ONIKS-2.53 was used. This device is designed to measure the strength of concrete and other composite materials by the shock pulse method according to GOST 22690-88 and PCT Uz 872-98 according to the non-destructive method. The device has a two-parameter method for determining the strength (shock + rebound) in the range and strength changes of 3-30 MPa and 10-100 MPa with a limit of permissible basic relative measurement error of not more than  $\pm 8\%$ .

The principle of exploitation of the device is based on the correlation dependence of the parameters of the shock pulse on the elastic-plastic properties of the controlled material. The device consists of a sclerometer and an electronic unit.

To carry out measurements of the strength of concrete foundations, the sclerometer identifier struck the measured surface. Upon impact, the converter generates a signal proportional to the surface hardness of the measurement object, which is recorded by the electronic unit and converted to the strength of the material. Measurements are made automatically when the sensor performs impacts and the display shows the results of single measurements and the final data: K-measured value of strength, V-coefficient of variation and W-span. The unit strength value of

concrete was taken as the average strength at the construction site, defined as the average value of 10 measurements.

**Determining the characteristics of masonry.** The masonry of the external and internal walls of the building under examination is made of burnt ceramic brick with dimensions of 250x120x65 mm in a cement-sand mortar.

For sampling in order to determine the strength characteristics, several brick samples were taken from accessible sections of the walls. The actual strength indicators of the masonry (brick grade, grade of masonry mortar, temporary resistance to axial tension along an unbound seam) were determined in accordance with the requirements of GOST 24922-81, GOST 8462-85.

**a) Determination of the brand of brick.** The brand of brick selected from the available sections of the masonry was determined using the ONIX-2.5 device. The results of determining the tensile strength of a brick under compression are shown in table No. 2

**b) Determination of the strength of the masonry mortar.** The strength of the mortar from the masonry joints was determined by compression tests of cubes with 3-4 cm ribs made of plates selected from horizontal masonry joints and glued using a layer of gypsum dough 2-5 mm thick. The plates were made in the form of a square, the side of which was 1.5 times the thickness of the plate, equal to the thickness of the seam. Samples were tested one day after their manufacture. Samples of cubes from the solution were tested according to paragraph 9.5 of the PCT Uz 691-96 "Building solutions. Test Methods. " The strength of the solution was calculated according to clause 9.6.1. PCT Uz 961-96 and was determined as the arithmetic average of the results of five samples.

To determine the actual strength of the solution in cubes with ribs of 3-4 cm, the test results of the cubic plates were multiplied by a reduced coefficient of 0.8 (see table A1 of Appendix A, PCT Uz 961-96). The test results are given in table No. 2. Determined using the ONYX 2.5 instrument.

**c) Determination of the adhesion of the masonry.** The determination of adhesion strength was carried out by axial tensile testing of the elements of masonry walls, selected under construction conditions. To conduct control tests on the adhesion of masonry from brick, accessible sections of the walls were selected. When testing the masonry for adhesion, the compressive strength of the solution was determined from the masonry seam according to the above procedure. The test of masonry for adhesion was carried out according to the scheme specified in GOST 24992-81 "Stone structures. Method for determining adhesion strength in masonry. " The test results are shown in table No. 3 and determined using the ONIX-2.53 device.

**The result of tests to determine the strength of reinforced concrete structures.**

**TABLE NUMBER 1**

No. p.p	Constructions names	Test data			
		R, MPa	V, %	W%	Concrete grade
1	2	3	4	5	6
1	Foundations monolithic	22.3	21.9	35.1	B 20
2		25.3	19.6	38.1	B 20
3		23.6	20,2	22.9	B 20
4		24.0	18.1	36.1	B 20



5		23.9	19,4	38,0	B 20
1	Columns	48,4	15.3	27.3	B 40
2		46.9	12.8	31,0	B 40
3		44.1	12.1	30.1	B 35
4		48.9	15.4	29.8	B 40
5		47.5	18.2	25.1	B 40
1	Staircases and landings	25.1	17.9	33.3	B 20
2		27.4	18.8	40.1	B 25
3		25.1	18.8	17,2	B 20
4		28.1	17.7	36.1	B 25
5		26.9	31.3	31.6	B 25
1	Reinforced Cores	27.1	18.5	44.8	B 25
2		28.3	16.7	41.1	B 25
3		24.5	14.0	32,7	B 20
4		28,2	18,4	38.1	B 25
5		29.8	15,5	40.5	B 25
1	Foundation blocks FBS 24.0x0.6x0.4	21.9	22.8	34.0	B 20
2		24.4	15,5	36.0	B 20
3		22.5	10.0	21,2	B 20
4		25.9	19.8	35.3	B 20
5		22.4	18.5	39.1	B 20
1	Jumpers above the entrance doors	28,2	15.9	31.1	B 25
2		27.5	17.8	40,0	B 25
3		28.8	18.1	27,2	B 25
4		28.5	19.9	38.1	B 25
5		26.1	31.1	35.1	B 20
1	Monolithic reinforced concrete antiseismic and strapping belts	27.1	15.1	42.1	B 25
2		28.1	16.1	41.8	B 25
3		26.2	14.1	32.9	B 20
4		28,2	15.1	35.3	B 25
5		25.1	14.8	40.5	B 20

Note: V - is the coefficient of variation.

W - is the span between the maximum and minimum results.

**Test results for determining the strength of bricks and cement - sand mortar (determined by the ONIX-2.5 device)**

**TABLE NUMBER 2**

No. p.p	Name of constructions and materials	Test data			
		R, MPa	V, %	W%	Mark
1	2	3	4	5	6
1	Burnt brick	8.1	23.1	12.9	M 100
2		9.0	24.9	13.0	M 100

3		7.4	22.8	12.1	M 100
4		7.9	24.6	11.1	M 100
5		8.8	25.7	12.8	M 100
1	Cement - lime sand mortar	6.5	14.2	33.1	M 75
2		6.1	18.8	40.4	M 75
3		8.3	28.1	42.5	M 100
4		5.5	22.1	40.9	M 75
5		6.1	21.2	42.1	M 75

Note: V - is the coefficient of variation.

W - is the span between the maximum and minimum results.

### Test results for determining the adhesion strength of a mortar with a brick

**TABLE NUMBER 3**

No. p.p	Tear load kg	Traction strength $R_t^B$ kg / cm <sup>2</sup>		Character of separation	
		Private	The average	By solution	By contact
1	2	3	4	5	6
1	365.8 / 310	1.18	1.19	-	+
2	374.4 / 312	1.2		-	+
3	370/311	1.19		-	+
4	356.5 / 310	1.15		-	+
5	376.3 / 311	1.21	1,183	-	+
6	366.5 / 308	1.19		-	+
7					
8	367.7 / 309	1.19		-	+
9	370/311	1.19	1,196	-	+
10	375/310	1.21		-	+
11	365.8 / 310	1.18		-	+
12	366.5 / 308	1.19	1.19	-	+
13	374.4 / 312	1.2		-	+
14					
15	373.9 / 309	1.21		-	+
	368.2 / 312	1.18	1,193	-	+
	366.5 / 308	1.19		-	+

The average value of the building - 1.2 kg / cm<sup>2</sup>

### The recommendation for eliminating partially saline walls is to carry out the following work:

1. Treat the walls with a special inhibitor. (Journal of Architecture and Construction of Uzbekistan No. 5 of 2008, pp. 40-41.
2. After the inhibitor dries up - plaster the walls with cement sand mortar, in the ceilings: apply krausite putty.

**Recommendation for the isolation of bare working reinforcement in girders and ceilings.**

1. Removes rust from working fittings with a wire brush.
2. Drawing a layer of krausit solution.
3. After the mortar has dried, the plaster is cement-sand mortar without adding gypsum, giving every day to dry the cement only in the basements.

**Recommendation for reinforcing reinforced concrete floors from the second floor along the ends and stairwells by arranging an anti-seismic belt.**

1. The device is an anti-seismic belt from corners No. 50 at the bottom and top of the wall with the use of Ø12 studs with a stud pitch of 500-600mm.
2. Punch a through hole on the walls Ø12 and along the transverse walls to pass corner number 50 on the inside, install plates 100mm x 100mm x 10mm and install them on the krausit solution, pull them into the "mixture". It is also similar in slabs with two plates to pull up to the "mixture". Connect the plates on the walls and on the slabs using a corner number 100 with a length of up to 100mm.
3. Tighten the metal corners parallel to the brick wall with Ø12 studs.
4. Setting the strip between the corners as vertical clamps from a 50mm x 5mm plate with a 30cm pitch.
5. Wrapping the structure with a galvanized mesh with 20mm x 20mm cells and cement plaster with sand mortar M100.

Attached is drawing No. 4 for strengthening the anti-seismic belt and overlap.

**CONCLUSION**

According to the results of a technical survey of building structures of a four-story brick residential building located in Tashkent, Sergeli district, Sputnik-2 massif, Davlatobod street.

1. The foundations of the building are tape, monolithic. The technical condition of the foundations is workable.
2. The walls of the surveyed building are made of solid burnt bricks. The walls at the time of the examination were in a limited working condition. The walls of the fourth floor were subjected to atmospheric precipitation for a long time (more than 20 years), they are destroyed. It is necessary at the beginning of construction to disassemble 60-80 masonry in height.
3. Harnesses and monolithic belts, at the time of the examination were in a limited working condition. It is necessary to isolate bare working fittings according to recommendations.
4. The antiseismic belts along the ends and along the stairwells must be strengthened according to the recommendations. They are in limited working condition.
5. Overlapping reinforced concrete, hollow, prefabricated prefabricated. The condition category of reinforced concrete floor slabs is assessed as exploitational.
6. Stairs - two marching, reinforced concrete teams, factory-made. They are generally in good condition.

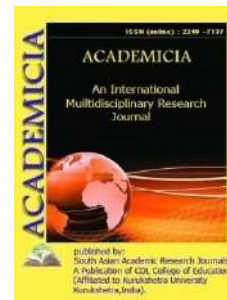
7. The staircases are prefabricated reinforced concrete, factory-made. They are generally in good condition.
8. There is no roof, it is necessary to design.
9. Window blocks are missing. It is necessary to install new window units in accordance with modern requirements.
10. Door blocks are missing. It is necessary to install new door blocks in accordance with modern requirements.
11. No floors. It is necessary to design floors that meet environmental requirements.
12. No water-bearing communications; no heating systems in the building. It is necessary to perform the design and estimate documentation on all communications: heating systems, hot and cold water supply, sewage and gasification.
13. Interior finishing plaster must complete the finishing work.
14. Exterior finish is necessary to complete the finishing work.

Based on the results of the technical inspection of the building structures of the four-story three driveway brick residential building, we conclude: the examined object should be completed: After the appropriate measures to strengthen and restore the building structures are completed, the residential building will be earthquake-resistant and exploitation-reliable. It is necessary to carry out design estimates for specialized design organizations.

The survey forms a conclusion on the possibility of further exploitation of building elements, carrying out necessary works and measures to strengthen structures, eliminate defects caused by a long interruption in construction and the prevention of defects that may occur after the resumption of construction and installation works, the implementation of which will ensure the safety and reliability of the facility under construction. Possibilities of using materials in construction.

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## **PECULIARITIES OF TREATMENT OF POST-TRAUMATIC PURULENT INFLAMMATORY COMPLICATIONS IN PATIENTS WITH Fractures OF THE LOWER JAW**

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### **ABSTRACT**

*The purulent-inflammatory complications of fractures of the lower jaw represent a serious medical and social problem. Despite certain successes achieved in the prevention and control of purulent-inflammatory diseases after fractures of the lower jaw, a marked decrease in the proportion of complications is not observed. To a large extent, this is due, on the one hand, to the state of the immune system, liver, and kidneys, and, on the other hand, to difficulties in selecting pathogenetically substantiated therapy. Treatment of patients with fractures of the lower jaw remains one of the urgent problems of modern dentistry. In different age groups, the course and treatment of fractures of the lower jaw has its own peculiarities, therefore, improving the quality of treatment for victims largely depends on a differentiated approach to each specific case of injury, taking into account certain patterns characteristic of each patient.*

**KEYWORDS:** *Lower Jaw Fractures, Purulent-Inflammatory Complications, Treatment Methods, Treatment Objective, Improvement of Treatment Quality.*

### **INTRODUCTION**

In the course of the long development of reconstructive surgery, the maxillofacial region (MFR) formulated the basic principles for treating diseases, the most optimal methods for their reconstruction (plastic surgery with local tissues, flaps on the feeding leg from tissues close to the defect and distant parts of the body, free tissue transplantation) and therapeutic methods have been proposed to prevent postoperative inflammatory complications [15]. A common task in the treatment of patients with purulent-inflammatory processes of the lower jaw is the inclusion of a set of therapeutic measures aimed at both the patient's body and pathogens. [12, 37]. Treatment of purulent-inflammatory processes is based on the integrated conduct of surgical interventions

and conservative measures. Surgical intervention, which consists in the mandatory opening of a purulent focus and their rational [2, 19]. Autopsy of the abscesses is carried out by incisions over the affected foci, which provides a free outflow of pus and exudate, reduces pressure in the infiltrated tissues, normalizes microcirculation and early removal of necrotic tissues, and also helps to suppress microflora directly in the pathological focus and accelerates the regeneration process. After good drainage, the wound is repeatedly washed with solutions of antiseptics (furatsilin, potassium permanganate, dimexide, extericide, etc.) antibiotics, surfactants (chlorhexedine, rocal, etc.). One of the effective local methods of cleansing the wound from microbes and toxins, as well as tissue decay products, is wound dialysis, which actively influences healing processes, improves functional results and shortens the treatment time for patients [40]. In order to quickly cleanse the wound, dioxidine, dimethyl sulfoxide, oxacillin, chloroacetophos and levomecol ointments, proteolytic enzymes are used locally. A common drawback of various ointments used in the treatment of purulent-inflammatory diseases is that their basis is fat. In this regard, ointments do not mix with wound exudates and cannot absorb wound, which adversely affects the processes of cleansing and healing of the wound in the initial stages. Apparently, in the initial stages of the inflammatory process, it is better to use drugs in the form of solutions, and after cleansing the wound and in the absence of secretions from it, use ointment preparations [17.39.].

In recent years, a number of works have appeared on the successful use of a number of physical factors in local therapy, which helps to cleanse and heal wounds, and reduce the duration of treatment. In particular, in the literature there are works devoted to the use of ultrasonic cavitations of purulent wounds. According to these authors, when using ultrasonic cavitations, a complex of reflex reactions of a stress-adaptive and protective nature is developed in the body that improves homeostasis, adaptive and trophic functions ([25]. Many authors recommend the use of laser radiation only in the regenerative phase of the wound process, t. to. its use in the phase of purulent-necrotic states can exacerbate the inflammatory process. [31].

Apparently, at present, the situation is completely ripe when it is necessary to intensify the introduction of methods that do not inhibit or replace, but naturally stimulate the body's defense system (local, general and specific and non-specific). In addition, it is necessary to take into account the fact that, in response to a fracture, an increased yield of calcium and phosphorus from the bone is noted both locally and from distant parts of the skeleton. [19.29]. The presence of local acidosis caused by an acute inflammatory process, both in the lower jaw and in the surrounding tissues, contributes to a decrease in the mineral saturation of bone tissue in the area of the defect. All this against the background of bacterial aggression, metabolic and microcirculatory disorders in the damaged bone complicates the treatment of this pathology and lengthens the rehabilitation of patients and, most importantly, hinders its structural and functional recovery.

The use of one method does not always give the proper result, therefore, scientists have found application for new mutually complementary methods of treatment. These include electrophoresis and ultrasound treatment of wounds, with which drugs can be administered deeper [17.34]. The use of ultrasonic cavitation of purulent wounds is reflected in modern literature [5,13,27].



Hyperbaric oxygenation is increasingly used in the complex of therapeutic measures in the treatment of patients with purulent-inflammatory diseases, especially in the presence of anaerobic infection [7,26], the effectiveness of which is associated primarily with the acceleration of local and general hypoxia, as well as the creation of hyperoxia, which is detrimental on aerobes and a number of anaerobes, at the same time increases the activity of antibiotics [23]. The main component of the complex of general therapy is the use of antibacterial drugs. General therapy for purulent-inflammatory diseases of the MFR begins immediately after surgery with intramuscular or intravenous antibiotics. Rational antibiotic therapy is the use of antibiotics taking into account individual sensitivity or, in the absence of such an opportunity, broad-spectrum drugs are usually used [23,42]. The frequency of antibiotic administration depends on the severity of the patient's condition. In the event of severe complications, some authors suggest administering large doses of antibiotics, which often leads to the development of dysbiosis and even candidiasis [3, 36]. Antibacterial drugs, inherently sometimes replacing natural immunity and nonspecific body protection at the beginning of use, are highly effective. Their use on an increasing scale began to turn its opposite side, as many authors point out, they convince themselves that a natural load on the immune system is necessary. With purulent-inflammatory processes and traditional methods of administering antibiotics, due to insufficient therapeutic concentration in the lymph, they are not always able to exert an optimal bactericidal and bacteriostatic effect on pathogenic microorganisms in the lymphatic system, which indicates the need to develop more advanced methods of drug administration ([44, 45].

The lymphatic system is involved in various pathological processes: shock, inflammation, allergic, as well as adaptive restructuring of the body. Considering that at usual doses and routes of administration, medications do not always penetrate into the lymphatic system in sufficient doses, manifesting effective amounts, endolymphatic therapy has developed significantly. A number of authors have proved the advantage of the endolymphatic method of administering antibiotics (ampicillin, claforan, gentamicin injected into the lymphatic vessel once), which consisted in achieving a very high concentration of the drug in the lymph and maintaining the therapeutic concentration of the antibiotic in the body during the day, which cannot be achieved with traditional methods introduction [9,22, 28]. When conducting regional endolymphatic therapy, an antibiotic that has got into the lymph slowly moves along the lymphatic pathways, partially entering the bloodstream [41,45]. Most of it is delayed and held for a long time along the lymphatic capillaries, depending on the localization of the pathological focus, but as far as possible from the affected organ (skin, mucous membrane) with reduced protective properties.

Studies on indirect saturation of the lymphatic system with drugs were first conducted by B.V. Ognev (1971), who used high-molecular-weight drugs to administer, based on the fact that these substances are mainly absorbed from the tissue into the lymphatic system, however, due to the slow nature of this process, it was not possible to create the necessary therapeutic concentration of the drug in the lymphatic system in this way. The works of S.U. Dzhumabaeva learned that a local increase in venous pressure resulting from the application of a tourniquet to the limbs leads to a redistribution of tissue fluid movements towards the lymph node. Yu.M. When studying the effectiveness of lymphotropic therapy for purulent-inflammatory diseases of soft tissues of various etiologies and localizations, Levin revealed that with the lymphotropic administration of antibiotics 1-2 times a day, the patients' condition improves faster, the temperature and leukocyte

blood count normalize. Subsequently, this method was widely used in the treatment of purulent-inflammatory diseases, including in the treatment of fractures of the maxillofacial region.

In the search for new drugs, the authors drew attention to the complex preparation Collapan gel containing hydroxyapatite collagen, which is a solid gradually resorbable matrix, against the background of infected bone defects, its gradual destruction occurs with the simultaneous replacement of the newly formed bone. The preparation Kollapan-gel has antimicrobial osteoinductive and osteoconductive properties i.e. refers to biologically active materials. In addition to these properties, the drug can prevent complications due to the prolonged release of the antibiotics contained in it. High antimicrobial activity of the material lasts up to 20 days. Thus, the complex preparation Kollapan-gel allows affecting the main pathogenesis links in the inflammation zone, bacterial factor, microcirculation system, reparative osteogenesis and local immune status [16, 33].

Enzymotherapy is the treatment with the help of purposefully formulated mixtures of hydrolytic enzymes, the therapeutic effectiveness of which is based on the integrated effect on key processes in the body. Systemic enzyme therapy drugs are WobenzymFlogenzim and Wobe-Mulos E (MUCOS Pharma GmbH Co, Germany), which are a combination of natural, highly effective enzymes of plant and animal origin. Clinical trials have shown that Wobenzym and Wobe-mugos E satisfy the universal therapeutic principle: reliability and high efficiency with overall good tolerance, which determines the wide range of their clinical use [43]. Acting systemically, enzymes have an anti-inflammatory, immunomodulatory, antiaggregant, fibrinolytic, decongestion, and secondary analgesic effect. The drugs have a positive effect on the course of the inflammatory process, limits the pathological manifestation of autoimmune and immunocomplex processes, positively affect the immunological reactivity of the body. Systemic enzymes do not inhibit inflammation (since this is a natural reaction of the body to the disease), but optimize its course. Under the influence of proteolytic enzymes, the necessary catabolytic phase of inflammation is minimized and the regenerative phase is accelerated. If the disease is associated with an infection, then enzymes contribute to a normal immune response: detect, kill the pathogen and remove from the body. One of the properties of enzyme preparations is the ability to improve the effect of other drugs and reduce their side effects. Enzymes increase the concentration of antibiotics in the blood, facilitate their penetration into tissues and thereby increase the effectiveness of therapy. According to the results of the work of Guggendicher, Wobenzym is able to increase the penetration of antibiotics into staphylococcal abscesses. A number of works of recent years have also shown that Wobenzym potentiated the effectiveness of the use of antibiotics in the treatment of various purulent-septic processes. The clinical effectiveness of drugs that affect the processes of regeneration of the mandibular bones is also in the field of view of many scientists.

A number of articles have been devoted to bone metabolism in fractures under the influence of hormones. Calcitonin [14] and others were used as a stimulant for regeneration. The regeneration of the mandibular bone takes place in three stages: cell-fibrous 1 week after the fracture, chondroid 2 weeks later and primary - bone after 4 weeks. The authors prove how, under the influence of calcitonin, phosphorus-potassium metabolism improves, changes in the basic mineral elements of bone tissue in patients with fractures of the lower jaw and osteoporosis. The decrease in the content of Ca and P in the mandibular bone on the side of the fracture from the 7th to the 14th day is obviously due to the prevalence of the resorption of the mineral elements of

the bone over their restitution. At this time, the protein system is intensely formed, contributing to mineralization. This is, first of all, the morphogenetic protein of bone - collagen. By the 28th day, primary bone callus is formed and naturally by this time the entry of CA and P into the bone prevails over their exit from it. Surgical treatment of a purulent bone wound consists in creating the correct surgical situation, i.e. "Multi-chamber" wound space should be turned into a "single-chamber" with effective drainage. Treatment of overgrown fractures, defects of the bone and soft tissues is possible not only sequential, but also simultaneous. Non-free soft tissue and bone grafting can be performed under conditions of stable fixation of bone fragments of MFR. Scientists prove that the use of calcitonin in fractures of the lower jaw favorably affects the course of the regenerative process and the formation of apatite crystals. Dystrophic processes in bone tissue and the development of inflammatory complications depend on the violation of the trophic function of the lower alveolar nerve. It was shown that deafferentation of the lower jaw causes regular changes in mineral metabolism, as well as structural rearrangement of the bone in the dynamics of post-traumatic regeneration, which causes inhibition of the replacement of primary bone marrow by highly differentiated bone tissue (Eroshenko V.F. 1993).

The literature data on the treatment of patients with complicated fractures of the lower jaw indicate the advisability of including in the complex of therapeutic measures the method of intraosseous administration of drugs: dioxidine, dimexide, etc., which allows to achieve optimal conditions for splicing fragments [12, 37]. However, insufficient attention is paid to the normalization of metabolic processes in damaged bones. The inclusion of the method of intraosseous infusion of biologically active drugs in the complex of therapeutic measures at the early stage of treatment of fractures of the lower jaw, the authors consider it extremely advisable. This contributes to a faster adaptation of the body to injury, accelerating the normalization of metabolic and reparative processes in damaged bone tissue. The most common and serious complication of a local mandible fracture is traumatic osteomyelitis. According to various authors, its frequency reaches 30%. Currently, despite successes in the study of etiology and pathogenesis, the improvement of known methods and the development of new methods of treatment and prevention, a significant reduction in the frequency of its occurrence has not been achieved [12,37]. In the complex treatment and prevention of traumatic osteomyelitis with general antibiotic therapy and correction of hemostasis, the local effect on the infected bone wound is important. In this regard, studies of intraosseous infusions of antibacterial drugs are of particular interest [11, 37].

Recent studies have shown an increasing interest in the use of sodium hypochlorite solution, which has a detoxifying, antimicrobial, antibacterial and antiviral effect, in the treatment of purulent-septic conditions. Medicinal sodium hypochlorite solution is a powerful means of a multidirectional action of an oxidizing nature, an active oxygen donor, and is widely and successfully used in the treatment of endo- and exotoxicoes of various etiologies [6,35]. The authors prove that the inclusion of intra-infusion infusions of sodium hypochlorite solution in the complex therapy of patients with traumatic osteomyelitis of the lower jaw promotes not only activation of reparative osteogenesis, but also another favorable shift in metabolic processes in the body, which ultimately have a positive effect on the course of the postoperative period, which consists in in particular, in reducing the incidence of complications.

Currently, autologous bone, alloost, xenotissue, synthetic bone based on calcium and phosphorus are widely used in bone restoration operations. However, as many authors point out with bone

grafting, adequate osteogenesis is far from always created. Researchers indicate that the larger the bone defect, the more likely the formation of patches with the formation of only fibrous or non-mineralizing osteoid tissue [1,21, 38]. Even autobone is not always completely remodeled into mature bone tissue, and its full mineralization does not always occur. One of the attempts to improve osteogenesis was the use of a combination of autobone and allocost, allocost and xenotissue, all of these materials with synthetic bone. If small bone defects filled with biomaterials in different combinations gave good osteogenesis, in other cases the results were far from satisfactory [10,25,16].

To increase the effectiveness of osteogenesis of individual biomaterials and their combinations, a number of authors consider it necessary to prepare the bone. They noted more perfect osteogenesis with the introduction of biomaterial directly into the bone, i.e. in the spongy bone, or when the cortical plate is perforated and plastic material is laid on the jaw portion washed by the blood. Other researchers have obtained good results when mixing biomaterial with blood from a wound [34]. From these premises a new technology arose - the use of a patient's blood plasma enriched in platelets. Experimental studies have established the stimulation of osteogenesis under the influence of a number of factors emanating from platelets, the use of this technique allows you to increase bone mass by 30-40% [28,30].

In the West, in cranial-maxillofacial surgery, distraction osteogenesis is becoming increasingly popular, and the literature on the elimination of congenital deformities and defects of the facial skeleton, requiring a slight movement of the bones, predominates in the literature. Only rarely are publications devoted to the elimination of large defects of the lower jaw. Distraction osteogenesis significantly expanded the possibility of reconstructive craniofacial surgery. The apparatus designed by Shvyrkov M.B. it is successfully used in the primary surgical treatment of gunshot wounds, it was once the surgical treatment of gunshot wounds, he developed several models, and gunshot defects of the lower jaw, different in size and location, prompted the author to create more and more new options for osteoplasty of the lower jaw.

Particularly successfully used are two variants of the Shvyrkov apparatus: osteoplasty with local tissues and non-free osteoplasty of the lower jaw. Using external fixation devices of his own design, using compression and distraction technologies in conjunction with radical PChO wounds, he notes a 5-fold reduction in the number of complications in the form of gunshot osteomyelitis, an almost 4-fold decrease in the number of disabled people, and 93.1% of the wounded in Afghanistan were returned to service. war, which is 32% more than in the American army during the Vietnam War [8.34].

The scientist continues to improve his technique called "distraction" - or a metered stretching of the resulting callus. Shvyrkov M.B. published a whole series of articles in the journal "Dentistry", which describes the experience of bone marrow distraction for osteoplasty of the lower jaw with local tissues, non-free osteoplasty of the lower jaw through distraction osteogenesis. The experience of M.B. Shvyrkov, osteoplasty of the lower jaw with local tissues and distraction osteogenesis is almost bloodless operation and can be used not only in the treatment of jaw fractures or elimination of defects, but also to increase its size in the presence of congenital and acquired malformations [3,32, 38].

One of the most optimal methods for treating fractures of the lower jaw is a functionally stable osteogenesis with mini-plates with screws, the use of which allows achieving good anatomical

and functional results in the shortest possible time. However, as with any treatment method, the use of standard miniplates has certain limitations. In particular, osteosynthesis with miniplates is not indicated for fractures of the lower jaw, accompanied by significant defects in bone tissue (comminuted, complicated by traumatic osteomyelitis, etc.). In such cases, for the reposition and immobilization of fragments, it is most often recommended to use various kinds of bone devices and fill the bone defect either a bone graft, or osteotropic drugs mainly containing hydroxyapatite or its analogues [23,44]. However, as the authors note, this method of surgical treatment of this pathology has certain drawbacks: the bulkiness of the apparatus, the need to perform another operation to collect a bone graft, the probability of rejection of foreign material, the high cost of the apparatus, etc. In this situation, the authors recommend the introduction into clinical practice of treating fractures of the lower jaw with defects in bone tissue, a mesh plate implant made of titanium for craniofacial facial osteogenesis in combination with filling the bone cavity with osteotropic drugs.

The authors from Bishkek Yeshiev A.M. and Scheinman V.Yu. a method for treating fractures of the lower jaw using a modified Tigerstedt tire based on special couplings and struts is proposed. The proposed tire is new, improves the hygienic condition of the oral cavity, increases the effectiveness of splinting and reduces the number of complications of an inflammatory nature.

Currently, it is generally recognized that the most effective stimulator of osteoreparation is the demineralized bone matrix (DBM), while the osteogenic potential of other types of allografts is insignificant or absent [20].

One of the promising new directions in the correction of the regeneration process is the use of biological active polypeptide growth factors.

The material accumulated over recent years indicates that polypeptide growth factors regulate osteogenesis and bone resorption [36]. Currently, methods have been developed for the purification of polypeptide growth factors from animal tissues, as well as methods for producing recombinant analogues of these proteins. This makes it possible to create composite materials with osteoinductive properties for the treatment of bone injuries and other defects. One of the properties of demineralized bone tissue is its ability to induce osteogenesis with great constancy under unusual conditions for it and has a unique ability to replace bone structures in a purulent wound.

Saveliev V.I., Kravtsov V.A. In the experiment, we conducted a comparative study of the biologically active properties of demineralized, freshly frozen and formalized bone allo- and autografts and proved the superior osteoinductive property of demineralized bone tissue. It was established that in their osteogenic qualities formalized allografts are inferior to frozen and lyophilized ones, and those, in turn, are worse than demineralized bone tissue with osteoinductive ability. It is advisable to use it as an inducer of demineralized bone tissue in combination with other types of transplants and implants, which can bear the main mechanical load. There is no information in the literature on the use of demineralized bone tissue in reconstructive maxillofacial surgery. Information about their use by foreign authors is sporadic. For the first time, G.B. Troshkova, I.E. Kolukanov used an allogeneic demineralized bone graft to restore the integrity of the front wall of the maxillary sinus in an infected bed. Vinnikov I.N., Kuralesova A.I. conducted clinical and experimental work on the use of decalcified bone matrix to stimulate bone formation after removal of odontogenic cysts up to 6 cm in size. The



decalcified bone matrix was lyophilized. V.Yu. Nikolsky (2002) in the early stages (3-17 weeks after tooth extraction) used allogeneic demineralized and lyophilized bone, sterilized by gamma radiation, in the form of small shavings to fill the hole when installing both an instant dental implant and with the introduction of a titanium biphasic dental implant with simultaneous alveolar bone grafting. Successful osseointegration was achieved in 95.1% of cases [18,41].

The development of complications of bone fractures of the facial skeleton (the formation of a false joint, delayed consolidation and secondary displacement of fragments, failure of bone regenerate, improperly fused fracture) contribute not only to errors in treatment and associated inflammatory processes, but also to underestimation of somatic diseases, among which alcoholism plays an important role. This disease, primarily affecting the mental sphere, but also accompanying serious changes in the organs and tissues of the whole organism, including the skeletal system.

A number of researchers have proved that with chronic alcohol consumption, secondary-caused osteoporosis occurs, which is characterized by a decrease in the level of physiological, and therefore reparative bone regeneration. The development of osteoporosis is due to the toxic effect of ethanol and its products on bone cells and a violation of the formation of hormone-active forms of vitamin D. The possibility of a direct effect of alcohol on orthotropic cells and cells providing reparative processes is also not ruled out [4,43].

Injury to the facial skeleton and fractures of the lower jaw is most often domestic and usually occurs in a state of intoxication, when coordination of movements is impaired, muscle tone is reduced. In alcoholics, fractures are predisposed to increased fragility of bones associated with a change in their physical properties. During the treatment of fractures, this is of great importance, since a reduced regenerative ability, exacerbated by non-compliance with such treatment by such patients, is the basis for the development of complications. In patients with alcoholism, bone wound healing is slower due to a violation of the immune system. (Askolonov A.A. 1990). These authors prove that alcoholism slows the healing of bone wounds, prolongs the local post-traumatic tissue reaction, and impaired immunity, mainly at the cellular level, also inhibits the regeneration process, and contributes to the development of inflammatory complications [2].

## CONCLUSION

An analysis of the scientific works of domestic and foreign authors shows that the problem of treating patients with MFR fractures and the prevention of purulent-inflammatory complications of these patients remains relevant and one of the most difficult. There is no single approach to the choice of classical and new methods of plastics, individualization of the choice of donor zones for free flaps. The issues of planning and the sequence of therapeutic measures and the timing of treatment have not been sufficiently studied. The issues of choosing an autologous transplant for reconstruction of the lower jaw have been little studied, there are different opinions and the feasibility of using an autorebro with its extensive defects.

There is no systematization of early postoperative complications from the movement of tissues and soft-bone tissue grafts and methods for their correction. The literature does not adequately reflect the importance of the body's reactivity and the state of the immune status for the prevention of complications after reconstructive operations for extensive lesions of the MFR and the possibility of using physical immune correction methods. In the available literature there is no data on the effect of enzyme therapy in combination with magneto therapy on the clinical and



biochemical processes in patients with fractures of the maxillofacial lesions. There is no comparative socio-economic study of the methodological approaches of rehabilitation for this pathology. Unresolved issues of the urgent problem of providing specialized medical care to patients with various forms of pathology of the MFR served as the subject of this study in order to substantiate organizational and complex treatment measures aimed at optimizing the anatomical, functional and social rehabilitation of patients with fractures of the lower jaw.

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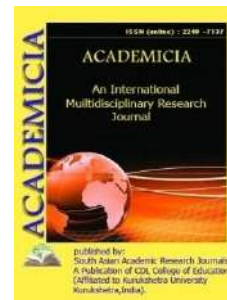
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## DENTAL PREVENTION OF MORBIDITY IN SILK-WELDING WORKERS

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### ABSTRACT

*Analyzing the literature on the impact of occupational factors of various chemical industries on the formation of dental pathology, we can state that the prevalence of diseases of hard tissues of the teeth, periodontal tissues and oral mucosa in workers of these industries are more common than in the control group, where the effect of chemicals on oral organs missing. The bleeding index is  $2.02 \pm 0.24$  points. The examination showed that patients had periodontal tissue lesions corresponding to moderate periodontitis, clinically manifested by symptomatic gingivitis and bleeding phenomena.*

**KEYWORDS:** Occupational, Symptomatic, Periodontitis

### INTRODUCTION

#### Relevance of the topic

A study of the epidemiology of dental diseases conducted in many countries of the world shows significant differences in the prevalence and intensity of dental caries, periodontal and oral mucosa diseases, and the decisive role in the development of these processes of natural, social, domestic, cultural, as well as vocational factors .

Analyzing the literature on the impact of occupational factors of various chemical industries on the formation of dental pathology, we can state that the prevalence of diseases of hard tissues of the teeth, periodontal tissues and oral mucosa in workers of these industries are more common than in the control group, where the effect of chemicals on oral organs missing. However, there is no assessment of the impact of a complex of harmful substances in combination with unfavorable physical factors of the working environment on the state of hard tooth tissues, periodontal and oral mucosa. The study of the pathogenetic condition of dental diseases under



the influence of various industrial and production factors is one of the priority areas in dentistry and allows us to develop an effective prevention program.

Many scientists have proven that production factors have a negative effect not only on the hard tissues of the tooth, but also cause diseases of the oral mucosa. However, questions regarding the level and structure of the incidence of the oral mucosa under the influence of harmful factors among workers in chemical industries have not been fully studied; the mechanisms of the influence of harmful factors on the oral mucosa are not completely described.

An analysis of the literature indicates that in countries with developed industry, research is being carried out to study working conditions and morbidity of workers, ensure occupational safety, assess occupational risks and develop preventive measures aimed at protecting labor and health.

## **MATERIALS AND RESEARCH METHODS**

We conducted a comprehensive examination of 150 patients with chronic generalized periodontitis of moderate severity aged 35 to 50 years, as well as 10 volunteers (practically healthy people) with an intact periodontium aged 25–35 years, who made up the control group (CG). A study of the dental status of patients included a survey and examination. The following indices were determined during the survey: hygiene index according to Green - Vermillion (1964), PMA, PI according to A. Russel (1967), IR according to Muchlemann (1971). X-ray examination was carried out using orthopantomograms and targeted intraoral images.

## **Research results and discussion**

During the examination of patients, the following complaints were noted: bleeding gums during brushing and eating solid food, itching and discomfort in the gums, bad breath, discoloration of the gums, tooth mobility. On an objective examination, the gingival papillae and marginal gums were swollen, cyanotic, bleeding on probing. The depth of periodontal pockets reached 4–5 mm. Pathological mobility was determined within the I – II degree. In all patients, abundant supra- and sub gingival dental deposits were revealed. An X-ray examination in patients with moderate severity of CGP revealed a predominance of the vertical type of bone resorption, the absence of a compact plate and destruction of the interalveolar septum from 1/3 to 1/2 of the root length, which corresponds to the second degree of destruction of the bone tissue of the alveolar part of the jaw.

The hygiene index was very high, its average value was  $2.63 \pm 0.43$  points, which indicates poor oral hygiene. The RMA index was  $40.30 \pm 3.34\%$ , which indicates the presence of an inflammatory process in the periodontal complex in these groups of patients. The average PI value in group I was  $5.06 \pm 0.31$  points. The bleeding index is  $2.02 \pm 0.24$  points. The examination showed that patients had periodontal tissue lesions corresponding to moderate periodontitis, clinically manifested by symptomatic gingivitis and bleeding phenomena.

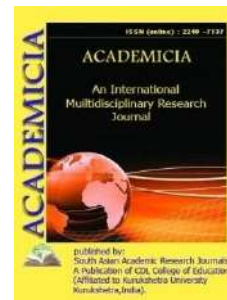
## **FINDINGS**

1. A direct dependence of the prevalence of keratoses of the oral mucosa on the conditions of silkworm production has been established, they can be attributed to occupational diseases
2. The influence of adverse production factors on the functional and radiological parameters of the oral cavity of the examined workers and the population has been established.

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## GOODS AND SERVICES TAX (GST) - BIGGEST TAXATION REFORM IN INDIA

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### ABSTRACT

*Goods and Services Tax (GST) is the biggest taxation reform since 1947. It is implemented in India from 1<sup>st</sup> July 1, 2017. The main purpose of GST is to sum up various types of indirect tax all together. This tax structure is designed to support and enhance the economic growth of the country. This is user friendly and would bring transparency in the taxation system of India. GST will be levied on manufacturer sale and consumption of goods and services. It is to overcome all the shortcomings of the existing taxation system. The paper is focused on meaning, concept and purpose of GST, all the changes amended by the government in the tax rates on goods and services and challenges faced by the stakeholders.*

**KEYWORDS:** GST, Indirect Tax, VAT, Indian economy

### INTRODUCTION

#### Objectives of the study

- To study the concept of GST
- To know the changes in the Taxation Structure
- To know the benefits and challenges faced by the stakeholders.

### RESEARCH METHODOLOGY

This paper is based on secondary data. The data was collected from the various published sources like reports, magazines, journals, newspapers etc.

### Concept of GST

The new indirect taxation system that is Goods and Services Tax (GST) is made to create a single tax system and single market. It will boost economic and development goals. This system is amended in India from 1<sup>st</sup> July 2017; it will throw up some surprises for consumers and businesses. First time the consumers get a measure of the total central and state taxes levied on a product. It will end the hidden taxes paid by them. People are concern about inflation. They expected to rise in price because of GST. But the government keen to ensure that GST is not inflationary, it's to prevent firms from passing on any reduction in tax burden to consumers. Consumers are likely to benefit from lower tax burden on some products and services. Lower indirect taxes will also address the regressive nature of this levy which affects the rich and poor alike, unlike taxes on income which is based on an assessee's ability to pay. For businesses elimination of multiple levies and creation of a single market with fewer tax rates and fewer tax exemptions will improve the ease of doing business and reduce avoidable litigation. A large part of the tax litigation in India is around tax exemption.

**Meaning of GST:** Goods and Services Tax is to eliminate inefficiencies in the tax system that results in "tax on tax. It is value added tax at each stage of the supply of goods and services precisely on the amount of value addition achieved. It is the tax based on consumption. It has three components CGST, SGST and IGST.

**GST is the sum of:** Import duty, service tax, excise duty, customs duty, central sales tax, taxes on advertisement, luxury tax, entertainment tax, taxes on betting and gambling, state cesses and surcharges on supply of goods and services.

### Other countries GST

Country	Rate of GST
Australia	10%
France	19.6%
Canada	5%
Germany	19%
Japan	5%
Singapore	7%
Sweden	25%
New Zealand	15%

There are 150 countries all over the world there is GST. In India GST rates are 5%, 12%, 18% and 28%.

- Zero rated items: Food grains used by common people
- 5% rate: items of mass consumption including essential commodities will have low tax incidence.
- 12% and 18%: Two standard rates have been finalized as 12% and 18%.
- 28% rate: White goods were taxed at 30-31% shall be now taxed at 28%.

### Products not part of GST

Education, health, local train, hotel up to 1000, Crude oil, petrol, diesel, natural gas, liquor, jet fuel, meat other than frozen and in unit container, fish fresh or chilled, dairy products, eggs, salt, human blood and components, contraceptives, fresh fruits and vegetables, non branded cereals

and flour, jiggery, non branded organic manure, judicial non judicial stamp paper, inland, post cards, non precious metal bangles and agricultural hand tools,

### Impact of GST

Product	Current Rates	GST Rates
Butter	5.66	12
Television	24.39	28
Footwear	14.41	18
Biscuits	16.09	18
Cornflakes	9.86	18
Wrist watch	20.64	28
Jam	5.66	18
Baby food	7.06	18
Small cars	26	28
Gold	2	3
Insurance	15	18
Banking charges	15	18
Telecom bills	15	18
Movie tickets	40	28
Medicines	5	12,18
Cab rides	6	5
Coal	11.69	5
Maintenance charges	15.55	18
Smartphones	5-15	12
Cement	31	28
Ayurveda	8-9	12
Readymade garments	18.16	12

These are for illustration purposes only. Not meant for direct implementation or reliance. The rates are based on submission as of the June 20<sup>th</sup>, 2017.

Under the present taxation system food articles and agriculture produce are not taxed. The same arrangement is likely to continue under GST. For the other about 5000 commodities and services, the nearest tax slab will be applied. The services cannot be taxed over 18% and 5% will be imposed on mass consumption like spices, salts etc. Food grains to remain untaxed under the GST. Most of the daily used items will be taxed at 12-13%. The current tax is over 20%. The white goods are currently being taxed around 30-31% will be bought to nearest slab of 28%. Luxury goods will attract 28% GST plus cess.

GST on hotels services are depend the kind of room you stay in. If the room tariff is less than Rs. 1000, your stay will be tax free. However, if the room tariff is between Rs. 1000- Rs.2500, you will tax 12%. If the tariff is between Rs. 2500 to Rs. 5000, the stay will be taxed at 18%. For luxury hotels, where the tariffs are more than Rs. 5000, GST rate will 28%.

GST on eating out has different tax slabs for restaurants depending on their turnover and whether they have AC or not. Restaurants with a turnover of less than Rs. 50 lakh will be levied a tax rate of 5%. Non AC restaurant will be charged 12% GST on food bill. Tax rate for AC restaurants and those with liquor license will be 18%, whereas restaurants in 5 star hotels will attract a GST rate of 28%. Eating out get costlier in cities like Mumbai where the existing tax rate is around 10.6%. Post GST, the customers will be taxed at 18% in AC restaurants. For a non AC restaurant in Mumbai where existing tax rate is at 6%. From July 1, 2017, small joints will be taxed at 12%.

All cars are fall in the 'luxury bracket' of GST. That means they will attract 28% tax. However, depending on their size, extra cess will be levied. Small cars or cars under four- metre length powered by a petrol engine not greater than 1.2 litre or a diesel engine not greater than 1.5 litre by displacement will be taxed at 28%. For petrol cars, the effective tax rate will be 29%. However, for diesel cars the effective tax rate will be 31%. For mid-size, luxury cars and SUVs the effective tax rate will be 43%. The price of SUVs is expected to come down as they are currently taxed at 48-55%. The government said it would tax hybrid vehicles at a rate as high as 43%. This would be significantly higher than the prevailing tax of about 29% on such cars.

Daily use items like sugar, tea, coffee and edible oil will attract the lowest tax rate of 5%, almost the same as under the current tax structure. Common use products like hair oil, soaps and toothpaste will be charged with a single national sales tax or GST of 18% instead of present 22-24%. The highest slab of 28% under GST has also been applied on chewing gums, white chocolate, and chocolates containing cocoa, wafers coated with chocolate, instant coffee, custard power, student's colors, paints, varnishes, perfumes, beauty products, sunscreen, shampoos, hair dyes, after-shave lotions and deodorants.

### **Benefits of GST**

It is a simple method. The tax rate will be same in the whole country it will not change rapidly. It will bring transparency in the indirect taxation system. GST will transparent the taxes levied on supply of goods and services. It will reduce tax burden. Business will be beneficial with the common market. No truck line will be at state border after GST. The imports will improve due to lower tax rates. The new tax system is expected to improve the tax compliance boost revenue receipts of central and state government. It will increase GDP by 1-2%. It results in reduction tax burden on many items.

### **Limitations of GST**

The GST is a very good type of tax. But there are few challenges that has to be face to implement GST in India. There are many tax slabs in GST this can reduce the benefits. There can be lots of conflicts in the classification. There should be separate registration for each state. It needs more time to satisfy everybody, the stated are confused whether the GST will hamper their revenue. But the government ensured that they will compensate the loss by GST. This is very difficult that the entire states implement GST together at the same rates, the centre have to coordinate with 29 states and 7 union territories to implement such tax regimes. People are unaware about the tax rates so it is important they should spread awareness. There are goods on which the tax rates have been increased. The proposed GST structure is likely to succeed only if the country has a strong IT networks.



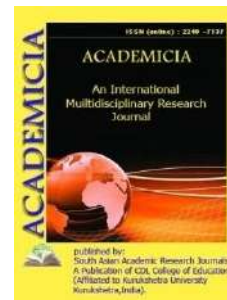
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## CONCLUSION

GST is the biggest step taken by the government in this year. There are 150 countries all over the world have implemented GST with success. This is user friendly and transparent taxation system. No doubt GST will give India a world class tax system by giving different treatment to manufacturer and service sectors. GST has a positive impact on various stakeholders like central government, state government and industry. It will impact the national economy, international trade, firms and consumers. Although GST is a good tax system but India has to face many challenges due to diversity in India and lack of awareness and IT sector.

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## FORMATION OF THE CENTRAL ASIAN VECTOR IN THE FOREIGN POLICY OF THE FEDERAL REPUBLIC OF GERMANY

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### ABSTRACT

*This article is devoted to the formation of cooperation between the Federal Republic of Germany and the newly independent Central Asian states. As a result of the disintegration of the USSR in the 90s of the XX century, the Central Asian states gained independence. Initially, the main foreign policy issue for the countries of the region was to expand diplomatic relations and accelerate cooperation with the world's leading countries. In this context, the Federal Republic of Germany was one of the first Western European countries to establish embassies in all Central Asian countries. The article analyzes the factors influencing the formation of the Central Asian vector in German foreign policy. These include Germany's economic, political and cultural interests in Central Asia. In addition, in the 1990s, more than 300,000 ethnic Germans lived in Central Asia. The formation of the German Central Asian vector is taking place in two directions: as an independent state, Germany participates in its foreign policy and in the common Central Asian policy of the European Union. It also laid the groundwork for the EU's Central Asia strategy for the first time under the German presidency. This strategy was updated in 2015 and 2019. This shows that Germany's interest in Central Asia is growing.*

**KEYWORDS:** *Federal Republic of Germany, Central Asia, Economic and Political Interests, European Union, PCAs, TACIS, Ostpolitik, Green Central Asia Initiative*

### INTRODUCTION

In the emerging world order, Germany is seeking a geopolitical and geoeconomic place in accordance with its position at the regional (European) and global levels. In this context, Central Asia, with its favorable geostrategic and economic potential, is playing an important role in

German foreign policy strategy. Therefore, Germany's interests in Central Asia can be explained as follows:

- Maintaining its influence in different regions of the world as a means of strengthening and further enhancing its status as a leading state, increasing its ability to find its place in new regions;

- Find an alternative source of raw materials for German industry, which is the largest industrial producer in Europe, and ensure energy security; According to the data, in 2020-2030, the dependence of Western European countries on external energy resources will be as follows: gas - 70%, oil - 90%, coal - 100% [1]. At present, Turkmenistan, Uzbekistan and Kazakhstan have 4.3% of the world's gas reserves. The identified gas reserves are estimated at 7.76 trillion cubic meters. Oil reserves in these countries are estimated at 5.6 billion barrels. tons or 3.5% of world reserves[2].

- The need for a new market for growing German products and the restoration of the "Great Silk Road" as a strategic transport corridor in this case; "It should be noted that a large part of the EU's main trade turnover with the East is accounted for by Germany, in particular, Germany accounts for 40% of the EU's annual exports to China alone." [3] In this context, the formation of a single transport corridor is becoming an objective necessity.

The implementation of the above-mentioned tasks is closely linked with ensuring stability in Central Asia. The fact that Afghanistan, a neighbor of Central Asia, has become a center of global threats (international terrorism, drug cultivation, economic poverty, illegal arms trade, etc.) also has a negative impact on Germany. Therefore, raising the level of security in Europe by ensuring stability in Central Asia and neighboring regions can be said to be one of the priorities of German policy today.

In addition, the protection of the interests of the German population living in the territory of the former Soviet Union is also important in German foreign policy. According to 2008 data, Kazakhstan has a population of 230,000 Germans [4]. Although there are about 15,000 Germans left in Kyrgyzstan today, there were more than 100,000 in the 1990s. Therefore, the local German population can play a mediating role in German policy in Central Asia.

### **The main directions of German Central Asian policy**

Germany's policy on Central Asia has been developing steadily since the first chancellor of the United Germany, G. Kold, came to power. In particular, the government of Chancellor G. Kohl recognized the independence of all states in the region six days after Gorbachev's resignation as head of the Soviet Union on December 31, 1991 [5]. As a result, it has become the only EU member to have an embassy in all Central Asian states. Before coming to power in 1998, the Social Democrats drafted a document entitled "The Caspian Sea - the future of the region", which emphasizes the need to intensify policy in Central Asia and the Caspian region[6]. After coming to power, on November 8, 2001, former German Chancellor G. Schroeder demanded that the Bundestag conduct a wider European operation than in Central Asia [7].

At the same time, Germany, through the EU, seeks to advance its interests in various areas of cooperation with Central Asian countries. This can be explained mainly by the fact that Germany is the main donor to the EU budget.

So far, the EU's relations with Central Asia have been based on two principles:

1. Partnership and cooperation agreements (PCAs). These agreements, signed in 1999 with Kazakhstan, Kyrgyzstan and Uzbekistan, entered into force.
2. Technical assistance for the CIS countries (TACIS). In 1991, the European Commission launched the TACIS program, which covered 12 CIS countries and Macedonia.

Also, since the beginning of the XXI century, the EU has adopted a strategic program for Central Asia: "EU and Central Asia: a new strategy for cooperation (2007-2013)." This strategy was updated in 2015 and 2019 [8].

It can be seen that the EU's policy towards Central Asia reached a new level in 2007, during the German presidency of the EU. On 22 June 2007, the German presidency adopted a new EU Central Asia Strategy. According to the new strategy, 750 million soums will be allocated for various projects with Central Asian countries in 2007-2013. euro allocation is planned. The main task of this strategy is to ensure the traditional historical ties between Europe and Central Asia, mutual interests and stability in the region [9]. However, based on new political concepts, the humanitarian sector has been recognized as one of the most important areas of security in Central Asia.

Therefore, based on the EU-Central Asia: New Partnership Strategy, the EU's priorities in Central Asia are[10]:

1. Support for human rights, the rule of law, democratization;
2. Investment in the future: in the field of youth and education;
3. Promotion of economic development, trade and investment;
4. Strengthening energy and transport links;
5. Combating common threats and challenges;
6. In the field of environment and water resources;
7. Expansion of intercultural ties;

To this day, the EU's strategy towards Central Asia has traditionally continued today. At the same time, official Berlin is contributing to the European Union's strategy for Central Asia, adopted on June 17, 2019.

Currently, one of the priorities of German Central Asian policy is to improve the ecosystem in the region. It is known that this is called the "Berlin Process" and was launched by Germany in 2008. It is dedicated to strengthening regional cooperation on water issues and thus the sustainable management of water resources in the Aral Sea basin.

As part of this process, on January 28, 2020, Germany announced "the Green Central Asia Initiative". The Green Central Asia initiative, launched by Berlin, is aimed at reducing the negative effects of climate change and strengthening dialogue on the issue. This initiative is also a unique contribution to the implementation of the goals set out in the EU Strategy for Central Asia, adopted on June 17, 2019.

### Obstacles to German Central Asian Policy

Despite Germany's growing interest in Central Asia, the region is not a relatively priority in the EU's overall foreign policy:

- *The emergence of relative differences in US and EU policy in Central Asia.* According to A.Rar, a well-known German expert, at first Europe tried to follow the US "Great Game" in the region and supported the US approach. However, he noted that the differences between the interests of the alliance and the interests of the United States have intensified. The US attempt to gain a foothold in the region is seen as a threat to the EU's "geopolitical ambitions" in Central Asia and the Caucasus[7]. In this regard, Chinese researcher Yu Shao points out two main differences in EU and US Central Asian policy:

1. The United States has no interest in developing regional cooperation and only prioritizes the development of individual ties with the countries of the region. The EU, on the other hand, prioritizes regional integration over bilateral ties;

2. The issue of pipelines carrying energy resources to the world market. The U.S. is focusing on the trans-Caspian direction, while the EU is focusing on the trans-Caspian direction.[10].

– *Division within the EU on foreign policy.* This is mainly reflected in the fact that the leading states within the EU are trying to focus the Union's foreign policy on their spheres of influence, and in this way try to gain greater influence in the EU. In particular, the interest zones of Britain and France are located in the Middle East and North Africa, as well as in its efforts to bring EU policy to the region. There is competition for geopolitical construction in the European region - France and Germany, France is the initiator of the "Southern" direction - the Mediterranean Union, and Germany is the supporter of the "Eastern" direction [11]. In the first half of 2007, during Germany's presidency, Kempe described the EU's foreign policy in Central Asia and its efforts to strengthen ties with Eastern Europe as a new "Eastern policy" by Bertelsmann, an expert on political research. [12].

– *Despite the EU's growing dependence on energy resources, about 80% of the world's resources are located around the EU's borders.* The largest source among them is the Middle East and Russia. Analyzing the importance of energy sources and countries in their supply to provide Europe with sustainable energy sources and the expansion of the energy community, the author I.Pashkovskaya in her article published in January 2009 assessed them as follows:

1. Russia;
2. Norway and Algeria;
3. Turkey on energy supply;
4. Ukraine (transit);
5. Caspian and Central Asian region;
6. North Africa, the Middle East and the Persian Gulf [13].

- *Central Asia's entry into Russia's strategic sphere of influence and the sharp increase in the dependence of Eastern European countries on Russian energy resources.*

## CONCLUSION

In conclusion, the formation of Germany's Central Asian policy, its desire to bring it to the permanent agenda of EU foreign policy and ensure its interests in the region directly depend on Germany's relations with the three participants in this process:

- Germany-Central Asia;
- Germany-EU members;
- Germany - relations with leading countries.

Ensuring a balance in these areas can play a key role in determining the future of Germany's position in the Central Asian region, in determining the prospects for cooperation with the countries of the region.

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## ANALYSIS OF THE RESEARCH ON TEACHING GEOGRAPHY TO BLIND STUDENTS

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### ABSTRACT

*The article describes the pedagogical and psychological features of teaching blind students, in particular, the history and current trends in research in the teaching of geography.*

**KEYWORDS:** *Education, Geography, Blind Children, Visual Aids, Map, Research.*

### INTRODUCTION

The analysis and study of previous research in each scientific work allows using the achievements and drawing conclusions from the mistakes made. Many scholars from history have dealt with theoretical and practical issues of the science of typhlopedagogy. In particular, the peculiarities of the education of blind children, the first information about their physical development, the founder of medical science Hippocrates (about 460-370 BC) said that it is necessary to first abandon the circle of religious thought and make a rational diagnosis of diseases. He tried to explain and actively treat the causes of blindness, hearing loss.

According to Aristotle, the loss of one of the senses in a person with a visual impairment leads to the restriction of emotions and the loss of some knowledge. The philosopher pointed out that those who have lost the ability to see from the three basic senses (smell, hearing, and sight) are the most valuable for the needs of life. He warned that the blind were born with higher mental abilities than the deaf. Aristotle also confirmed that the ability of people with visual impairments to work is at the same level as normal people [1, 1976].

### THE MAIN FINDINGS AND RESULTS

#### *Methodology*

While many philosophers and naturalists in ancient times tried to explain the processes of knowing the world, they often gave a negative answer to the question of how blind people in

those times could understand the world. However, we can see that Aristotle's views on the subject were radically different, that is, positive.

It should be noted that Aristotle's opinion is fully confirmed by the fact that today not only scientists, but all mankind enjoys the scientific and literary heritage created by historically blind talents - Homer, Mosert, Ahmad Yugnaki, Beethoven. The first steps in the social rehabilitation of the visually impaired were taken by the Polish scientist J.A. Comenius (1592-1670), the French enlighteners J.J. Russo (1712-1778), K.A. Helvetius (1715-1771), Denis Diderot (1713-1784) began with new ideas introduced into pedagogy by scholars such as [6, 1939; 11, 1985; 12, 1973;].

He also stressed the need for education for all children with disabilities and stressed that no human being should be deprived of the opportunity to receive an education [7, 1996].

#### *Analysis of results*

For the development and formation of special education, the French philosophers and enlighteners J.J. Russo (1712-1778), K.A. Helvetius (1715-1771), d. The works of Diderot (1713-1784) were of great importance. It is noteworthy that in 1784 the first school for children with visual impairments was established in France. In his Study of the Visually Impaired (1749), Deni Diderot developed the ability of surviving analysts to argue that the visually impaired could understand the realities of the universe and that special conditions and teaching aids were needed. He proved that people with visual impairments can be as educated as healthy children if the necessary conditions are created for their education. The scientist also made a psychological analysis of the inner world of a person with a congenital visual defect, his feelings and experiences, and laid the groundwork for a number of special scientific studies in this regard. Diderot drew attention to the need to create conditions for the blind and to create a special education system for them [4, 1941].

Born in Copvre, France, in the family of a shoemaker, Louis Braille developed a six-dot embossed writing system in 1825. This method of writing is still used by the blind today.

ValentinGayui was the first person to put the system of teaching the blind into practice. In 1784, at his own expense, he founded the Institute of the Blind at his home in Paris and the first school for the blind in Russia (1807). He expressed the following views, taking into account the opportunity of the blind and the need for education:

1. It is necessary to save all blind people from idleness, to allow them to work.
2. The blind must engage individually or collectively in work that is beneficial to society and to them.
3. The blind must have access to a source of income that protects them from begging and poverty.
4. It is necessary to return to the community living at the expense of charitable funds - idle, but healthy hands.
5. The blind should be given the opportunity to engage in science, literature, and the arts. This goal is achieved through the use of special textbooks and exaggerated books.
6. It is necessary to ensure the use of any necessary means in the education of the blind.

7. The activities of the blind can be an example to those who are prone to laziness; they should be a competitive example for healthy young people.

V. Gayui believed that although advanced methods of teaching the blind had not yet been developed, it was possible to teach them and bring them to higher levels. He believed that those with visual impairments could join the community and find their place through their activities. V. Gayui draws the first embossed pictures of animals, and in the lesson those who had a defect in seeing the original of a natural object used them. With the establishment of the first school for the blind, the natural sciences course became one of the compulsory subjects in the program, but natural objects in the environment were taught directly using preserved analyzers.

The students were told about the geographical location and the human economy. The teaching of geography, including the natural sciences, was practiced until the early twentieth century by hearing or touching materials in a one-way street [9, 2006].

Special schools for children with visual impairments began to be established only in the early twentieth century. In 1908, the British ophthalmologist Garman opened “classes to protect the abilities of those with visual impairments”. In 1913, similar classes were opened in Boston (USA) by Dr. Allen. In them, the teaching of geographical materials to visually impaired schoolchildren was carried out using two different programs. The first is the use of the correctional method, this direction is developed during the formation and development of special schools, and the second is that only the image of the didactic material is magnified in accordance with the methods adopted in secondary schools.

L.S. Vygotsky was one of the first to say, “Blindness is not a defect, but a deficiency, an imperfection. It only becomes a defect under the influence of unfavorable social conditions for the blind. With the help of special education, the problem will be solved”. These views of LS Vygotsky were developed by V.A. Gander, P.Ya. Efremov, L.V. Zankov, D.I. Zorichev and G.A. Uspensky in 1928 in the first program and textbook for blind children of the former Soviet Union. formed the basis. Although this program and textbook have some shortcomings from a scientific point of view, it is still recognized as the basis of typhlopedagogy teaching programs. The main idea of this textbook is to raise the content of education in special schools for blind children to the level of secondary schools [2, 1955].

The electroforming method proposed by V.S. Sverlov and P.D. Krasnousov for the creation of embossed materials allowed to print a relief copy of the images on thick paper. Some geographical learning materials have also been created using this method, but the difficulty and complete incomprehensibility of these materials by the blind poses another problem. This work was continued by D.I. Zorichev. He developed the basic requirements for relief drawings, diagrams, schemes, tables and relief exhibitions. As a result of the scientist's work, in the 60s of the last century appeared visual weapons made of plastic, in which the embossed shapes are better described [8, 1960].

A well-known representative of typhlopedagogy, the Russian scientist DI Zorichev in his methodological manual “Geography of blind schools”, published in 1934 (reprinted in 1950), gave the necessary methodological recommendations for teaching geography to visually impaired or blind children. In particular, it should be noted that the scientist has developed a technology for the formation of curricula for visually impaired children and the organization of excursions in the teaching of geography [15, 2018]. It is also worth noting that the study of

spatial forms in geography, the development of scientific and methodological recommendations on the methodology of working with a special map [5, 1950].

The importance of making embossed visual aids in geography is that they can be used in the teaching of almost any subject. In addition, it is important to include in the teaching the specific stylistic features of the exhibitions, namely the relief image, the combination of relief, the introduction of explanatory texts in Braille.

Beginning in the 1930s, practical methods of teaching students in schools for the blind began to be introduced. From the simplest observations in nature, on the basis of a certain amount of accumulated experience, practical work in the field of geography gradually began to be applied to the educational process.

Since the late 1970s, the situation has improved somewhat, as the production of many visual aids in geography has been established. However, modern visual aids in geography are not enough for visually impaired and visually impaired students today. The existing ones do not meet the requirements of today's typhlopedagogy [14, 2020].

French scholar Stuart Snowdon has also conducted research on the teaching of geography in blind secondary schools. According to him, it is more difficult for the blind to master geography than to study other sciences. Because the science of geography needs to be more visual than other sciences. It is easy for healthy students to explain the environment and different countries through a map. For the blind, it is important to develop a special methodology and apply it in practice [16, 2020].

In his pamphlet, *Teaching Geography to Blind Students*, S. Snowdon made the following point: I am not opposed to blind students receiving the same education as healthy students. However, they should have their own methodology in teaching geography. For example, in this regard, it is advisable to exaggerate the objects on the map, diagrams and drawings in a way that can be felt by hand, and to describe the information about them in the same order. However, the information depicted on the map needs to be simplified a bit. This is because we have to admit that it is difficult for the blind to use the information provided for normal students to fully depict a special embossed map. That's why I'm in favor of identifying and mapping the most basic information that can be mapped to specific maps, he says. He also put forward the idea of making various teaching materials out of clay and applying them to the teaching process. He noted that the mastery of blind students increased when they created and applied to the learning process the creation of caves, shores, foothills, waterfalls, valleys, various landscape forms [17].

Russian scientist T. Alexander's scientific article "Vision and Geography" is devoted to the problems of teaching geography in students with different visual abilities. He points out that vision plays a key role in many ways in the acquisition of geographical knowledge. Visualization is important, first of all, in field observations and conducting field experiments and laboratories, conducting measurements, working with maps [13, 2020]. It should be noted that it is necessary to create special visual materials in this regard.

Russian scientist Boris Konstantinovich Tuponogov also conducted research on the teaching of natural sciences in schools for blind children. In particular, the topic of his dissertation for the degree of Doctor of Pedagogical Sciences is "Typhlopedagogical basis of correctional and developmental education (teaching biology and chemistry to blind and visually impaired

students”) (1996). As a result of his research, the foundations for teaching certain subjects in schools for blind children were developed. The means, form, method and content of special education have been improved on the basis of a systematic and comprehensive approach to this problem. At the same time, the specifics of the educational process in schools for blind children, the features of the use of general didactic and defectological principles were revealed, and typhlopedagogical requirements for teaching chemistry and biology were developed and tested [11, 1985].

R.Sh.Serodeeva from Russia in her dissertation “Requirements for the use of visual methods in the teaching of science to blind children” identified shortcomings and difficulties associated with visual impairment of children. He substantiated the typhopedagogical requirements for science lessons and visual aids, and provided guidelines for improving the knowledge and skills of visually impaired schoolchildren in the study of natural sciences [9, 2006].

It should be noted that in 2019, a special manual on creating geographical maps for visually impaired people in Russia was published. This book “Creation of tactile and typhoid maps” was written by Andrei Medvedev, head of the cartography laboratory of the Institute of Geography of the Russian Academy of Sciences.

“A blind or visually impaired person needs to be taught to understand and read a tactile map”. “It is very important to identify and understand the relief material, the symbols in the form of dots and lines, in the structure of the map and in the disclosure of the information shown in it”, said Andrei Medvedev. In his book, he explained the latest advances, basic principles, and methods for creating tactile and typhoid maps. Students who read this guide will be able to create tactile and typhoid maps independently. There are many pictures in the book - examples of tactile and typographic maps from different countries of the world [18, 2019].

This Institute of Geography is actively involved in the production of cartographic products for the blind. Also in 2015, with the financial support of the Russian Geographical Society, he published a geographical atlas of Moscow for the visually impaired, which included the most modern ecological and socio-economic state of nature.

## CONCLUSION

In general, it is very important to fill the gaps in the education of the blind and visually impaired, to help them in the process of education and development. The transfer of schools for the blind to a curriculum similar to the curriculum of secondary schools is considered a historic achievement of typhlopedagogy. It should be noted that the problem of using visual aids in teaching geography to visually impaired students is waiting to be solved. There is also insufficient scientific and practical research to improve the teaching of geography in blind children.

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## THE ROLE OF SOCIAL AND HUMANITY SUBJECTS IN EDUCATION OF SPIRITUAL GENERATION

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### ABSTRACT

*This article focuses the spiritual problems, the effective system that needs to be established in the fight against popular culture, and the importance of the social sciences and humanities in this regard.*

**KEYWORDS:** *Popular Culture, Kitch Style, Ideology, Spirituality, Global Network, Global Issues, Threat Concept, Tolerance*

*The unimaginative man is a kind of observatory without a telescope (G. Biger).*

### INTRODUCTION

It is known that the role of the social sciences in protecting our youth today from external ideological influences and threats is also important. Because the forms of ideological threat are diverse, they often work behind the guise of attractive slogans and ideas, using a variety of methods. Such evil forces have enormous material, financial resources and opportunities at their disposal, that serve well-thought-out and long-term goals. The main goal of these actions are, first of all, to win the hearts of young people, to influence the minds of a people in a particular country or region, to subjugate them to their own worldview, to weaken and subordinate them ideologically.

However, in the context of the global coronavirus pandemic, the initiators of various alien ideas also had problems with propaganda. They can't put on a show right now, they can't get together. But that doesn't mean they stop. They are looking for new and effective ways to achieve their goals.

## RESULTS AND DISCUSSION

There is the most perfect universal definition of "Popular culture". In other words, "mass culture" is a set of attacks that come to us from abroad, which are completely alien to national values, and include moral and ethical vices.

What is popular culture? Bernard Rosenberg of the United States claims of 1965 about popular culture: "The main reason for 'popular culture' is modern technology. Neither the national character, nor the economic, nor the political system is crucial in this matter."<sup>1</sup>

George Friedman (Toronto) says: "By popular culture we mean a set of cultural consumption values that are communicated to the general public by the media in the context of technical civilization" (1962)<sup>2</sup>.

Popular culture and its values are aimed at the general public. They are distributed quickly, all at once, through mass technical propaganda. Popularized.

In the context of the corona virus pandemic in the world, despite the fact that students and educators are at home, education and upbringing is carried out systematically. The old methods have been abandoned and replaced by effective, useful methods.

What to pay attention to in the upbringing of a harmoniously developed generation at the same time sitting all at home, in fact. Which documents reflect the important aspects that we need to programmatically in this regard? Which way is "convenient" for us? ...

The effectiveness of education in the current era of globalization depends on the further inculcation in the minds of young people of the ideas of patriotism for the motherland and its people. Because any ideology also serves the task of creating a social environment in which certain ideas prevail in society. As the First President of the Republic of Uzbekistan Islam Karimov stated, "Ideology is necessary in the life of any society. Without ideology, a person, a society, a state will inevitably lose its way."<sup>3</sup>

Hence, the fight against ideological threats is effective through proper education and training.

Ideological threats are a deliberate attempt to poison the minds of our youth and to "create" the average person by secretly promoting ideas such as immorality, violence, and the pursuit of pleasure alone.

The main weapon of these threats is the media and the Internet, known as the World Wide Web. Due to the extremely wide range of ideological threats, they can be responded to through comprehensive, well-thought-out and ideological education.

Globalization is widely spreading "mass culture". It dusts the minds, music, tastes, dress, interactions, family relationships, dreams and even religion of young people.

In his claim to the OliyMajlis on January 24, 2020, President of the Republic of Uzbekistan Sh.M. Mirziyoev said that the program idea "From national revival to national uplift" is a very honorable task to educate young people in the spirit of devotion to the motherland, the formation of initiative, devotion and moral qualities.<sup>4</sup>

Today, Uzbekistan has an institutional system for the development of the national idea (the father of this direction is recognized as the Nobel Laureate Doglaz Norz), and its further effectiveness depends on how the social sciences are taught in schools, including higher

education. It is also important to pay attention to the training of specialists in the teaching of these subjects in the higher education system.

It would be expedient to pay more attention to the specialization of students in the creation of educational complexes in the social sciences and humanities. This is due to the fact that in the 2019-2020 academic year in Uzbekistan, undergraduate students who have graduated from the same direction as the master's degree have been admitted, and this process will continue systematically. In our opinion, there are some problems in teaching professors and teachers in different fields.

The most important of these is that all students have different basic knowledge in the field. In such a situation, it is possible to achieve the intended goal with sufficient knowledge and experience of professors and teachers. Because each subject is explained to the student through a familiar field, its effectiveness will increase even more.

Social sciences and humanities are one of the main links in the education system of our society. Improving, expanding and increasing their effectiveness is one of the most pressing issues of today.

Moreover, it is based on the generalization of the experience of advanced countries in the world, to help young people to form a new social culture, to determine the path based on the principles of development, not to repeat the mistakes of the past, to learn from them, to anticipate and eliminate the main threats. In harmony with their peoples, it will be possible to ensure peaceful coexistence.

In this regard, President Sh.M.Mirziyoev states: "We all understand that education is the most important priority that will solve not only today but also tomorrow of any state and society. That is why our country is focusing on this issue at the national level."<sup>5</sup>

The formation of worldviews and thinking in today's youth, as well as their ideological protection, imposes a huge responsibility on professors and teachers of social sciences and humanities.

This is because it is possible to create a strong core of civil society only by uniting and mobilizing young people for a specific goal of the country's development. At the same time, it will be necessary to unite professors and teachers, generalize the topics they like, develop mobile applications, create applications based on the age and worldview of the audience, generalize the experience of world scientists, apply them in practice.

The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated December 31, 2019 "On approval of the concept of continuous spiritual education and measures for its implementation" summarizes the work of all, including teachers. It is also expected that this concept lead to a single system of spiritual and educational work in our country.

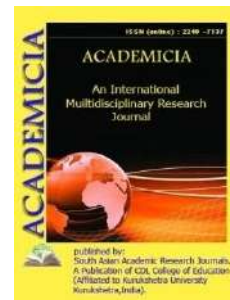
## CONCLUSION

In order to form the spirituality of young people in the concept, it is important to deeply integrate the principles of national ideas in the educational process in secondary schools, to fully explain to students the basics of national education, to organize the subject "Education" to convey the teachings of our ancestors. As a result, young people with sufficient knowledge come to higher education.<sup>6</sup>

At the time, when there is a coronavirus pandemic in the world, it is not possible for young people to be spectators on the sidelines. When popular culturists can't show their sharp performances, let young people take to the big stage and have their say. In sum up, with a great sense of responsibility, it is necessary to master the social sciences and humanities at home, to do independent research or works, to receive the necessary instructions and recommendations, to express their views with knowledge, practical results and to be worthy successors to teachers.

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## MODERN EDUCATIONAL TECHNOLOGIES IN PRESCHOOL INSTITUTION

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### ABSTRACT

*The article shows the role of didactic games and integration with computer technology, the use of computer games in a preschool institution, integration in the development of logical thinking, sense of proportion, orientation in the environment, feelings of the motherland in the education of preschool children in educational and educational classes, the Presidential Decree on fundamental changes in preschool education.*

**KEYWORDS:** *Preschool Institution, Education, Computer, Technology, Game, Speech Development, Feeling, Pupils, Integration Of Subjects, Relevance, Modern Pedagogy*

### INTRODUCTION

Ensuring the implementation of the Decree of the President of the Republic of Uzbekistan dated September 30, 2017 No PF-5198 "On measures to radically improve the management of preschool education" and the establishment of state and non-state networks of preschool education further expansion, creation of conditions for the formation of a healthy competitive environment between public and private preschools, the introduction of new forms of preschool education in the context of public-private partnership, as well as In order to ensure the effective organization of the Ministry of Preschool Education of the Republic of Uzbekistan, the Ministry of Preschool Education was established. The document says the number of public preschools in the country has shrunk by more than 45 percent over the past 20 years, while enrollment in preschools has risen by about 30 percent.[1]

In this regard, it is planned to retrain preschool teachers and teachers on the basis of modern technologies and methods and to create "appropriate conditions for the upbringing of children "In the next 4-5 years, all children of kindergarten age in Uzbekistan will be fully covered by preschool education, President ShavkatMirziyoyev said in his speech at the ceremony dedicated

to International Women's Day. "We have set a goal to fully cover all preschool children in our country in the next 4-5 years. This is our duty to our women, our children, if necessary, our sacred duty to the future, and we will definitely fulfill it," the President said.

According to him, there are currently 7,104 preschools in the country. Over the past two years, 2,211 new kindergartens have been established, with an additional 243,000 children enrolled.

"In other words, the coverage of preschool children in our country has increased by 12% over the past year and a half to 38%," said ShavkatMirziyoyev. [1]

### **Main part**

The main task facing the preschool education of the Republic is to bring up and bring up healthy, talented children who are fully developed, loyal to their Motherland and people. One of the current requirements of modern pedagogy is the fact that our educators teach in the classroom on the basis of the integration and interdependence of disciplines.

Modern pedagogical technologies in preschool education are aimed at the implementation of state standards of preschool education.

Today we will talk about pedagogical technologies and their effective use in a preschool institution. First, let's recall what the term "technology" itself means.

Technology is a set of techniques used in any business, skill, art (explanatory dictionary).

Pedagogical technology is a set of psychological and pedagogical attitudes that determine a special set and layout of forms, methods, methods, teaching methods, educational tools; it is the organizational and methodological toolkit of the pedagogical process (B.T. Likhachev).

Today, there are more than a hundred educational technologies.

Basic requirements (criteria) of pedagogical technology:

- Conceptual
- Systematic
- Manageability
- Efficiency
- Reproducibility

Conceptuality is the support of a certain scientific concept, including the philosophical, psychological, didactic and socio-pedagogical substantiation of the achievement of educational goals.

Consistency - technology must have all the features of a system:

- The logic of the process,
- The interconnection of its parts,
- Integrity.

Manageability - the possibility of diagnostic goal-setting, planning, designing the learning process, stage-by-stage diagnostics, varying means and methods in order to correct results.



Efficiency - modern pedagogical technologies that exist in specific conditions should be efficient in terms of results and cost-effective, to guarantee the achievement of a certain standard of training.

**Educational technology structure** The structure of educational technology consists of three parts: • The conceptual part is the scientific basis of technology, ie psychological and pedagogical ideas that are laid in its foundation. • The content part is the general, specific goals and content of the training material. • The procedural part - a set of forms and methods of educational activity of children, methods and forms of work of a teacher, activities of a teacher in managing the process of mastering the material, diagnostics of the learning process.

1. Modern educational technologies include:
2. • health-saving technologies;
3. • technology project activities
4. • research technology
5. • information and communication technologies;
6. • personality-oriented technologies;
7. • technology portfolio preschooler and educator
8. • gaming technology
9. • technology "TRIZ" and others.

I would like to consider information and communication technologies. The world in which the modern child develops is fundamentally different from the world in which his parents grew up. This makes qualitatively new demands on preschool education as the first link in lifelong education: education using modern information technologies (computer, interactive whiteboard, tablet, etc.).

Informatization of society poses the following tasks for preschool teachers:

- keep up with the times,
- become for the child a guide to the world of new technologies,
- a mentor in choosing computer programs,
- form the basis of the information culture of his personality,
- increase the professional level of teachers and the competence of parents.

The solution to these problems is not possible without updating and revising all areas of the kindergarten in the context of informatization.

**Requirements for computer programs DOE:**

- Research character
- Ease for independent studies of children
- Development of a wide range of skills and perceptions
- Age compliance
- Entertaining.

**Program Classification:**

- Development of imagination, thinking, memory
- Speaking dictionaries of foreign languages
- Simple graphical editors
- Travel Games
- Learning to read, math
- Use of multimedia presentations

Advantages of the computer:

- presenting information on a computer screen in a playful way is of great interest to children;
- carries a figurative type of information that is understandable to preschoolers;
- Movements, sound, animation for a long time attracts the attention of a child;
- has an incentive for cognitive activity of children;
- provides an opportunity to individualize training;
- in the course of his activities at the computer, the preschooler gains self-confidence;
- allows you to simulate life situations that cannot be seen in everyday life.

Errors in the use of information and communication technologies:

- Lack of teacher training
- Incorrect definition of the didactic role and place of ICT in the classroom
- Unplannedness, accidental use of ICT
- Congestion of demonstration.

ICT in the work of a modern teacher:

1. Selection of illustrative material for classes and for the design of stands, groups, classrooms (scanning, Internet, printer, presentation).
2. The selection of additional educational material for classes, familiarity with the scenarios of holidays and other events.
3. Exchange of experience, acquaintance with periodicals, developments of other educators in Russia and abroad.
4. Registration of group documentation, reports. The computer will allow you not to write reports and analyzes every time, but rather just type the circuit once and only make the necessary changes in the future.
5. Creation of presentations in the Power Point program to improve the effectiveness of educational activities with children and pedagogical competence of parents in the process of parenting.

Game technology

It is built as a holistic education, covering a certain part of the educational process and united by a common content, plot, character. It is included in series:

- Games and exercises that form the ability to highlight the main, characteristic features of objects, to compare, to compare them;
- Groups of games to generalize subjects according to certain criteria;
- Groups of games during which preschoolers develop the ability to distinguish real phenomena from unreal ones;
- Groups of games that educate the ability to control oneself, the speed of reaction to a word, phonemic hearing, ingenuity, etc.

Training in the form of a game can and should be interesting, entertaining, but not entertaining. To implement this approach, it is necessary that the educational technologies developed for teaching preschool children contain a clearly defined and step-by-step system of game assignments and various games so that, using this system, the teacher can be sure that as a result he will receive a guaranteed level of learning child of a particular subject matter. Of course, this level of achievement of the child should be diagnosed, and the technology used by the teacher should provide this diagnosis with appropriate materials. In the activity with the help of gaming technologies in children, mental processes develop. Game technologies are closely related to all aspects of the educational and educational work of the kindergarten and the solution of its main tasks. Some modern educational programs suggest using the folk game as a means of pedagogical correction of children's behavior.

## RESULTS AND DISCUSSIONS

Therefore, it should be noted that we suggest using computer and gaming technologies in integration. For example, such computer games for preschoolers:

For speech development.

This type of game is important in preparing the child for school, because now the child must not only be able to read and count, but also correctly pronounce all the sounds of speech. Here speech therapy games come to the rescue: Home logoped.

In this game there are many tongue twisters, proverbs, funny games and more than 350 exercises to study the pronunciation of certain sounds. A nice addition are colorful pictures.

"Games for the tiger".50 exercises, colorful and understandable drawings, volumetric images, sound accompaniment of the actions performed, the game form for the presentation of educational material and a cheerful presenter Tiger cub, which helps motivate children to attend classes.

There are also entire software and methodological complexes for studying letters and sounds, which are divided into difficulty levels, depending on the age of the child.

Developing online games

Developing games are divided into age categories and genres, but in any case, they are all educational. Here we "kill two birds with one stone": playing them, the child will receive new knowledge and pleasure. It is possible to enumerate the number and their types forever, but

nevertheless we will list the main ones: for the smallest common programs are “Find an Item”, “Guess Who”, “Collect an Item”, “Find the Differences” and many, many others.[6]

When choosing games for a child, remember that the main thing is not to harm. If possible, it is better to limit the time you use your computer. It is believed that a child aged about 5-6 years should spend at the computer no more than 15-20 minutes a day, and preferably not every day.

The game is one of the forms of practical thinking. In the game, the child operates with his knowledge, experience, impressions, displayed in the social form of game modes of action, game signs, which acquire significance in the semantic field of the game. The game, having features of intellectual activity in its motive and representing a peculiar practical form of the child's thoughts about the surrounding natural and social reality, allows him, figuratively speaking, to “spread the wings of his abilities”. In the game process of his thinking about the world, the child uses a sign (symbolic) system for displaying reality in the game. Iconic means of displaying reality in the game. The sign means of displaying reality by the child in the game have a hierarchical structure, which is crowned with the representation of the image of reality in an external sign - an object, image, symbol, including a word [7].

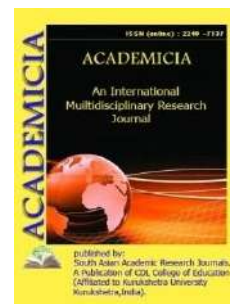
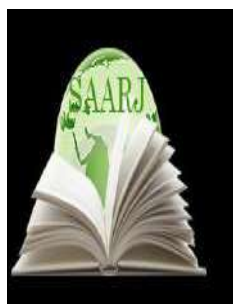
## CONCLUSION

The technological approach, that is, new pedagogical technologies guarantee the achievements of the preschooler and further guarantee their successful education in school.

Every teacher is the creator of technology, even if he deals with borrowing. Creating technology is impossible without creativity. For a teacher who has learned to work at a technological level, the cognitive process in its developing state will always be the main guideline. Everything is in our hands, so they cannot be omitted.

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## THE VERBAL LACUNAS IN CHINESE AND UZBEK LANGUAGES (ON THE EXAMPLE OF GRAMMATICAL AND SOMATIC LACUNAS)

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### ABSTRACT

*This article is devoted to the phenomenon of lacunarity in Chinese and Uzbek languages, in particular, the issue of verbal lacuna. The article provides analytical considerations based on the grammatical features of the verbs. In the following places, the lacunas occurring in verbs related to somas are analyzed between the two languages, and the classification of somatic verbal lacunas is given.*

**KEYWORDS:** *Lacuna, Lexical Gap, Phenomenon Of Lacunarity, Verbal Lacuna, Grammatical Categories Of The Verb, Somatic Verbal Lacuna.*

### INTRODUCTION

Lacuna (Latin lacuna "ditch, gap"; French lacune déficit, vide) - characteristic of the domestic, cultural, social and historical life of any nation and alien to another nation words and phrases that have no clear alternative in another language [1, 145]. I.A. Sternin, Z.D. Popova, M.A. Sternina, in their work, also distinguishes the type of lacuna called "word lacuna" [2, 208]. The problem of grammatical gaps in language comparison is poorly understood. In this regard, the study of the phenomenon of lacuna in the context of the grammar of Chinese and Uzbek languages is relevant.

In English language scientific works, the word "lacuna" is derived from "lexical hole", "lexical vacancy", and usually the term "lexical gap" is used in linguistics. The term "gap" in the word combining as a term for scientific discourse refers to different meanings of the lacunas such as "space", "hole". Combining with different definition words different types of lacunas are produced, for example, "semantic gap", "cultural gap". Thus, the word "gap" is used as a

synonym for "lacuna", and the word "gap" is used to describe a combination of lacunas (grammatical lacuna, cultural lacuna, etc.).

## RESULTS AND DISCUSSION

It is well known that verbs are very important in the construction of a text or speech. In this sense, there are a number of problems with the verb phrase in translation work. These problems, especially the peculiarities of these two languages, depend on the system of grammatical categories in them. An existing grammatical category in one language may not exist in another language or may be represented by other means. For example, in Uzbek, verbs include voices, moods, tenses, leading and auxiliary verbs. It is not present in the grammar of the Chinese language. This leads to grammatical gaps between the two languages. The voice category represents the relation of the action to the subject. This relationship emerges with a special grammatical form [3, 159]. The voice category represents the relation of the action to the subject (performer). This relationship emerges with a special grammatical form [3, 159]. The relative forms of the verb are formed in Uzbek with the help of suffixes, and in Chinese with the help of prepositions.

For example,

1. *U kiyimini kiydi.* (He put on his jacket) (active voice) 他穿衣服了。 *Ta chuan yifu le.*

2. *U bosh kiyimini kiydi.* (He put on his hat) (active voice) 他戴帽子了。 *Ta dai maozile.*

There is no lacuna in the grammar of Chinese and Uzbek languages. Speech order is proportional in both languages.

3. *Marasul ashula aytib asboblari yig'ishtiradi va kiyinadi.* (Marasul picks up her instruments and gets dressed). [4, 5] (active voice) Marasul 唱着歌收拾了东西, 就穿衣服了。 *Marasul changzhe ge shoushi le dongxi, jiu chuan yifu le.*

4. *Yur tezroq, kiyingin, qizim! Hurry up, get dressed, honey!* [4, 8] (active voice) 快点儿走啊, 穿衣服吧, 女儿! *Kuai dianr zou a, chuan yifu ba, nver!*

5. *Bolani kiyintiring!* (causative). 帮孩子穿衣服! *Bang haizi chuan yifu!*

6. *They got dressed.* 他们穿衣服了。 *Tamen chuan yifu le.*

Considering the above sentences, the verb proportions in sentences 1, 3, 4, 5, 6 are expressed differently in Uzbek and in Chinese with the same 穿衣服 *chuan yifu*.

Using suffixes such as *-in*, *-tir*, *-ish*, verbs that change in meaning and function do not find their full equivalent in Chinese, and see a grammatical gap in the middle. The verbs "to wear" in sentences 1 and 2 are translated into Chinese in two different ways. Because in Chinese, the verb "to wear" is used separately according to its object, such as 穿 *chuan* for "outer garment" and 戴 *dai* for "hat."

The word "undress" is also different in Chinese: 脱衣服 *tuo yifu* – to take off one's clothes, 摘帽子 *zhai maozi* – to take off one's hat. Although the Uzbek language has the concepts of "wearing a hat" or "wearing an outer garment", there are no separate lexemes to express these concepts.



This means that the concepts mentioned in the Uzbek language give rise to lexical lacuna. Below is another Chinese version of the word "dress".

7. *Nasiba.Kiyib ko 'ray-chi!Nasiba. Let me try it on!* [4, 14]Nasiba: 我试试看呢! *Wo shishi kan ne!*

The word "try on" in Uzbek is a completely different word from the Chinese word

“试试”*shishi*". As you can see, the verb "to wear" has several lacuna in Chinese.

In Chinese, passive voice is formed with the help of the 被 *bei*, 由 *you*, 让 *rang*, 叫 *jiao*, 使 *shi*, while in Uzbek it is formed by adding the suffixes - (i) *n*, - (i) *l* to the base of the verb. In Uzbek, the use of the auxiliary "by", which corresponds to the Chinese prefixes, is not used in the passive pronouns of the subject, so there is no lacuna between the two languages in the passive pronoun:

7) 他被老师批评了一顿。 *Ta bei laoshi piping le yi dun.* [5, 37] –*U o'qituvchi tomonidan tanqid qilindi. (She was criticized by her teacher).*

According to the linguist Sh.Usmanova, in the Uzbek language the head soma is more closely connected with the state verbs (confuse, hurt), the eye soma with the verbs (look, see), the foot soma with the action verbs (walk, go, press, pull). In addition, the pronoun comes together with gesture verbs such as shake, throw, shake, shake, raise the hand, shake, join, and forms a number of phraseological units, which serve to describe the action [6, 31].

O. Sukhanova distinguishes three types of verbal lacuna: generalizing, concretizing and generalizing-concretizing lacuna. According to him, the amount of concretizing verb lacuna is much greater than the rest of the verb lacuna. The degree of lacunarity of concretizing lacuna and concretizing-generalizing lacuna is the degree of concretization, which belongs to the lexical differentiation of the concept of species [7].

Specific lacuna in the Uzbek language on the Chinese background related to the soma of the mouth, eyes, hands and feet can be shown as follows:

a) Verbal lacunas associated with oral soma:

尝 *chang*- to eat, to taste

呓 *qiā*- to bite

咻 *xiū*- to make noise, to murmur

吭 *kēng*- to make a sound.

“专员——”她追上了下了车朝东院走去的蒋经国气咻咻喊道[8]。

“*Zhuānyuán ——*” *tā zhuī shàngle xiàle chē cháo dōng yuàn zǒu qù de jiǎngjīngguó qì xiūxiū hǎn dào.*

У “Комиссар ——” дея шовқин солиб аравадан тушиб шарқий ҳовли томон йўл олган Жиянг Жинггуога бақирди.

("Commissioner——" she cried Jiang Jingguo yelled after catching up with the car and walking towards the east courtyard).

b) the verballacunas associated with eye soma:

瞧 qiáo- to glance

眯 mī- to squint, to squint

瞟 piǎo- to look out of the corner of the eye, to look in secret

瞻 zhān- to look straight.

刘检察长瞟了赵金如问：“听清这两人是谁了吗？” [9]

*Liú jiǎnchá zhǎng piǎole zhào jīnrú wèn: "Tīng qīng zhè liǎng rén shì shéile ma?"*

*Прокурор Лю Жоэжинруга зимдан кўз таилаб: "Бу иккиси кимлигини аниқ эшитдингизми?" деб сўради.*

*(Prosecutor Liu Zhaojinru glanced at him and said, "Did you hear exactly who the two were?" he asked).*

c) the verballacunas related to hand soma:

带 dài- to carry with oneself;

掂 diān - to estimate the weight by hand;

钓 diào - fishing with a hook;

捧 pěng - to take with both hands (with respect).

领队者乃是死者的长子，他手捧着“先父之位”的灵牌，迈着沉重的脚步..... [10]

*Lǐngduì zhě nǎi shì sǐzhě de cháng zǐ, tā shǒu pěngzhe "xiān fǔ zhī wèi" de língpái, màizhe chénzhòng de jiǎobù....*

*Сардор марҳумнинг тўнғич ўғли эди. У "марҳум отаси"нинг исми ёзилган тахтачани икки қўллаб олиб, оғир қадам ташларди.*

*(The leader is the eldest son of the deceased. He is holding the spirit card of "the father's place" and taking a heavy step..).*

d) Chinese-Uzbek verballacunas related to foot soma:

跪 guì- to bend the knee;

踮 qiāng- to move in a rhythm;

蹑 niè- to walk on tiptoe.

忽然他灵机一动，蹑足走到通往楼梯的门旁，把门一开。 [11]

*Hūrán tā língjī yīdòng, nièzú zǒu dào tōng wǎng lóutī de mén páng, bǎmén yī kāi.*

*У бирдан ҳаракатга келиб, зинапоёга бошловчи эшик томонга оёқ учида юриб борди ва эшикни очди.*

*(Suddenly he moved, walked to the door leading to the stairs, and opened the door).*

Against the background of the Uzbek language, you can observe Chinese lacuna such as Gesture– 打手势叫 *dǎ shǒushì jiào*, shout loudly – 大声喊叫 *dàshēng hǎnjiào*.

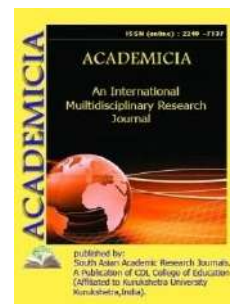
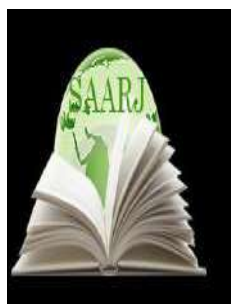
## CONCLUSION

In conclusion, the problem of occurrence of grammatical lacunas between Chinese and Uzbek languages has not been investigated fully. The grammatical category specific to the Uzbek verb family may not exist in Chinese or may be expressed by other means. There are significant differences, especially in the relative categories of verbs in both languages.

Somatic verbal lacunas are lacunas in words that describe actions performed with the participation of body parts, and they occur mainly in concretizing verbs.

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## EVALUATION IN 1960-1980 SCIENTIFIC RESEARCHES REGARDING THE EVENTS IN KHOREZM UNDER SOVIET UNION REPUBLIC

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### ABSTRACT

*In the period of Soviets, a lot of research was carried out on the liquidation of the Khiva Khanate and the history of the Khorezmpeople's Republic of Soviets. As a result of them, the data and archive documents on the subject are included in the scientific report. At the same time, this period was complicated, contradictory in the history of our statehood and ideological pressures in the scientific study of the problem prevailed. The article analyzes the scientific evaluations given in 1960 -1980s research on the processes in the Khorezmpeople's Republic of Soviets from the point of view of historiography.*

**KEYWORDS:** *Khorezm People's Soviet Republic (KSSR), Bukhara People's Soviet Republic, October Revolution, RSFSR, "Questions Of The History Of The CPSU", All-Russian Congress, Turkestan ASSR, Khiva Revolution.*

### INTRODUCTION

First of all, it should be noted that the scientific research of this period is inextricably linked with the domestic and foreign policy of the Soviet state, as evidenced by the example of the history of the Khorezm People's Soviet Republic. The team of scientists who survived the great difficulties of Stalinist politics in the 1950s and World War II finally had the opportunity to fully engage in science between the 1960s and 1980s. In general, this period did not differ much in the communist ideological life of the period, but after Stalin's death, N. Khrushchev's rise to power in the Soviet Union was reflected in scientific research, including historiography, except, until the years of perestroika, almost the same situation - a class approach in the communist spirit to historical realities prevailed.

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## THE MAIN FINDINGS AND RESULTS

The period of stagnation of the Soviet state under L.I. Brezhnev, the rise of corruption in state and public organizations and in Soviet society in general, was reflected in almost all spheres of society, including science, in particular. At the same time, the principles of openness of N. Khrushchev's time, objective assessment of historical events, national history, values, and objective assessment of historical figures changed, and the propaganda apparatus of the first years of the Soviet government, especially under Stalin, was revived and the class approach to realities intensifies. The government took the path of misleading the public and creating a "Single Soviet Nation" by exploiting scientific research, especially in the field of history and literature, by denouncing or unilaterally interpreting national history.

This approach is especially evident in the scientific and popular literature on the history of the Khorezm People's Soviet Republic, which can be seen not only in the Center or in the republic, but also in regional publications. For example, in an article titled "Issues of the history of CPSU" in the Journal "Khorezm and Bukhara experience" – the movement of the 20th century during the transition period, it was shown that the workers and peasants class had a desire to develop anti - dictatorial revolutionary-democratic movements such as growth and increase in consciousness [6] - will be evaluated as.

Another feature of the research of this period is that the October coup was emphasized as a people's democratic revolution, as a result of the victory of the revolution, initially in the Khiva Khanate, and then in the emirate of Bukhara for the first time in history carried out the transition to socialism with the unselfish assistance of Russian and other peoples of – Soviet ideology was strongly influenced by the content of the Soviet republics, the generalization of their experience in the development of these republics, which has a significant theoretical and practical significance for all developing non-socialist countries that have achieved political independence.

The second period, the period from the mid-1950s to independence, is marked by a return to Soviet ideology and the strengthening of its influence in the literature and research of this period. However, from the mid-1980s to the 1990s, the years of reconstruction saw significant changes in this area.

B.N. Ponomarev, Secretary of the Central Committee of the CPSU, in his 1962 report "On the State of Historical Science and Measures to Improve the Training of Scientific and Pedagogical Personnel" drew the attention of Soviet historians to the need for in-depth study and generalization of the experience of Khorezm and Bukhara. For this experience to become the property of the peoples liberated from colonialism, it must be manifested in all clarity, not only the end result, but also the real course of the process" [2: p. 22].

In the 1960s, along with the publication of a number of scientific monographs on the history of the Khorezm People's Soviet Republic, the candidate's work was carried out. Among them is U. Tukhtakhanov's "Relations between the Russian Soviet Federative Socialist Republic and the Khorezm People's Republic, 1921-1924" (1961) [3], A. Satlikov's "History of the development of irrigation in Khorezm (1920-1941) (1967) [4], K.Abdullaev's "Komsomol and youth in the struggle to strengthen Soviet power in 1920-1924" (1969) [5] cases were defended. The fact that this and other researchers' scientific research has been published not only in scientific journals but also in the mass media, especially in newspapers [6] shows how masterfully the Soviet state used science, especially history.

We find that M. Dzhunusov's research on the Khorezm People's Soviet Republic, published in the late 1960s, was dominated by such approaches [7]. New research by a number of other authors has also emerged on the subject. In particular, in 1964-1965 in the pages of the journal "Issues of the history of the CPSU" published articles on the problems of the path of development of socialism [8: p. 61].

The work, created by L.M. Landa in 1970, is presented as a short but detailed literature on the history of the Khiva revolution and the Khorezm People's Republic [9: p. 74-78]. This study also continues the views expressed earlier in this regard, and it is clear that one-sided coverage of the events, based on the existing communist ideology, prevailed. For example, M.A. Akhmedova's research on the development of socialism. One of his books, *The Experience of the Soviet Eastern Republics on the Path to Socialism and Its Characteristics* (1967), and the other, *The Non-Capitalist Path: Some Problems of Theory and Practice* (1976), although these works are a generalized study, but there is a special section on the Turkestan Autonomous Soviet Socialist Republic, Bukhara and Khorezm [10].

M.A. Akhmedova's research concludes that the Soviet ideology played a key role in the development of backward peoples, including the peoples of Khorezm and Bukhara. The significance of this monograph is that it presents not only an analysis of the practical experience and features of the development of socialism in the Khorezm People's Soviet Republic and the Bukhara People's Soviet Republic, but also specific problems.

The works of G.M. Bilalov, I.A. Alimov, M.N. Mamadjanov [11] can be included in such researches. G.M. Bilalov's "From the history of culture and education of the Khorezm People's Soviet Republic. 1920-1924 years". The book is considered to be the first study aimed at studying the Khorezm Cultural Revolution.

An important step is also taken in the field of research on general theoretical issues of socialist-based economic development related to the Khorezm People's Soviet Republic and the Bukhara People's Soviet Republic, and this task was carried out in practice in the 60s and 70s. I.A. Alimov's research "Agricultural changes in Khorezm and Bukhara People's Soviet Republics" (1970) [12] "Education and activities of the Communist Party, 1920 - 1924" [13].

This work covers and summarizes all aspects of socio-economic development in the works of other authors. As a continuation of this study, the historical research of F. X. Kasimov summarizes all the issues that were written on the problem [14], reviews of different views of the authors. This monograph includes the period from the first half of the 50 - ies. In the 1980s .The second monograph of F. X. Kasimov is published, the work is devoted to the historiography of the pre-socialist period of the peoples of Central Asia. This monograph covers the literature created on the subject until the 1970s [15].

In 1976, a collection of documents entitled "History of the Khorezm People's Republic" was published in Russian, which includes materials from the archives of the Uzbek and Turkmen SSR, the Republic and the region [16]. These documents are presented on a periodic basis. In the same year, a number of studies on the history of Khorezm were published, which also focused on the history of the Khorezm People's Soviet Republic [17].

Soviet-era research evaluates the literature of foreign scholars on the abolition of the Khiva Khanate and the history of the Khorezm People's Soviet Republic as the work of bourgeois



authors who grossly falsified the events in Khorezm. In particular, F. X. Kasimov's monograph "Avoidance of Capitalism: Soviet Historiography of the Transition of the Peoples of Central Asia to Socialism" (1979) [18] has a special section – "Soviet historians struggle against bourgeois falsification of socialist construction in the Central Asian republics".

The book by American author Seymour Becker [19: P. 286-289], who studied at Moscow State University, covers the period from 1865 to 1924. According to the author, during this time there was no change in the life of Bukhara and Khiva. Many collections of documents on the history of the October Revolution and the Civil War have been published in Central Asia, but they contain only partial information about Khorezm. There are different memories on this topic. It is estimated that these memories should be explored as an important source in the creation of real history.

In the 1980s, a number of studies on the history of the Khorezm People's Soviet Republic were published. Only articles and monographs published in 1980 confirm this. During these years, along with scientific research, a number of journalistic articles on the history of the Khorezm People's Soviet Republic were published in the national and regional press. In particular, O. Sobirov's article "Culture since the Revolution (60 years since the victory of the Khorezm People's Revolution)" was published in the newspaper "Uzbekistan Madaniyati" (February 19, 1980), in the newspaper "KhorezmHaqiqati", the official publication of the Khorezm regional administration, O. Avazmuradov's "Last blow". A scene from history.

Research in the 1980s acknowledged the development of Soviet history in connection with the history of the Khorezm People's Soviet Republic. This is based on the achievements, the predominance of the identification and study, systematization and scientific description of new documents in many Central and local archives. This, in turn, is considered by historians to usher in a new era in the study of a number of topics, including the Khiva revolution and the history of the Khorezm People's Republic. In particular, the movement of the Khorezm People's Soviet Republic and the Bukhara People's Soviet Republic to independent activity was described as feudal eastern backwardness and became the center of revolutions against their movement [25: p. 230-231].

The end of the Khiva Khanate and the history of the Khorezm People's Republic are complex, sometimes full of contradictions, based not only on concrete achievements, but also on a number of serious mistakes. They can be described as follows:

- Assess the specific historical characteristics of the socio-economic development of Central Asia;
- In the post-October revolution period, the Soviet ideology, which was instilled in the peoples of Central Asia, prevailed;
- A number of historians have tried to study not only research, but also important legal literature from the point of view of historiography and source studies.
- In the first decades of the twentieth century, taking into account the peculiarities of the socio-economic and political structure of the Khiva Khanate, attention was paid to the conditions for the abolition of the Khiva Khanate, but the class approach to reality prevailed;

- The methods and tools used in the implementation of revolutionary-democratic changes in the Khorezm People's Republic have been analyzed, but in many cases the ideological approach has led to a departure from the coverage of the original situation.

At the same time, studies conducted over the years have comprehensively analyzed the influence of the Russian Soviet Federative Socialist Republic in the Khorezm People's Republic, the establishment of a socialist republic in Khorezm, but often exaggerated the activities of centralized forces and sometimes discriminated against locals. Also, the research of this period is dominated by the ideological approach to the history of the Khorezm People's Soviet Republic, the exaggeration of the class struggle and one-sided coverage. However, they are important for their richness of materials, coverage of almost all aspects of the history of the Khorezm People's Soviet Republic and consistent coverage of the issue, as well as their role as a source.

Certainly, we are far from discriminating against the research of this period. Most of the researchers who conducted scientific research during the Soviet era were well acquainted with the literature related to historical events and tried to make extensive use of the research created before them. They also sought to make extensive use of periodicals and archives that provided materials on the history of the Khorezm People's Soviet Republic to cover the issue in full. Highly appreciating the work of the researchers of this period, it should be noted that they served the ideological life of their time and were influenced by the ideas that had been ingrained in their minds for many years.

The ideological policy pursued in Soviet times for many years, educational institutions, propaganda bodies, radio-television, newspaper-magazine, Scientific and artistic literatures, which were the main means of its existence, gave the result of ideas that were inextricably integrated into the people's masses. On the one hand, this led to the fact that not only did it affect every researcher who conducted scientific research in those years, but also did not take into account some exceptions; many of them became the chief propagandists of Soviet ideology. On the second hand, the awareness of the researchers who had reached this period in contrast to the researchers in the 1950 - ies about the Real realities has been greatly reduced, almost depriving them of the opportunity to see the "second side of the coin", and the lack of access to research carried out abroad has led to the creation of scientific literature.

One of the characteristic features of the historiography of the Khorezm People's Soviet Republic at that time was to show the Khiva khanate only in black and arouse hatred against it, to evaluate the khanate as a structure that oppressed only the poor, and khans, officials and priests as representatives of the old regime. as well as the description of the construction of the Khorezm People's Soviet Republic as a stage in the centuries-old dream of the population.

Khorezm culture flourished during the Khiva khanate, such as state traditions, political and military achievements, creative work, architecture and music, education in Khiva madrassas, literature, history and translation during the khanate, national handicrafts and land cultivation, irrigation networks, etc. it has become a definite tradition in historiography of the 60s and 80s to give only a negative assessment of a flourishing period. A similar approach was taken against the Young Khiva people, who played an important role in the construction of the Khorezm People's Soviet Republic and were enlightened forces in the oasis, and continued to label progressive intellectuals as "nationalists", "counter-revolutionary forces" and "anti-communists".

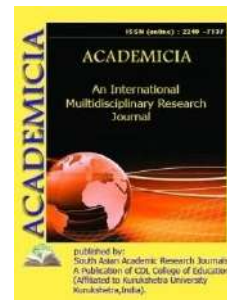
## CONCLUSION

To conclude, although the influence of communist ideology is evident in Soviet-era research and published works on the history of the Khorezm People's Soviet Republic, a recognizable feature of this research is that it was created using primary sources and important historical archival documents.

Certainly, the research and literature of this period is an important source for creating real history. Therefore, one of the main tasks before us is to study the Soviet-era literature on the abolition of the Khiva Khanate and the history of the Khorezm People's Republic without ideology or in isolation.

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## CONCEPTS OF PERSON AND RESPONSIBILITY IN ISLAM

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### ABSTRACT

*Each person, undoubtedly, is a society part. The understanding of an Islamic way contains also understanding of the person, as especially important category for reflexions. Allah speaks to us: «Truly, Allah does not cancel favor which he rendered to people while they do not change that in their souls» (Koran, 8:53). Certainly, the idea of revival and justification after death is based on the concept of personal responsibility of the person. The same it is possible to tell and concerning the concept of creation of the world.*

**KEYWORDS:** *Concept, Personality, Social Group, Individual Properties Of The Person, Development Of The Person.*

### INTRODUCTION

The concept of the person is the most complicated in human knowledge. In the European languages the word "person" goes back to Latin concept "person" that meant a mask of the actor at theatre, a social role of the person as certain complete beings, especially in legal sense. The slave was not considered as the person. Expression «to lose the face» which is in many languages means loss of the place and the status in certain hierarchy<sup>1</sup>.

To begin studying of a problem of the person it is necessary from the individual - indivisible further a particle any whole. But this original social atom, the separate person, is considered not only as the individual representative of a human race, but also as a member of any social group. It is the most simple and abstract characteristic of the person saying only that it is separated (first of all corporally) from other individuals. Much more substantially other term – is the "individuality", designating uniqueness and originality of the person in all riches of its personal qualities and properties. Schematically it looks so: person acts at first as the individual, «casual individual», then as the social individual, the personified social group (class individual) and, at

last, as the person incorporating all variety of social communications and relations [Berkovis2001:86].

## THE MAIN FINDINGS AND RESULTS

Essence of "special person», is according to K.Marks, not his beard, his blood, not his abstract physical nature, but his social qualities. But properties of the person in any way do not reduce - with I to his specific features. The more considerably the person is, the more his individual refraction is presented in general, universal characteristics. Individual properties of the person are not the same, those personal properties of the individual, i.e. the properties characterizing it as the person [Berkovis2001:86].

### 2. Formation of the person and his form

To understand these questions, it is necessary to address to a problem of genesis, an origin of personal features of the person. First of all there is a question - when the person is born, what to it promotes or interferes? It is obvious, that to the newborn child the term "person" is inapplicable, though all people are born as individuals (except for so-called Siamese twins) and as individualities, i.e. in each newborn child the unique image embodies as in a genotype, and a phenotype all its background. It can concern to congenital features of biochemical reactions, physiological parameters, readiness of a brain for perception of an external world etc. At a birth all children are not only different, but also all unique for even monoovular twins differ on a number of essential signs. Reception of a genetic copy - the double of the person - basically is possible, but will cause weight of the most complicated ethical problems.

So, newborn is already individuality, and everyday lives increases its requirement for diverse reactions to world around. Crying and shout - are unique ways accessible to it to let know about the unsatisfied requirements. But already from first days of a life, from the first feedings, special style of behavior of the child is formed, so well recognized by mother and relatives. Individuality of the child accrues to 2 - to 3-year-old age. At this particular time the first lines of personal behavior in many respects caused by are shown that the child gets to a situation of a free choice. At this age all children are extraordinary talented and inquisitive, and if associates promote development of these qualities, formation of the person goes normally[Nuriev, Yakupov 2007:140].

The further development of the person is connected with passage of other age periods and with features of development of girls and boys, girls and young men. The age, sex, a trade, a circle of contacts, an epoch - all these can form personality. On a course of life launches (as a rule, in a youth and at the age of 30 - 40 years), and stagnation (25 - 30 years, 40 - 50 years) are inevitable also. Creation of own family, a birth of children etc. become boundaries in human life a separation from a parental family[Nuriev, Yakupov 2007:141].

Formation of the person occurs in the course of socialization, i.e. mastering of experience by it and valuable orientations of the given society. The person studies to carry out social roles (to behave according to a role of the child, the student serving, the spouse, the parent etc.) . All these social roles have the expressed cultural context and, in particular, strongly depend on a thinking stereotype. If to compare the European canon of the person, say, with Japanese essential distinctions are obvious. The person is understood by Europeans as certain value which operate with similar image in different situations, keeping leading "core". For Japanese the perception of



the person and his acts as sets of several «circles of duties» are characterized - in relation to the emperor, parents, friends etc. For each sphere there is "code" of behavior. The person here is not independent and not self valued, and is realized only in connection with any generality. The European appears as «firm person», reminding egg in a shell while the Japanese is more anxious by an establishment and maintenance of communications with associates.

Formation of the person has passed in the European tradition stages of comprehension of feeling of fear and shame (an antique society), love to the God, sinfulness of the person and corporate morals (feudal world), statement of self-value of human individuality and occurrence of a phenomenon of alienation (New time).

Let's stop on structure and components of the person. We already said that are not born persons, and become as a result of long process of maturing which has the critical periods. Moreover, at a certain stage of a course of life the person can partially or lose personal lines completely. It happens at chronic alcoholics, addicts, at a heavy pathology of a brain etc. the Person is characterized by a unique combination of natural properties of the individual and the social qualities formed in this or that society. In this sense the person represents synthesis sensual and super sensual, i.e. that is not fixed by sense organs, but very really influences behavior of the person[Lobkovich 1998: 23].

First of all are allocated physical person, or «physical I». This body, or the corporal organization of the person, the steadiest component of the person based on corporal properties and feelings. The clothes and "home" can be carried to the physical person also. It is known that, how much about the person is possible to tell on these components of his world. Same concerns products of manual or intellectual work of the person - to ornaments of his life, collections, manuscripts, letters etc. Protection of the body, the identity, the nearest environment is the most ancient personal qualities of the person both in society history, and in history of the individual.

The social person develops in dialogue of people, since primary forms of dialogue of mother with the child. As a matter of fact, he grows from system of social roles of the person in the different groups which opinion he values. All forms of self-affirmation in a trade, public work, friendship, love, rivalry etc. form social structure of the person.

The spiritual person - is a kernel of ours "I". These are the inwardnesses reflecting tendency to certain cultural wealth and ideals. They can and not be realized in all completeness, but anyhow the care of "shower" is quintessence of personal development. Sooner or later each person starts to think of sense of the existence and spiritual development. Spirituality of the person is not something external; it cannot be got by formation or imitation. Frequently it is not only "holds" the person, like a core, but also is the highest blessing, the Supreme value in which name even sacrifice life. Requirement for spiritual development of the person is nonsaturated that it is impossible to tell about physical and social requirements. The history gives weight of examples of, how the intensive spiritual life (wise men, scientific, figures of the literature and art, religious devotees) was pledge not only a physical survival, but also active longevity. The people keeping the inner world, as a rule, survived and in the conditions of penal servitudes and concentration camps that has once again confirmed bitter experience of XX century.

Allocation of the physical, social and spiritual person (as well as corresponding requirements) has conditional enough character. In the person all these parties of the person form the system, each of which elements can get dominating value at different stages of life. The periods of the



strengthened care of the body, its functions, stages of expansion of enrichment of social communications, peaks of spiritual activity are known, say. It often happens that any line accepts system formed character and in many respects defines essence of the person at the given stage of its development. The age, heavy tests, illnesses, etc. can change in many respects structure of the person, lead to its original splitting or degradation.

### 3. Social types of the person

Allocate some large types of the person which are traced on all historical way of development of mankind. The first type - are figures (hunters and fishers, soldiers and handicraftsmen, farmers and industrial workers, engineers and geologists, physicians and teachers, politicians and managers etc.). For them main is an active action, change of the world and other people, including and. These people are "burn" on work, finding in it the higher satisfaction even if his fruits and are not so appreciable. Rapid development of the western civilization has led cultivated to such person - active, knowing to himself the price possessing self-respect and realizing a measure of the responsibility for, the family, people. The requirement for such persons always was strict. Still the evangelist of Luka gave of a word of the Christ: «Much is Harvest, but is not enough makers» [Stolovich 1994: 87].

The second type - are thinkers. They are people who, according to Pifagor, come to the world not to compete and trade but to look and reflect. The image of a wise man, thinker personifying traditions of a sort and his historical memory (annals), always had huge authority. Many great wise men and prophets - Buddha and Zarathustra, Moisey and Pifagor, Solomon and Lao-tsz, Confusiy and Mahavira Gin, Christ and Mohammed - or were considered as envoys of gods, or were idolised. Thinkers have the unique weapon - is a word.

The third type - people of feelings and emotions who sharply feel how «world crack» passes through their hearts. They are figures of the literature and art, whose ingenious discernments frequently advance the most courageous scientific forecasts and predictions of wise men [Stolovich 1994: 87].

The fourth type - is the people who have made with business of the life mercy. Albert Schweitzer and Feodor Petrovich Gaaz, Anri Dyunan and mother Tereza, thousand their followers in history and the present - living examples of service to people, irrespective of their race, nation, an age, sex, a condition, creed and other signs. An evangelical precept - «Love near yours as yourself» - found in their activity by a direct embodiment. Such persons feel a sincere condition of other person, as though «feel» in it, facilitating its sufferings. Their force - is in belief in the mission, in love to people and all live.

Certainly, the majority of people is combined by signs of different types of persons, and sometimes there is also a change of leading installations. Thus it is important to understand one - a choice of a personal way and a sphere of action - is result of free of the person. Therefore the person is inconceivable out of freedom, and according to Hegel, the true nature of the person is «free spirituality».

### 4. Freedom

Freedom is an ability of the person to operate according to the interests and desires. In Russian the term "freedom" is used first of all in value «freedom from», i.e. absence of external compulsion, oppression, restrictions etc. Concept "will" has wider value which was issued

approximately in XV - XVI centuries in the Moscow state. On the one hand, «manumission» at all did not mean autonomy of the person, and opposite, replaced with its authority of group that is in a sense nonfree. On the other hand, in freedom is both the desire and command of the nature, steppe, have given, that so is characteristic for perception of the world (we will recollect a Gogol bird-three). The concept of freedom was fixed in Christianity as expression of idea of equality of people before the God and possibilities for the person of a free choice on a way to the God. However realization of this idea has appeared in the contradiction with equality and justice ideals.

To understand essence of a phenomenon of a personal freedom, it is necessary to understand contradictions of voluntarism and fatalism, to define borders of necessity (law) without which freedom realization is inconceivable [Rahmatullina, Yakupov 2004; 255].

The voluntarism considers will as a human life principle, belittling thus value of reason. These ideas have been developed in Schopenhauer's philosophy was extended in XX century to Operate in the spirit of voluntarism - means, not to reckon with objective conditions of life, with nature and society laws, giving out the arbitrariness for the higher wisdom. It is a lot of such examples, including in history of our society. Many revolutionaries tested original impatience, desire to "push" a course of history and to impose it the will. But the life showed sooner or later utopianism of such attempts, for which people paid off with blood, poverty, development delay.

Fatal predetermines all courses of human life and his acts. It speaks or destiny (in mythology and language), or will of the God (in Christianity and Islam), or a determinism of the closed system where each subsequent event is rigidly connected with previous (Gobbs, Spinoza's systems, Laplasa). Here, as a matter of fact, places for a free choice does not remain, for there are no alternatives. Rigid necessity and full predictability of the basic stages of human life following from here and the main events is characteristic for an astrology and other occult doctrines of the past and the present, and also for every possible social Utopias and the anti-Utopias reflected in products by A. Platonova, J. Oruella, O. Haksli, etc.

At the same time it is obvious, that necessity ignoring (natural, historical etc.) is fraught with an arbitrariness and permissiveness, anarchy and chaos, that in general excludes freedom. Hence, freedom is something more, than the account of objective necessity and elimination of external restrictions. Internal freedom, «freedom for», freedom in a choice of true, good and beauty is much more essential. In frameworks «freedom from» the formula is quite reasonable: «everything is authorised, that is not forbidden». But as a matter of fact it is logic of the slave which has remained without the supervisor [Rahmatullina, Yakupov 2004; 255].

Thus, freedom is the most complicated and deeply inconsistent phenomenon of human life and a society, having the greatest attractiveness and being at the same time heavy burden. Knowingly in western philosophical thoughts (E. From) the phenomenon «flight from freedom», especially was analyzed if freedom realization led to inequality and injustice growth. This problem - is how to correlate freedom and equality, not leading to suppression and equalizes, - faces to each society and state. Solving it, it is necessary to be guided by this or that system of values.

## 5. Values and their kinds

The concept of values reflects the importance of those or other objective phenomena for a life of people. The valuable relation is formed in the course of human activity where allocate three kinds of manufacture: people, things and ideas.

The first (and the basic) value is the person in all variety of his life and activity. This representation has arisen not at once, there was a result enough a long evolution of public consciousness. The belief, that each person is self estimated irrespective of an age, sex, race and the nation, an origin, etc., were arisen and become stronger or in comparison of the person with the higher value (the God, Spirit), or owing to action of the general laws of life of society. So, in the Buddhism equality of people and recognition of their value occurred because all born is doomed to suffering and should overcome it and find pleasure. In Christianity value of the person is seen in possibility of expiation of sinfulness and finding of an eternal life in the Christ, and in Islam value of the person - in return of to the Allah and execution of his will [Yakupov 2004: 340].

Concept of value of the person - is universal, and it is impossible to reduce concept of value of the person to "utility" of the person for a society. Attempts to divide people on "necessary" and "unnecessary" are vicious on the essence for their realization inevitably generates an arbitrariness conducting to degradation and the person, and societies. Value of the human person in a sense above all that does or is spoken were done by person. It cannot be reduced to work or creativity, to a recognition from a society or group of people. As objective criteria (work fruits, creativity certificates), and their value judgment from contemporaries sin is homogeneity. The history repeatedly proves that the true scale and an orientation of acts and thoughts of many persons become obvious after many years, and even centuries. Value of many works of historical figures as though continuously increases; at the same time it is a lot of examples when time discredits exaggerated authorities.

There was a whole galaxy of scientists, whose contribution to a scientific-theoretical substantiation of depth of philosophy and ethics of Islam was especially great.

I will name only several: they are - SaaduddinMasud Ibn Umar at-Taftazani (722-792), Abdulla Ibn Mubarrak al-Marvazi (740-803), Imam Ahmad Ibn HafsKabirBuhariHazrati (768-832), Ishak Ibn Rahvayh al-Marvazi (785-860), Ahmad Ibn Hanbal al-Marvazi (786-863), Abu Muhammad Abdulla Ibn Abdurahman Ad DorimiSamarkandi (803-877). The most well-known, affected all development of divinity, were Imam Abu Abdulla Muhammad Ibn Ismail al-Buhari and Muhammad Ibn Ali Hakim at-Tirmizi.

All of them were the largest experts on the Sacred Koran and Sunna Prophet, began the formation with these main sources of Islam. The huge scientific huge scientific, literary, cultural and spiritually-moral heritage didn't lose the importance up to our days to what huge circulations of their books testify, exit on screens and theatrical scenes of films and performances about a life and acts of great ancestors.

Other visible collector and the keeper of hadis became **Abu Iso Muhammad at-Termizi**. Known as **al-Hakim at-Tirmizi**. Written by **at-Tirmizi** the book of hadis is considered one of authoritative in the Islamic world. **At-Tirmizi** in the products popularly explains the essence of traditions, rituals, customs, ceremonies. In the sermons and compositions, such as «Ilal ash-

Sharia» and «Hatm al-Avlija», **at-Tirmizi** argued on sense of Muslim ceremonies, about «love to the God», about categories of mystics, about «press sacred», existing along with «the press of prophets

**Al-Buhari** has written more than 20 products. This original work has been made with classification of hadis on plots. For the past since then more than 12 centuries the collection of al-Buhari is for Moslems the theological work second for the importance after the Koran. It was republished time and again, and translated on many languages of the world[Uvatov 1998: 42].

Some words about **Hodzhe Ahmad Yasavi** - is one of the first sufiy mystics in turkik in the world. He wrote on hakani - the Turkic literary language, developed at a court yard of karahanid, and was the author of a cycle of verses «Divan of hikmat».

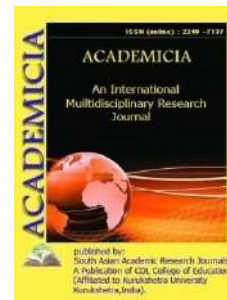
## CONCLUSION

Thus, it is possible to draw a conclusion, that the fertile earth Maverannahr gave to the world the whole galaxy of scientists and thinkers which the natural-science, logic, religious-philosophical researches and searches included big contribution to world civilization development. Practically all cities and villages of this edge became famous owing to the sons of Khoresm, Samarkand, Bukhara, Nasaf, Tashkent, Fergana, Margelan, Termez, Shahrisabz and other places. They caused stir in spheres of science, poetry and music, culture, theology, medicine, military science, architecture.

Thus, the concept of the person, freedom, values enriches and expands our representation about the person, his past, present and future.

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## STUDY OF ANTIOXIDANT AND ANTIRADICAL ACTIVITIES OF EUFORBIN (EUPHORBIA FERGANENSIS B.FEDTCH) POLYPHENOL

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### ABSTRACT

*The experiment was studied the antioxidant the activity of polyphenol Euforbin getesan in isolated mitochondria. Discovered getesan inhibitory effect on the  $Fe^{2+}$ /acrobate-dependent swelling of mitochondria and lipid per oxidation decrease on mitochondria. It was established getasan has antioxidant activity and has protective effect on mitochondrial membranes.*

**KEYWORDS:** Antioxidant, Antiradically, Membrane Activity, Euforbin Polyphenol, In Vitro Experiments,  $Fe^{2+}$ /Ascorbate, MDA, Mitochondria

### 1. INTRODUCTION

One of the current problems of today is the search for substances that have effective pharmacological activity on the basis of native plants that exhibit antioxidant, antihypoxanthic and antiradical properties [2;3]. Research to identify the medicinal properties of plant extracts and their application in clinical trials requires direct molecular research in tissue and cell physiology [3,4,5].

Recent research in the field of pharmacology has shown that polyphenols can effectively control tissue and cell dysfunction in various pathophysiological states, have different mechanisms of

action and have higher pharmacological activity than other plant biologically active substances (alkaloids, diterpenoids, flavonoids) [1; 2]. Studies have shown that polyphenols are natural substances with a wide range of membrane activity, antioxidant, antihypoxanthic, hepatoprotective, cardioprotective, immunomodulatory, and membranefree effects [2,3,4].

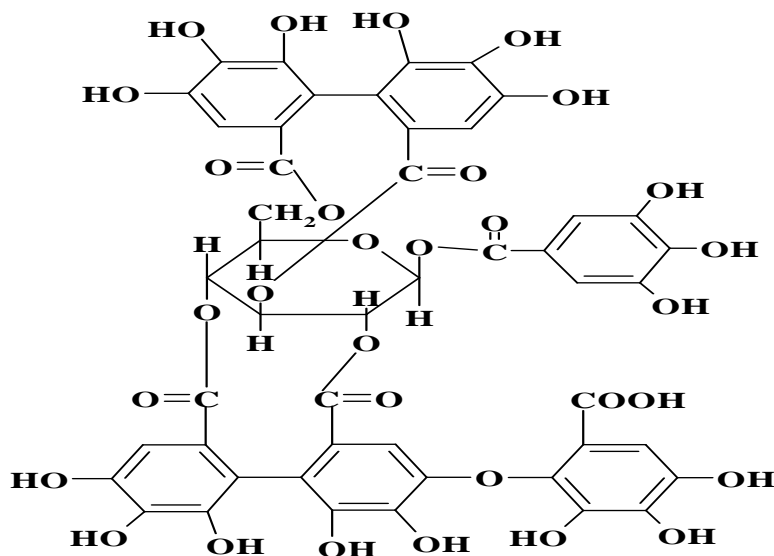
Polyphenols are involved in metabolic processes in the body, exhibit membrane activity and antioxidant properties at the expense of OH groups, and low levels of toxicity can lead to a number of problems in medicine, food, cosmetics, pharmaceuticals and manufacturing [2,4].

Therefore, it is necessary to study the mechanism of action of polyphenols at the tissue and cellular levels, and to determine their pharmacological properties, and the advances will help to keep the genome of the population healthy and healthy. The results will lead to promising advances in pharmacology, medicine, physiology, and biophysics [4,9,10].

**Purpose of the study:** Study and pharmacological evaluation of antioxidant and antiradically properties of Euforbin polyphenol in vitro experiments.

## METHODOLOGY

In carrying out this work, presented by the Institute of Bioorganic Chemistry of the Academy of Sciences of the Republic of Uzbekistan: *Euphorbia ferganensis* B. Fedtch (Drying) (1-O-galloil-2,4-valoneil-3,6-hygsahydroxydifenol- $\beta$ -D-glucose pharmacological properties of glucose) polyphenol have been investigated.



( $C_{20}H_{19}NO_5$ )

M.m = 1104

**Figure 1. Chemical structure formula of Euforbin polyphenol**

**The antioxidant activity of Euforbin polyphenol** was evaluated in the context of the effect of hepatic mitochondria on lipid peroxide oxidation process in non-white white rats with a body mass of 120–140 g. Mx was isolated from the liver of rats by differential centrifugation [15]. Dissociation medium (DM): 250 mM sucrose, 10 mM trisHCL, 1 mM EDTA, pH 7.4.



### Determination of lipid peroxide oxidation products in mitochondria

LPO products were studied in the presence of thiobarbiturate acid (TBA). The reaction was stopped by adding 0.220 ml of 70% trichloric acid to DM. After this phase, the mitochondria suspension was centrifuged at 4,000-minute intervals for 15 minutes. Then, 2 ml of precipitate was removed and 1 ml of 75% TBA was poured. 2 ml of H<sub>2</sub>O and 1 ml of TBA were added to the control test tube. The mixture was incubated for 30 minutes in a water bath. After cooling, a change in optical density at a wavelength of 540 nm was detected. In calculating MDA, extraction with the molar coefficient ( $\epsilon=1,56 \times 10^5 \text{ M}^{-1} \text{ cm}^{-1}$ ) was used:  $\text{nmol MDA} / \text{mg protein} = D / 1,56 \times 30$ .

The amount of protein in the mitochondria was calorimetrically determined by the Biuret method. Cattle whey album was used as the standard.

$\text{Fe}^{2+}$  / ascorbate system was also used to study the LPO process in the mitochondria membrane. Under the influence of this system, the mitochondrial membrane loses its barrier function, resulting in an increase in organelle volume and a loss of mitochondria. This volume change was determined by photometric change in optical density at 540 nm wavelength in 3 ml cells. DM: KCl - 125 mM, trisHCl - 10mM, (pH 7.4); Concentrations:  $\text{FeSO}_4$  - 10  $\mu\text{M}$ , ascorbate - 600  $\mu\text{M}$ ; the amount of mitochondria is 0.5 mg / ml [5].

**The antiradical anti-hypoxanthic activity of Euforbin polyphenol** have been investigated by the use of an antioxidant base as well as 2,2-diphenyl-1-picrylhydrazyl (DFPG) molecular regeneration.

### Statistical processing of the obtained results

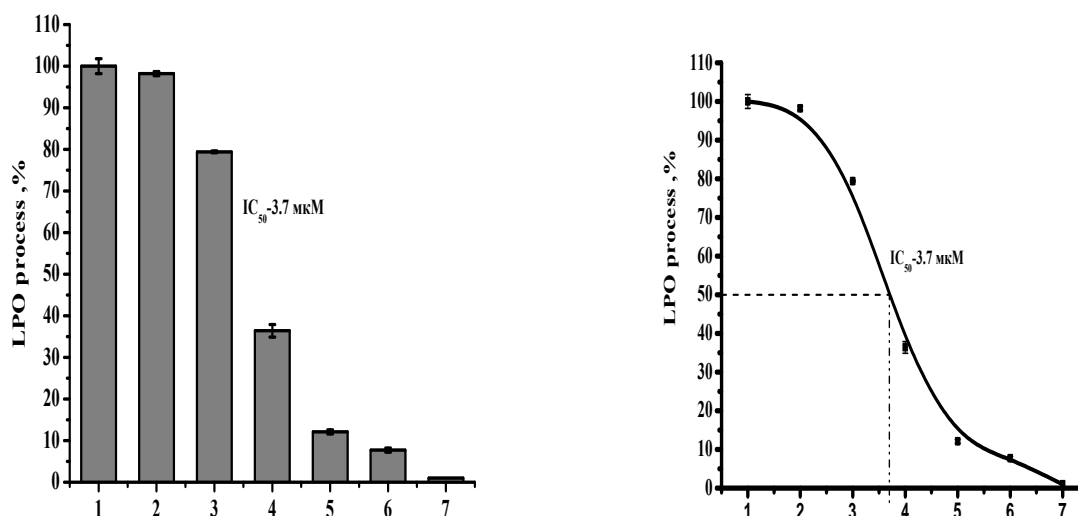
Statistical processing of images and drawing was performed using OriginPro 7.0 (Microsoft, USA), computer programs. The experiments were performed as a calculation of the arithmetic mean of 3–8 different experiments of the liver. The difference between control and experiment values was calculated by t-test. Whereas  $P < 0.05$  and  $P < 0.01$  represent statistical reliability.

## RESULT AND DISCUSSION

The role of mitochondria in cell physiology is a specific “target” for the study of pharmacological agents that have antioxidant effects [8,9,10,11,12]. Dysfunctional changes in mitochondria are first observed in the etiology of various pathologies [12,13,14]. These changes are explained by the qualitative and quantitative changes of lipids in the structure of the membrane of the Mx, the disruption of the membrane permeability to the ions, and the permeabilization of the membrane [14,15]. Several external (pesticides, herbicides, alcohol, chemical reagents) [14,15] and the accumulation of internal (free radicals in the cell, high concentrations of H<sub>2</sub>O<sub>2</sub> and Ca<sup>2+</sup> ions in the mitochondrial matrix), which accelerates the process of peroxide oxidation of lipids in mitochondria and causes cellular antioxidant systems to degenerate [12,14,15]. Antioxidant drugs improve the physiological and functional system of the cell, increasing the stability of damaged cells and mitochondria membranes.

The antioxidant property of Euforbin polyphenol was assessed by investigating the process of peroxide oxidation of lipids resulting from the induction of rat liver mitochondria under the effect of  $\text{Fe}^{2+}$  / ascorbate [5].

In the experiments, the addition of 10  $\mu\text{M}$   $\text{FeSO}_4$  and 600  $\mu\text{M}$  ascorbate to the incubation medium had an inducible effect on the mitochondrial membrane structure, resulting in permeable membrane permeability. Under these conditions, membrane permeability increased by  $45.3 \pm 1.76\%$  as a result of structural disturbance of the Mx membrane. In the experiments, the Mx membrane permeability values were calculated and were 100%. Increased membrane permeability under  $\text{Fe}^{2+}$  / ascorbate evidence indicates that the LPO process is formed in Mx.



(Concentrations Euforbin)

1- control; 2-1  $\mu\text{M}$ , 3-3  $\mu\text{M}$ , 4-5  $\mu\text{M}$ ,  
5-6  $\mu\text{M}$ , 6-8  $\mu\text{M}$ , 7- 10  $\mu\text{M}$

**Figure 1. Effect of Euforbin polyphenol on the peroxide oxidation of lipids in mitochondria.**

Note: The research conditions are listed in the Materials and Methods section. The peroxide oxidation process of lipids in the mitochondria is expressed in% of the ordinate axis, and the absorption axis shows the concentrations of euphorbia polyphenols. (\* -  $P < 0.05$ ;  $n = 8$ ).

In subsequent experiments, the correction effect of Euforbin polyphenol on LPO was analyzed. Adding 1  $\mu\text{M}$  of Euforbin together with  $\text{Fe}^{2+}$  / ascorbate to the incubation medium reduced the peroxide oxidation process of lipids in Mx by  $2.0\% \pm 1.2$ . This is the first indication that Euforbin polyphenol has antioxidant properties.

The antioxidant effects of Euforbin have been studied in greater detail by increasing the concentrations added to the incubation medium. 3  $\mu\text{M}$  of Euforbin added to the medium inhibited the LPO process at Mx by  $20.6\% \pm 1.2$ , 5  $\mu\text{M}$  by  $63.6\% \pm 1.5$ , with 6  $\mu\text{M}$  by  $87.9\% \pm 0.5$ , and  $92.3\% \pm 0.5$  by 8  $\mu\text{M}$ . Euforbin at 10  $\mu\text{M}$  showed a high antioxidant property by inhibiting the LPO process in Mx to 100%. In the experiments, the half-maximum inhibitory concentration of Euforbin (IS<sub>50</sub>) was 3.72  $\mu\text{M}$ .

The study of the activity of the studied substance to determine the antioxidant effect is fully covered by the study of the amount of MDA produced by the LPO process. Because, under pathophysiological conditions, the main disorders in tissues and cellular antioxidant systems are the degree of qualitative and quantitative changes of lipids by the process of production of LPO products (MDA). In addition to enhancing the membrane stability of the anti-oxidant pharmacological agent Mx, it is also essential to prevent MDA secretion from the LPO process. Only then, the antioxidant activity of the investigated substance is fully covered [Oliveira et al., 2015, Nakagawa et al., 2000].

In our experiments, MDA release in the LPO induced by  $\text{Fe}^{2+}$  / ascorbate effect (control group) was  $3.52 \pm 0.18$  3.2 nmol / mg of protein (Tabl.1.).

**TABLE 1 EFFECTS OF EUFORBIN POLYPHENOL ON THE ACCUMULATION OF MDA IN LPO INDUCED BY  $\text{Fe}^{2+}$  / ASCORBATE EFFECT ON RAT LIVER MITOCHONDRIA**

Experience groups	MDA nmol/mg protein $P = \text{Fe}^{2+} / \text{asc.} + \text{euforbin}$	(IC <sub>50</sub> ) (mM)
control	0,10±0,02	-
$\text{Fe}^{2+}$ /aascorbate	3,52±0,18	-
$\text{Fe}^{2+}$ /asc. + Euforbin 1 µM	3,25±0,03**	15,1 mM
$\text{Fe}^{2+}$ /asc. + Euforbin 5 µM	2,98±0,03**	
$\text{Fe}^{2+}$ /asc. + Euforbin 10 µM	2,10±0,05***	
$\text{Fe}^{2+}$ /asc. + Euforbin 15 µM	1,80±0,02***	
$\text{Fe}^{2+}$ /asc. + Euforbin 20 µM	0,70±0,03***	
$\text{Fe}^{2+}$ /asc. + Euforbin 25 µM	0,46±0,03***	

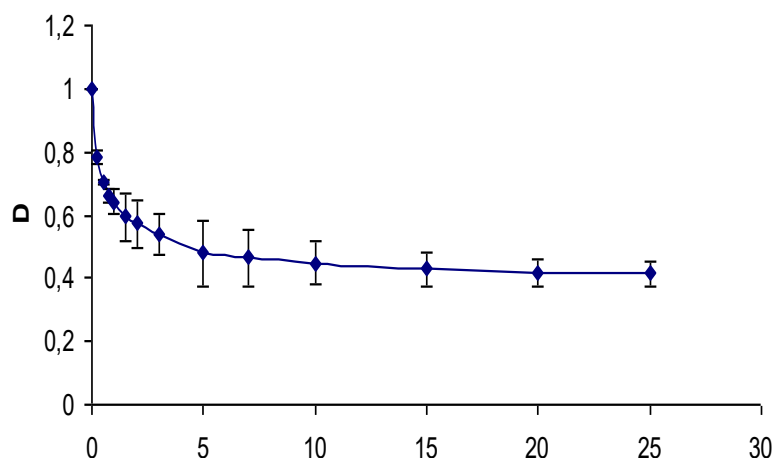
(DM: KCl - 125 mM, trisHCl - 10mM, pH 7.4; Concentrations:  $\text{FeSO}_4$  - 10 µM, ascorbate - 600 µM; mitochondria protein 0.5mg / ml; control -  $\text{Fe}^{2+}$  / ascorbate;

\*\* R <0.01; \*\*\* P <0.001; n = 5).

Adding 1 µM and 5 µM concentration of Euforbin in the incubation medium did not significantly affect the accumulation of MDA in the membrane. The major quantitative change in the MDA decay occurred at a concentration of 20 µM of Euforbin. Under the effect of 5 µM of Euforbin, the MDA in the membrane was 2.98 nmol/ mg of protein, 2.1 nmol/mg of protein at 15 µM, and 1.8 and 0.7 nmol / mg of protein at 15 and 20 µM, respectively. In this experiment, the highest inhibitory concentration of Euforbin was 25 and the MDA content was 0.46 nmol/mg of protein (Tabl.1.).

The results of the experiments prove that Euforbin is a pharmacological agent with high antioxidant properties. MDA inhibited the decomposition process by preventing the increased LPO process induced by Euforbin  $\text{Fe}^{2+}$  / ascorbate action.

The literature also shows that antioxidants simultaneously exhibit anti-oxidant properties. The antiradical properties of antioxidants are characterized by their chelating of various metal ions and their free oxygen-absorbing properties. In our experiments, the antiradical effect of Euforbin was achieved by the application of 2,2-diphenyl-1-picrylhydrazyl (DFPG), an antioxidant-based molecule [4].



**Euforbin 10 мкМ**

**Figure 4. Effect of Euforbin polyphenol on free radicals.**

Note: The rate of reaction of Euforbin polyphenol with DPPH on the Ordinate axis, and the absorption axis time is -  $t_{50}$  .

The results of the kinetics of changing the optical density of the solution by adding Euforbin to the DPPH solution are shown in the figure below (Figure 2).

Continuation of the reaction process directly showed that the molecular deceleration process slowed down. The summarizing formula for the DPPH binding process of Euforbin polyphenol was calculated as follows:

$$-\frac{dC_{DPPH}}{dt} = k1_{eff} C_{DPPH} + k2_{eff} C_{DPPH}^2$$

The results obtained are based on the regression curves, and  $k1_{eff}$  and  $k2_{eff}$  are calculated as a result of the solution of the above formula. The accuracy of the results is  $10^{-4}$ , which allows comparing the antiradical properties of  $k1_{eff}$  and  $k2_{eff}$  Euforbin (Table 2).

**Table 2.**

**Expression of activity  $k1_{eff}$  and  $k2_{eff}$  constant calculated on the basis of regression curves**

The reaction constant of primary and secondary order	Euforbin
$k1_{eff} (\text{мин}^{-1}) 10^{-4}$	3,53
$k2_{eff} (\text{M}^{-1} \cdot \text{мин}^{-1})$	0.74

At the end of the study, we examined the correlation coefficients of the interaction of Euforbin polyphenol with antioxidant and antiradical properties. The results obtained and their statistical

treatment were consistent with the antioxidant and antioxidant properties of Euforbin, indicating that this ratio was equivalent to  $r = 0.82\%$  in the effect of Euforbin.

## CONCLUSION

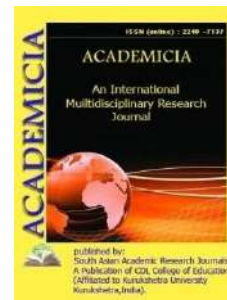
The results of the study prove that Euforbin is a medicinal compound with high antioxidant, anti-radical and anti-hypoxic effects. The properties of Euforbin suggest that it is a highly pharmacological, effective drug such as quercetin. The obtained results can be used for the creation of a new generation of medicines with Euforbin based targeting membrane-containing, antioxidant, antioxidant properties, and indepth study of the mechanisms of sub molecular action of polyphenols compounds. The kinetic changes of the curves shown in the figures show that the DFPG molecules account for the first 5 minutes of the reaction process, with the bulk of.

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## **A STUDY REGARDING RELATIONS B/W PARENTAL INVOLVEMENT AND STUDENTS' ACHIEVEMENT IN MATHEMATICS , SCIENCE IN BATTICALOA, SRI LANKA**

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### **ABSTRACTS**

*This study investigated how were correlates with the parental involvement and the achievement of students in the urban and semi-urban type 2 schools in mathematics and science. The descriptive survey research design was employed to carry out this study. One hundred and ninety two (192) students from 16 type 2 schools in Batticaloa educational zone, Sri Lanka were stratified randomly selected for this study. The type 2 school was selected for maintaining the homogenous values. From the results of this study, parental involvement accounts for 26.1 % of the total variance in mathematics achievement of secondary schools ( $R^2 = 0.261$ ;  $p < 0.05$ ) and 19.4 % of the total variance in science achievement of secondary schools ( $R^2 = 0.194$ ;  $p < 0.05$ ). These percentages are significant at 0.05 level of confidence. It shows that parental involvement is an important predictor of mathematics and science achievement. There exists a significant difference in the parental involvement of urban and semi-urban type 2 school students ( $t = -8.12$ ;  $p < 0.05$ ). Urban school students enjoy more parental involvement than their counterparts in the semi-urban school students. It shows that there is a correlation between parental involvement and male, female students in type 2 schools ( $t = -7.34$ ;  $p < 0.05$ ), and also there is a significant difference in the academic achievement of male and female students in mathematics and science ( $t = -0.432$  and,  $-0.512$  respectively ;  $p < 0.05$  ). It also shows the finding reports that, there is a significant difference in the academic achievement of mathematics and science with urban, semi-urban schools students ( $t = -9.142$  and,  $-8.314$  respectively;  $p < 0.05$ ). Teachers and*

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*Counselors need to enlighten parents on the need to personality get involved in the academic activities of their children.*

**KEYWORDS:** *Parental Involvement, Type 2 School, Mathematics And Science Achievement, Teacher, Students, Urban And Semi-Urban School.*

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## INTRODUCTION

The term 'Parental involvement' includes several different forms of participation in education and with schools. Parents can support their children's schooling by attending school functions and responding to school obligations like parent-teacher conferences. They can become more involved in helping their children improve their schoolwork by providing encouragement, arranging for appropriate study time and space, modeling desired behavior (such as reading for pleasure), monitoring homework and activity tutoring their children at home. Outside the home, parents can serve as advocates for the school. They can volunteer to help out with school activities or work in the classroom or they can take an active role in governance and decision-making necessary for planning, developing and providing an education for the community's children.

Alebiosu saw science education as the tool used to achieve scientific literacy which is the gateway to achieve scientific and technological advancement and economic survival. She further pointed out that the place of science in the improvement of the social, economic and political life of mankind justified its inclusion in the curricula of schools. Mathematics in itself is identified as a specialized language in which knowledge of the physical world has been recorded; a language in which idea originating in the minds of scientists can be encoded, transmitted to others and decoded with a much exact method and much less error (Oyedeji, 1999). Olutusin described mathematics as an instrument to ease or facilitate the learning of other subjects and that today, the importance of mathematics permeate all aspects of human endeavour.

## REVIEW OF LITERATURE

Parental Influence can make a substantial difference in encouraging or discouraging young women to pursue mathematics related majors and careers. Studying factors that influence the selection of quantitative fields, Ethington and Wolfr (1987) found that while parents encouraged academic performance in general, they tended to discourage daughters from entering quantitative majors in college. Luchins (1979) reported that more women mathematicians recalled being discouraged by family and friends. However, high mathematics achieving women and women who chose non stereotyped careers were strongly influenced by parental, teacher, and counselor support and encouragement (Franklin and Wong, 1987; Kingdon and Sedlacek. 1982). Differential treatment by parents in their children's enrollment in advanced mathematics courses can also be found in children from underrepresented groups. Parental education level in and attitude towards mathematics could also be reasons for the racial difference in enrollment in mathematics courses and performance on mathematics tasks.

Parsons et al.(1982) studied whether parents had sex-differentiated perceptions of their children's mathematics aptitudes. The results revealed that both mothers and fathers held sex-differentiated perceptions of their children's mathematics aptitude despite the similarity of actual mathematics performance of boys and girls. Parents' perceptions of mathematics ability favored sons rather

than the daughters; similar finding were also reported by Andrews (1989). Researchers found that parents could engage in their children's education in various ways (Eccles and Harold, 1993; Edwards and Young 1992). Ho and Willms (1996) used eighth-grade student data from the NELS to investigate the effects of parental influence on eighth-grade achievement. By controlling for the family structure variables, the authors concluded that "it was involvement at home; particularity in discussing school activities and helping students plan their programme, that had the strongest relationship to academic achievement".

In Ho's and Willms'(1996) study of the effects of parental influence on eighth grade achievement, it was found that parents' participation in school events had a moderate relationship with students' reading achievement but a negligible relationship with science achievement. Ma's study (1999) indicated that this type of parental influence, especially volunteer work for school, had sustaining and important effects on student achievement through early grades(eight to ten) of high school. Ascher (1988) stated, "the more parents participate in a sustained way at every level in advocacy, decision making and oversight roles, as fund raisers and boosters, as volunteers and paraprofessionals, and as home tutors the better for student achievement". A number of researchers also emphasized the positive effects of parental supervision at home on a range of educational outcomes (Astone and McLanahan, 1991; Fehrmann, Keith and Reimers, 1987). Home supervision includes such things as parents' structuring children's time for homework, modeling children's learning, encouraging children to read at home, and limiting the time children watch television (Christenson et al., 1992). Edwards and Young (1992) summarized various studies on parental involvement and concluded that students achieved higher when parents monitored children's homework.

Epstein(1995) and Gianzero(2001) reported that family practices of involvement are as or more important than family background variables in determining whether and how students' progress and succeed in school. Henderson and Beria (1997) and Gianzero (2001) asserted that when schools work together with families to support learning, children tend to succeed not just in school, but throughout life. Research shows that parental involvement in their children's learning positively affects the child's academic performance (Fan and Chen, 2001). Olatoye and Ogunkola (2008) reported there is no significant difference between how parents are involved in their sons' and daughters' academic progress. There is also a strong positive relationship between parental involvement and academic achievement.

Experts in the field agree about the importance of linkages between families and schools, however, researchers in developed countries should now begin to emphasize the need for more rigorous study to help educators predict the precise outcomes of implementing particular strategies for involving families in children's education. In developing countries, studies on parental involvement are few; many research reports on this area continue to come from developed countries(Jeynes, 2005) argued that there are still questions that the individual studies on parental involvement cannot answer because of narrow focus that they had addressed. This study therefore attempted to examine the probable influence of parental involvement on students' achievement especially in mathematics and science in the secondary schools in Batticaloa educational zone, Sri Lanka.

### **Research Hypothesis**

Thus, the study was guided by the following research hypotheses;

1.  $H_0$ : Parental involvement will not significantly influence students' achievement in mathematics.
2.  $H_0$ : Parental involvement will not significantly influence students' achievement in science.
3.  $H_0$ : There is no significant difference in the parental involvement of students in urban and semi-urban school.
4.  $H_0$ : There is no significant difference in the parental involvement of students of male and female students.
5.  $H_0$ : There is no significant difference in the academic achievement of male and female students in mathematics.
6.  $H_0$ : There is no significant difference in the academic achievement of male and female students in science.
7.  $H_0$ : There is no significant difference in urban and semi-urban school students' achievement in mathematics.
8.  $H_0$ : There is no significant difference in urban and semi-urban school students' achievement in science.

## METHODOLOGY

The descriptive survey research design was employed to carry out this study. Since the aim of the investigators was to record, analyze and interpret the existing conditions between the non-manipulated variables, hence the choice of the research design. This design also accommodates generalization of the findings of the study upon the whole population from which only a representative portion was actually studied.

The target population for the study comprised all the students in junior secondary students in grade 9 in Batticaloa educational zone. This zone is one of the 14 zones in eastern province in Sri Lanka. It has cultural and educational similarities with the other zone in the eastern province of Sri Lanka. The school in Batticaloa zone was stratified into urban and semi-urban schools. A stratified random sample of 192 students from 16 type 2 schools (8 urban and 8 semi-urban schools were used) was selected for this study. A random sample procedure was used to select urban and semi-urban type 2 school from the list of schools in the Batticaloa zone. Equal number of urban and semi-urban schools was chosen. From each of these selected schools, 12 students were randomly selected to make a total of 192 respondents that constituted the sample for this study. The average age of the students is 14.2. (Early adolescent). The schools situated in area served by urban and town councils were considered urban school while those situated in area served by Piradesasaba were considered semi-urban school.

Two instruments were used to collect data for this study,

- i. Self-designed questionnaire named Parental Involvement Questionnaire (PIQ) – It was made up of two sections, with section A comprising of 08 items designed to find out some personal information such as sex and school type while section B comprised of 12 items based on the issues raised in the background to the study. The respondents are to choose either Yes or No on each items. This was considered appropriate because of the age, level of education and maturity of the respondents, being junior secondary school students. The investigator and his assistant helped the respondents in interpreting the items and ticking their chosen responses.
- ii. Achievement Performance Test (APT) - The investigator take junior secondary level for find out the achievement of mathematics and science subject. In this study focus on achievement

of mathematics and science subject in secondary school students. The achievement of students was assessed on the subject by they obtained at the mid-year examination marks held in July 2012.

The content validity of the questionnaire and performance tests was ensured through experts' suggestions and guidance. Experts in questionnaire construction and mathematics and science teachers assisted in critiquing the items on the instruments. Correction was made on the items of the instruments based on suggestions of experts. The test-retest reliability yielded 0.78 and 0.71 coefficient of correlation (R) for PIQ and APT respectively.

### Data Analysis, Results and Discussion

The data collected with the above described instruments were analyzed using Regression, t-test and Pearson Product Moment Correlation statistics. All null hypotheses were tested at 0.05 level of confidence using a two-tailed test.

**1. Research Hypothesis  $H_0$  – Parental involvement will not significantly influence students' achievement in mathematics:** Table 1 shows that parental involvement accounts for 26.1% of the total variance in mathematics achievement of secondary school students ( $R^2 = 0.261$ ;  $p < 0.05$ ). This percentage is significant at 0.05 level of confidence. It shows that parental involvement is an important predictor of mathematics achievement. However, the results also reveal the fact that there are other factors contributing to students' mathematics achievement other than parental involvement which may account for the remaining variance in science achievement.

**TABLE 1: INFLUENCE ON PARENTAL INVOLVEMENT ON MATHEMATICS ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS.**

R= 0.511 ; $R^2 = 0.261$						
	Sum of squares	Df	Mean square	F	Significant	Remarks
Regression	198.125	1	198.127			Significant ( $p < 0.05$ )
Residual	4126.329	190	12.457	24.456	0.000	
Total	4896.126	191				

**2. Research Hypothesis  $H_0$  – Parental involvement will not significantly influence students' achievement in science:** Table 2 shows parental involvement account for 19.4 % of the total variance in students' achievement in science ( $R^2 = 0.194$ ;  $p < 0.05$ ). This percentage is statistically significant. Although it is obvious from these results that there exist other factors that determine achievement in science apart from parental involvement. Nevertheless, parental involvement is an important predictor of achievement in science, according to the findings of this study. Thus, to enhance achievement in science, greater parental involvement in their children's' academic activities should be encouraged.

**TABLE 2: INFLUENCE OF PARENTAL INVOLVEMENT ON SCIENCE ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS**

R =0.441 ; $R^2 = 0.194$						
	Sum of square	Df	Mean square	F	Significant	Remarks
Regression	186.415	1	186.415			Significant ( $p < 0.05$ )
Residual	2428.314	190	9.458	22.159	0.000	
Total	2841.984	191				



**3. Research Hypothesis  $H_0$  – There is no significant difference in the parental involvement of students in urban and semi-urban schools :** The results presented in Table 3 shows that there exist a significant difference in the parental involvement of urban and semi-urban secondary school students (  $t = - 8.12$  ;  $p < 0.05$  ). This suggests that urban school students enjoy more parental involvement than their counterparts in the semi-urban schools. Therefore, the null hypothesis that there is no significant difference in the parental involvement of urban and semi-urban school students is rejected.

**TABLE 3: COMPARISON OF URBAN AND SEMI-URBAN SCHOOL STUDENTS' PARENTAL INVOLVEMENT**

School Type	N	Mean	Standard deviation	Df	t	significant	Remarks
Urban	96	7.458	2.384	190	- 8.12	0.000	Significant ( $p < 0.05$ )
Semi-urban	96	8.346	3.436				

**4. Research Hypothesis  $H_0$  – There is no significant difference in the parental involvement of male and female students:** There is a significant difference in the parental involvement of male and female students (  $t = - 7.34$  ;  $p < 0.05$  ). Male students seemed to be enjoying greater parental involvement in their academic activities than their female counterparts. The null hypothesis is therefore rejected in Table 4.

**TABLE 4 : COMPARISON OF MALE AND FEMALE STUDENTS' PARENTAL INVOLVEMENT**

Gender	N	Mean	Standard deviation	Df	t	significant	Remarks
Male	96	8.345	3.456	190	- 7.34	0.000	Significant ( $p < 0.05$ )
Female	96	9.489	2.945				

**5. Research Hypothesis  $H_0$  – There is no significant difference in the academic achievement of male and female secondary school students in mathematics:** The results in the Table 5 indicate that there is no significant difference in the achievement of male and female secondary school students in mathematics (  $t = - 0.432$  ;  $p < 0.05$  ). The hypothesis is therefore not rejected.

**TABLE 5 : COMPARISON OF MALE AND FEMALE STUDENTS' ACHIEVEMENT IN MATHEMATICS**

Gender	N	Mean	Standard deviation	Df	t	significant	Remarks
Male	96	6.321	3.145	190	-0.432	0.651	Not Significant ( $p < 0.05$ )
Female	96	7.452	4.239				

**6. Research Hypothesis  $H_0$  - There is no significant difference in the academic achievement of male and female students in science :** From the results presented in Table 6, it can be deducted that there is no significant difference in the academic achievement of male and female secondary school students in science (  $t = 0.512$  ;  $p < 0.05$  ). The hypothesis is therefore not rejected.



**TABLE 6 : COMPARISON OF MALE AND FEMALE STUDENTS' ACHIEVEMENT IN SCIENCE**

Gender	N	Mean	Standard deviation	Df	t	significant	Remarks
Male	96	6.321	3.241	190	-0.512	0.514	Not Significant ( p < 0.05)
Female	96	7.459	4.012				

**7. Research Hypothesis  $H_0$  - There is no significant difference in the performance of students in urban and semi-urban secondary schools in mathematics :** From the results of the hypothesis 7 presented in Table 7, it was revealed that there exist a significant difference in the mathematics achievement of urban and semi-urban secondary school students (  $t = -9.142$  ;  $p < 0.05$  ). Urban school students performed better than their semi-urban school counterpart in mathematics. The hypothesis that there is no difference in the achievement of urban and semi-urban school students in mathematics is therefore rejected.

**TABLE 7 : COMPARISON OF URBAN AND SEMI-URBAN STUDENTS' ACHIEVEMENT IN MATHEMATICS**

Gender	N	Mean	Standard deviation	Df	t	significant	Remarks
Urban	96	6.412	3.214	190	-9.142	0.000	Significant ( p < 0.05)
Semi-urban	96	9.314	5.172				

**8. Research Hypothesis  $H_0$  - There is no significant difference in the performance of students in urban and semi-urban secondary schools in science :** The results of the test made in hypothesis 8 as presented in Table 8 shows that there is a significant difference in the performance of urban and semi-urban school students in science (  $t = -8.314$  ;  $p < 0.05$  ). Urban school student performed better than their semi-urban school counterpart in science. The hypothesis that there is no significant difference is therefore rejected.

**TABLE 8 : COMPARISON OF URBAN AND SEMI-URBAN STUDENTS' ACHIEVEMENT IN SCIENCE**

Gender	N	Mean	Standard deviation	Df	t	significant	Remarks
Urban	96	4.841	2.912	190	-8.314	0.000	Significant ( p < 0.05)
Semi-urban	96	6.319	3.148				

Cotton and Wiklund (1989) asked the question; “Does parent involvement have positive effects on students’ achievement?” In answer to that question they found that all the research documents they selected to reflect on the effects of parental involvement on students’ academic achievement and other student outcomes overwhelmingly demonstrate that parents’ involvement in children’s learning is positively related to achievement in all subjects and for all types and ages of students. The findings in this study agree with Cotton and Wiklund that parental involvement significantly influences mathematics achievement of secondary school students. The shows that if parents can be involved more with their wards’ academic activities especially in mathematics

and science, the ordeal of mass failure in mathematics will become a thing of the past as the interest of the students may be awakened in the subject through motivation and encouragement by their own parents.

It was also discovered in this study that parental involvement is an important predictor of students' achievement in science. This coincides with the finding of Olatoye and Ogunkola (2008) that parental involvements have significant influence on science achievement which invariably indicates that parental involvement is an important predictor of science achievement. Also, according to Olatoye and Ogunkola, this finding corroborated many research studies such as Hixon (2006) and Epstein (1995) who also found that parental involvement could help improve student achievement in school. Cotton and Wikelund (1989) found that the more active forms of parent involvement produce greater achievement benefits than the mere passive ones, that is, if parents receive phone call, read and sign written communications from the school and perhaps attend and listen during parent-teacher meeting, greater achievement benefits accrue than would be the case with no parent involvement at all. They continued that considerably greater achievement benefits are noted when parent involvement is active. When parents work with their children at home, attend and activity support school activities or even help out in classroom or field trips and so on.

Parental involvement when correlated with students' in mathematics and science yield positive and significant correlation revealing how important parental involvement is to achievement of students in these core school subjects. It was discovered in this study that parental involvement in urban and semi-urban schools varies and parents of students in semi-urban schools are more involved in their ward's schooling than parents of students in urban schools. This is probably due to variations in the facilities committed to children's learning since semi-urban schools are difficult while urban school is about good facilities compared with the semi-urban schools. The variations may also be explained by the likely differences in parent educational qualifications or socio-economic status. The difference may also be in the level or types of parental involvement, whichever the case; urban school students' parents should be more alive to their responsibilities.

Parental involvements of male and female students were compared and it was discovered that male students enjoy more of parental involvement than the female students. Conway (2008) on the other hand concluded that parents are more involved with their daughter than sons. This finding contradicted that of Olatoye and Ogunkola (2008) who found that parental involvement for male and female students does not differ in anyway, but in agreement with that of Paulson (1994) who reported that parental involvement predicted academic achievement for boys not for girls.

However, gender was found to have no impact at all on mathematics achievement as both male and female students performed well alike in mathematics and science. Olatoye and Ogunkola (2008) also found no significant in male and female students achievement in science. This opposes the findings of Gorman (2006) that there is a significant difference in favor of male students. This suggests that if care is taken to make the home environment conducive for learning, both male and female students will overcome the scholastic malfunction of this present age. It was discovered that urban school students were lagging behind in their performance in mathematics and science when they were compared with those in semi-urban schools. This finding is supported by Olatoye (2002) and Ogbonna (2007).

## CONCLUSION AND RECOMMENDATION

Overtime, educators have frequently pointed out the critical role of the home and family environment in determining school success and that earlier in a child's educational process parental involvement begins, the more powerful the effects will be. Parents and other sibling in the family should seize and harness the influence of involvement to set their wards in motion in order to facilitate better and higher achievement in their school subjects. No one is more than parents in sending signals to their ward on the importance of reading and education through their own examples, assistance and involvement. Parents should not just send their wards to school as a way of getting them free from their aprons for the period while they are away, rather they should see going to school as a way of building the lives of the children and their future too.

Parents should therefore devise means by which they would be involved in the academic activities of their children. There are different types and levels of parental involvement, individual parents and families should start from somewhere and get involved. End should come to era where all a parent does is to supply the needs to keep their children in school, parents should visit schools, involve themselves with school (as much as they can afford) then identity with their young lads as early as possible in their studies.

The schools should also organize orientation and training programmes for parents as such could open their eyes and minds as to how they can be involved, some may possibly be ignorant of just how to help or be involved with their children's studies. An array of programmes should be offered by the schools so that parents no matter their degree of willingness, available time, ability and social economic status will be able to participate in academic activities of their children.

Teachers can specifically pinpoints areas of needs, weakness or strength of students to the parents so that they can work on it as a way of getting them acquainted to how to help the child. This suggests that parents and teachers are to work in collaboration in order to bring the best out of every student, as much as possible.

Parents, teachers and the school at large should overcome the age-long gender bias and come to grip with the truth that if all mediating variables are taken care of, boys and girls will both perform well alike and so should start to encourage both male and female students to be at their best that gender is not a barrier in mathematics and science achievement.

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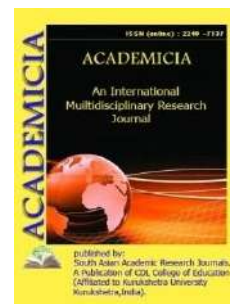
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## LINGUO-POETIC FEATURES OF ANTONYMS IN ALISHERNAVOI'S EPIC "LISONUT-TAYR"

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### ABSTRACT

*Comprehensive study of Alisher Navoi's works is one of the most important tasks facing today's literary critics and linguists. This article discusses the linguo-poetic features of the antonyms used in the work "Lisonut-tayr" by the poet AlisherNavoi, the sultan of the word property. The power of the thinker, the importance of the word for man, his views on the types of words is illustrated by examples from his work. Many aspects of Navoi's work have been studied by our researchers. The goal of every researcher is to reveal to readers the essence of Navoi's works and to bring them to the level of immortal masterpieces. In particular, this article promotes the same idea.*

**KEYWORDS:** *Literary Text, Antonyms, Nouns, Adjectives, Adverbs, Verbs, Analysis, Contradictions, Antonyms.*

### INTRODUCTION

The fourth section of the Decree of the President of the Republic of Uzbekistan ShavkatMiromonovichMirziyoyev "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" is devoted to the development of the social sphere and the state youth policy, and special attention and emphasis are placed on improvement. Therefore, in today's process of globalization, the study of the works of our classical poets is very effective in strengthening ideological immunity and educating the younger generation to be perfect human

beings. This is clearly seen in the rubai of our classic poets AlisherNavoi and Zahiriddin Muhammad Babur.<sup>1</sup>

Undoubtedly, the ability of a literary work to rise to the level of an eternal work depends on its linguistic structure and the age of the author's artistic expression. Therefore, in order to evaluate the essence of any literary work objectively, first of all, it is necessary to analyze the specificity of its linguistic structure. Just as it is necessary and important to study AlisherNavoi from the point of view of creative literature, so it is necessary and important to study his language, his great contribution to the creation of the Uzbek literary language and his linguistic activity from the point of view of linguistics.

## MAIN PART

The language of fiction opens up new horizons in the field of literary expression in the process of development of the national literary language on the basis of a creative approach, study and mastery of the national language, and the history of the national literary language. The language of the work of art also reflects the subtleties of speech, ways of expression, artistic, stylistic, expressive, emotionally expressive ways of expressing words.<sup>2</sup> In the process of linguistic analysis of a literary text, it is necessary to identify lexical units in which the semantic-expressive expressions of emotional-expressive expression, reflecting the writer's skill in language use, and to consider to what extent they served the writer's artistic and aesthetic purpose. For this purpose, semantic, figurative, contradictory, ambiguous, historical and archaic words, new constructions, dialectal words, foreign and vulgar words in the language of the work of art are distinguished and what is added to the work, and explained that it was brought in on purpose.

From the second half of the twentieth century, the interest in the phenomenon of antonyms increased, and special research on this topic began to emerge. Over time, the phenomenon of antonyms was initially interpreted on the basis of different opinions in some articles, textbooks and scientific works. In particular,

S. Mutallibov's article "Antonyms" is one of the first works on the study of antonyms in the Uzbek language.<sup>3</sup>

Contradiction is one of the main criteria of existence. The role of the category of contradiction in the understanding of the universe is incomparable. For example, in Ethics, B. Spinoza makes effective use of contrast in revealing the nature of emotions and explains their expression by contrasting words. The philosopher argues that he approaches events on the basis of contrast: "Definition means opposition".<sup>4</sup>

Another important aspect in defining the category of contradiction is its psycholinguistic aspect. Psychologists argue that the formation of any concept, distinguishing the features of different objects and phenomena and comparing them with each other, the identification of commonalities takes place on the basis of perceptions in our thinking.

Antonyms (derived from the Greek anti- and onomanom) are words with opposite meanings, one denying the other, but this denial is associated with a new concept. This notion, on the other hand, reflects the natural negatives and positives of events, the existence of parties, and their relative interrelationships. For example: there is a small for a large being, there is a narrow for a



large being, there is a day for a night, there is a bad for a good being, so the antonym is two opposite poles.

The methodological features of antonyms are as follows:

- a) Summarizes (in pairs) things, it is absolutely impossible to convey the content-concept expressed by this pair in another word, phrase, sentence. Large and small gathered at the meeting. It is through this generalization that thought is expressed in a powerful, influential, and figurative way;
- b) Using an antonymic pair, the meaning of one is reinforced, emphasized, influenced by the listener. Strengthening is often relative to the next: your heart is soft, your will is strong;
- c) Serves as a descriptive representation of real reality.
- g) Exaggerates the meaning, indicates that the situation is at the last limit-opportunity level. It is necessary to use antonyms thoughtfully and appropriately in speech, otherwise there will be mental confusion<sup>5</sup>.

The presence of contradictory words in the language is one of the most convenient ways to ensure the expressiveness of artistic speech, and one is "tazod". This art is also called "mutabaqa, tibak, applied, muttazad, ittizad, takofu". In this art, according to art critics, the opposite is used".<sup>6</sup>

Abu Abdullah al-Khwarizmi, in his book Mafatih al-Ulum, which deals with the study of the terminology of the science of art, explains the term "mutabaqa" as follows: "The word "mutabaqa" is derived from the verb "tabaqa", which means followed in the footsteps of his forelegs.

In the European philological tradition, this art is called "antithesis". In the works on the language of the work of art, the terms of opposition are used. Concepts, signs, situations, images are contradicted by the use of opposite words side by side. There is usually a difference between linguistic and contextual or spoken words.<sup>7</sup>

The antonyms of cognate words are formed mainly by means of adverbs that form opposite words: watery-waterless, informed-ignorant. In the play we can also find such antonyms:

Chun *hunar***varuz**rachiqdib*ehunar*,

Tozdinqoldiquyiroqtojvar.

Chun went out on a limb,

The lower crown remained dusty. (30-b)

Antonyms, which consist of different root words, are in the original form:

O'tkaribmenurni**vayronada**,

Boshimayemrulgudek**koshonada**.

I've ruined my life,

My head hurts. (75-p)

Antonyms are often used in speech to denote a feature, quantity, place, and are less common in lexical units that express a specific concept. This indicates that antonyms appear mainly on the basis of character; attribute (quality and form). From the point of view of antonyms, we can divide them into groups according to their occurrence in the following categories:

1. Noun antonyms:

a) Time nouns:

He made the sky dark. (7 p.)

He also fixed the evening with a difficult dress. (8-p)

b) Place names:

Every strange thing, spread across the desert,

Then cross the river. (8-p)

There is a danger of death in Furqat,

Eight flights and seven hells will sink. (36 p.)

The word fly means heaven, where the number eight is part of heaven and the number seven is part of hell.

c) activity-process names:

Better a poor horse than no horse at all.

Surdin mourns a hundred times better. (187-p)

In the above verse, antonymic pairs such as “aysh”-sin, “sur”-mourning are used, in which the lexeme of “sur” is the wedding lexeme, is contrasted with the lexeme of mourning.

O’rnig’aonirasulaylabimom,  
Oybo’lib**xurshidg**’aqoimmaqom.

Instead, the imam became the imam,

The position of the moon is as a hurricane. (P. 21)

d) Personal nouns: In this work, which is one of Navoi's rare works, the number of personal names is significant, especially the number of personal names with opposite meanings. In the play, the words "king" and "gado" are used interchangeably. In addition, the names of historical figures are mentioned, contrasted with each other, and word art is created.

Bermadimhargiz**gadolg**’abirdiram,  
To o’zimniko’rmadim**sohibkaram**.

I never paid a penny,

I didn't see myself as an entrepreneur. (13-p)

In the following verse, the words king and lover are conditionally contrasted, that is, they are textual antonyms.

**Shohg**’akomiltavajjuhdu ravish,  
Bo’yla**oshiqqaqachonbo**’lg’ayulish.

With full respect for the king,

That's the decent thing to do, and it should end there. (58-p)

In the following legacies, the words believer and disbeliever are contrasted from a religious point of view.

Mehnatiding'oyibuhozirg'arahm,  
Shiddatidin**mo'minukofirg'**arahm.

Mercy for the lost and the present,

Have mercy on the believer and the disbeliever. (102-p)

Through these verses, the poet was able to illustrate the phenomenon of stratification of people or confrontation based on their position.

Garchiitlarga**mulozimbo'**lmisham,  
Lekulxayluzrah**hokimbo'**lmisham

Although I've been a dog handler,

But I am the ruler of that dream. (202-p.)

*e) Abstract nouns:*

Ko'zgaavvalko'rguzub**mehrimunir**,  
Yoshurub, **g'amshomig'**aqildingasir.

Show kindness first,

You hid and grieved in captivity. (97-p)

Doimog'**ambirlaeltibmenbasar**,  
**Shodlig'**idinmendayo'qemishasar.

I'm always sad,

I'm glad I didn't have to. (164-p)

The words "yusrvausr" in the following byte are historical words and mean ease.

Solg'oningdinbo'yunungg'atasbehi**yusr**,  
Tilgaoningvasfidayuzlandi**usr**.

The rosary on your neck,

Face with her to be eased.(45-p)

Because Navoi'sLisonut-tayr was written in a mystical spirit, and because it was based on conversations between birds, the birds there were placed in opposition to each other.

With desire they have composed a novel for,

Crow's foreign trade is endless. (254-b)

Animals and plants are also contrasted in the text.

All poetry at birth,

The fly will stop hunting elephants. (212-p)

In the above verse, the poem with the ant, as well as the elephant and the fly are in conflict with each other in terms of form and power and opposed to each other.

In addition, plants and flowers are used as antonyms in the play.

## 2. Quality antonyms:

### a) Dimensional quality:

Who is here in the progressive recession. (207-b)

In the above verse, it means a part, a piece, a gray-large.

### b) color quality:

He also fixed the evening with a difficult dress. (8-b)

The word camphor is white and musk is black. Black and white antonyms are used.

### c) Feature quality:

His faithful companion,

For better or for worse for him. (P. 20)

The word good or bad is the same for everyone.

## 3. Verb antonyms:

### a) Action verb:

I thought, I complained - know how I am,

Kill or have mercy, if you know. (P. 105)

The name of the action is contradicted in the following bytes.

Every species of bird in the world,

How many days will it take to fly or land? (P. 37)

### b) Case verb:

Keep my situation a secret or reveal it,

Say the word or you will not be able to stand alone. (P. 230)

## 4. Adverbial antonyms:

### a) Time format:

If you die a thousand years ago,

Whoever does not suffer death in the end (p. 161)

### c) In the form of quantity and (late) time:

If it's too late, it's too late.

Not at all. (P. 167)

### d) Location:

The sheikh looked at this time,

In the future, every new group.

Many roads go up and down,

Except for self-identification. (P. 240)

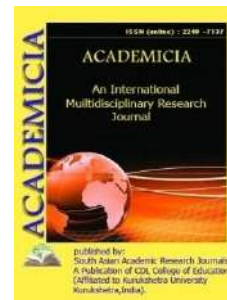
## CONCLUSION

Navoi is an incomparable master of words who can effectively use the word tool. It is not difficult to learn this from the above verses. Each of the contradictory words in the work is used

appropriately, and serves to reveal the essence of the work. He was able to express to the reader what is good and what is bad, that the world is made up of two poles, and that he does not value the good without seeing the bad by contrasting the two words.

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## THE DEVELOPMENT OF STUDENTS' MEMORY SKILLS WHEN LEARNING A FOREIGN LANGUAGE

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### ABSTRACT

*Memory is one of the essential parts of human mind. The good memory is particularly indispensable for the foreign languages learning, as it is one of the conditions for the new communication skills obtaining. Also the well-developed memory is a prerequisite for both high-quality translation and interpretation. In order to keep memory sharp it should be regularly trained. In this article we have considered the most widespread and efficient aural and visual memory enhancing techniques, since these types are the most involved into the translating, interpreting and foreign languages learning activities.*

**KEYWORDS:** *Memory Development, Translation, Operative Memory, Aural Memory, Visual Memory, Foreign Languages.*

### INTRODUCTION

Human memory is a necessary mechanism that can store huge volumes of all kinds of information and instantly find the necessary information. However, sometimes it fails, confusing or losing some data. We often complain about a bad memory or that it is full of insignificant trifles, but the really important one is erased. Nevertheless, even in ancient times, scientists found that memory needs constant training, and over the centuries of the development of science, many methods and methods have been developed to maintain its sharpness until the end of life.

The first attempts to study the nature of human memory and find a way to improve it are attributed to the ancient Greek thinkers Parmenides, Diogenes, Plato. Philosopher Aristotle in the 4th century BC e. introduced a system of scientific terminology to describe mental processes. He linked the work of memory with the movement of blood in the body. The development of the theory of psychoanalysis at the end of the 19th century, as well as the development of new



scientific ideas in the second half of the 20th century, had a significant impact on the modern understanding of the work of memory. G. Ebbinghaus in his works studied the processes of memorization and forgetting. O. Hayden determined the dependence of memory on the amount of RNA in the body. Surgeon W. Penfield researched direct stimulation of the brain and found that its various parts are responsible for different types of memory. He also suggested that a person's memory retains everything he has ever paid attention to.

According to modern scientific ideas, according to the storage time of information, memory is divided into instantaneous (sensory), short-term and long-term. Unlike long-term, short-term memory is not aimed at accumulating information, but at its direct processing and application. It holds information for a short period of time, on average up to 20 seconds [1]. The short-term subtype is the operative (working) memory required to carry out current actions. The processed data disappears from it as the final result is achieved. The main feature of this type of memory is the presence of operational units; their number, which a person is able to accurately reproduce a few seconds after a single perception, determines the amount of information held, as well as the quality of its storage. Researchers found that, on average, RAM stores 5-7 such units, but they can be increased to 8-9. They consist of separate semantic compounds, the size of which depends on the degree of development of a particular topic and training attention. The operational units of memory in learning to read are letters or syllables, but later they expand to letter combinations, words, phrases, sentences, and even complex syntactic constructions. Thus, the volume of operational units, along with their number, determines the amount of RAM in general.

When teaching students interpretation and translation, much attention is paid to the development of memory, since in this professional activity it is the main tool for finding language matches. In order to perform the task at a high level, the translator must constantly increase the volume of his working memory, expanding the boundaries of its individual operational units. No less important is a trained memory for people who study foreign languages, even if they are not related to translation activities.

There are a variety of techniques and methods for improving memory. We examined exercises to increase the volume of auditory and visual memory, since it is these types that are most involved in the development of language skills.

**Auditory memory.** This type is more involved than others in simultaneous and consecutive translation, it also plays an important role in oral communication and understanding of foreign speech.

The first exercise is recommended before bedtime. When you lay down, you need to listen to the surrounding sounds. They are present, even if it seems that you are in complete silence. Try to isolate individual noises from the general background, for example, a clockwise knock, your own heartbeat, or wind noise. This exercise will significantly improve your attention; increase your sensitivity to the right sounds [2]. For maximum effect, it should be repeated daily.

The second exercise is the reproduction of what you hear about yourself. Being in a quiet place completely relax and focus on any sounds heard by you earlier. Try to hear them in your mind, then change the volume, key, duration. Such an exercise must be done for five minutes daily. Make sure that you can perfectly clearly reproduce any sound internally and easily change its parameters.

The third exercise is performed using musical works. After choosing a well-known melody, listen to its beginning and press the pause. Now try to mentally continue the music. The exercise will be mastered when you can mentally turn on the work, interrupt it and continue again. Over time, you should increase the length of the listening passage. Remember to compare our composite on with the original.

Reading out loud. Reading aloud is certainly one of the most effective exercises for developing auditory memory when learning a foreign language. It is this that helps to increase the working vocabulary, improve diction, intonation and brightness of speech. Reading aloud is necessary in a hurry, expressing words clearly and clearly. Such 10-15-minute daily activities will significantly develop both auditory memory and eloquence.

Eavesdropping. Walking along the street or in a public place, try to hear and keep in mind a passage of conversation of strangers. Then reproduce to yourself what you heard with the right intonation, and also mentally imagine the faces of the speakers. Such an exercise will allow you to learn how to easily perceive the text by ear, and also develop attention and sensitivity to the tone of speech.

Visual memory. When learning a foreign language, equally important is the ability to quickly remember unfamiliar words, most of which we perceive visually, reading literature or making notes. Such abilities can also be developed with the help of special exercises.

A toy. Pick up a small toy or any other small item. Stroke, smell, feel with your fingers all the small details of the thing, squeeze it in your hands, feel its weight and elasticity of the material from which it is made, look at it. Then put it aside, close your eyes and imagine all the little things that you are familiar with. Feel the object in your hands, remember its smell. Open your eyes and check yourself. This exercise will benefit your tactile memory, and also allow you to develop a coherence of feelings-perceptions, which are the basis for photographic memory.

Aivazovsky method. For 5 minutes, carefully look at the subject, part of the landscape or at the person. Close your eyes and mentally restore the color image of the subject as clearly as possible. According to your desire, images can be recreated not only in the head, but also drawn on paper, this will increase the effectiveness of the training. The regular implementation of this exercise will facilitate the mastery of foreign spelling and vocabulary [3].

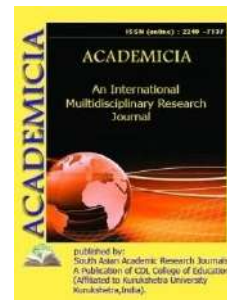
The game of matches. Throw 5 matches on the table, and within a few seconds, remember their location. After that, turn away and try using the other 5 matches to recreate the picture on another surface. If you couldn't remember everything, then look at the matches again and reflect the image more precisely. As soon as you feel that it's easy for you to do this exercise, observation time. This technique also effectively develops photographic memory.

Lifestyle. In addition to exercises, the lifestyle of a person is extremely influenced by a person's memory. The negative effects of bad habits (alcohol, smoking, chronic lack of sleep) on brain activity and memory were identified in a study conducted at the Kazakh National Medical University. According to a study by researchers at Harvard Medical School and the Brigham Women's Hospital in Boston, eating a lot of foods rich in saturated fats (red meat and butter (palm and coconut oil, dairy products) and trans-fats (confectionery, chips, popcorn, convenience foods, meatballs, fish fingers) also leads to memory impairment.

1. The development of memory is a priority when mastering any foreign language and developing the skills of interpretation and translation.
2. In simultaneous and sequential translation, in addition to auditory, operative memory is involved, the size of which is determined by the volume and number of operational memory units.
3. Using exercises for auditory and visual memory, it is possible to increase the amount of RAM, as well as significantly improve attention.

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## THE PHILOSOPHY OF INDEPENDENCE IS THE IDEOLOGICAL BASIS FOR RAISING THE COUNTRY'S NATIONAL DEVELOPMENT TO A HIGHER LEVEL

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### ABSTRACT

*The content of the national idea is significantly influenced by the views of the greatest representatives of the social thought of the East and West, which have not lost their value. The true meaning of the expression "Knowledge is power" lies precisely in this. Along with the aforementioned, such qualities as faith and conviction, honesty and conscientiousness, mercy and generosity, honesty and favor, shame and shyness are inherent in our people. Its formation, in particular, is influenced by theories about the origin of the world and man, about the development of society, the ideas of goodness, justice, nobility, moral and physical perfection of the individual. Of course, this feeling acquires positive significance only if a certain measure is observed. If it passes the measure, then it pushes the people to swagger, aggressiveness; and if it does not reach a measure, it leads to national pessimism.*

**KEYWORDS:** *Aforementioned, Representatives, Conscientiousness,*

### INTRODUCTION

One of the foundations that determines the content and meaning of the ideology of national independence is the ancient and rich history of our region. History is a great teacher. She gives people not only role models, but sometimes she also presents bitter lessons. Created in the native land many centuries ago, still ancient admirable monuments of culture and art, testify to the high skill of our people, the glorious history of our country, awaken a sense of pride in the soul of every citizen.

Sources that nourish the national idea are such pearls of spiritual heritage as Alpomysh, Shashmak, as well as the life and works of great ancestors - Spitamen, Jaloliddin Manguberda, Amir Temur and others. The philosophical foundation of our national idea is, first of all, the best examples of national spiritual heritage, scientific, religious and secular views of great ancestors and pearls of world philosophy. Its formation, in particular, is influenced by theories about the origin of the world and man, about the development of society, the ideas of goodness, justice, nobility, moral and physical perfection of the individual. These are the freedom-loving ideas of great thinkers, the world discoveries of Al-Khwarizmi, Al-Beeruni, Ulugbek and others, the concept of a just society of Al-Farabi, the philosophical views of Ibn Sino, Alisher Navoi's views on the problem of human perfection, as well as the activities of the enlightenment democrats of the late 19th – early XX centuries.

The content of the national idea is significantly influenced by the views of the greatest representatives of the social thought of the East and West, which have not lost their value. The philosophical wisdom of Confucius, Plato's doctrine of the world of ideas, Hegel's dialectic, humanistic philosophical traditions and currents of modern philosophy are all universal human foundations of the national idea. Thus, the national idea of Uzbekistan is based essentially on the whole philosophical experience of human civilization - antiquity, antiquity, the Middle Ages, modern times and modern times.

In the world there are a lot of nations, peoples and states. Each of them has its own specific interests, goals and aspirations, dreams and hopes. There are also ideas expressing these hopes, dreams and goals, mobilizing people for their realization. Today, an idea is being formed in Uzbekistan, embodying the fundamental interests, dreams and aspirations, noble goals of representatives of all nations and nationalities living in the country.

The national idea of Uzbekistan is, in its essence, a system of ideas expressing the main goals of our people, linking its past and future, serving the achievement of its centuries-old aspirations and aspirations. Protecting and strengthening the independence that people have dreamed of for centuries is the sacred duty of every citizen. For this, we all must actively act, closely uniting, feeling the interests of the motherland. This is due to the awareness of the idea that embodies the interests of our people, the understanding that the well-being of the people is the prosperity of the motherland. Only that country will live in material and spiritual prosperity, in which rich citizens. The national idea of Uzbekistan is a spiritual criterion that determines the activity of each person in society, the degree of awareness and fulfillment of his duty and responsibility to the country, nation, himself and his family. The national idea of Uzbekistan should:

- be based on the Constitution of the Republic of Uzbekistan, national and universal values, principles of democracy;
- absorb for centuries the high spirituality of the people, its traditions and customs, the immortal heritage of our great ancestors;
- Express the ideas of goodness, justice, freedom and independence, beliefs and faith of the people;
- serve the prosperity of the motherland, ensure peace in the Fatherland, increase the welfare of people

- mobilize all members of society, all sectors of the population to achieve the great future of Uzbekistan;
- To educate in every citizen, regardless of nationality, language and religion, a sense of pride and dignity, love of the motherland, mutual respect, devotion to the ideas of independence and democracy;
- To form public consciousness through enlightenment, relying on pluralism of opinions and freedom of conscience. If an idea is a mobilizing thought, then ideology is a system that combines such ideas into a single force. Its content and meaning are covered in detail in the Basic Law, where it is determined that social life develops on the basis of a variety of political institutions, ideologies and opinions. No ideology should rise to the level of state ideology.

The national idea of Uzbekistan serves the socio-political progress of Uzbekistan, expresses the interests of the whole people, all political parties, groups and movements.

Ideology is a force that stimulates national identity. The main reference point of the national idea of Uzbekistan lies precisely in this. In other words, as long as the nation does not recognize itself as a single "organism", it cannot take care of its honor, its dignity, authority, and cannot feel its national pride. Awareness of their identity is a force that encourages people, leading them to social cohesion. It is based on a sense of shared ownership, expressed by the concept of "this is ours."

Of course, this feeling acquires positive significance only if a certain measure is observed. If it passes the measure, then it pushes the people to swagger, aggressiveness; and if it does not reach a measure, it leads to national pessimism. The awakening of a sense of self-awareness in the East and the West, in the life of the peoples of Asia and Europe, led them to flourish, to unite, and was the impetus for a healthy "competition" with other peoples. And we have the feeling "Uzbekistan is a united Motherland" is being formed at a high level. From time immemorial, representatives of various civilizations have lived side by side on the land of Uzbekistan, diverse beliefs and worldviews have mutually enriched.

The national idea of Uzbekistan has the following basic principles:

- Assistance in maintaining and strengthening the independence of the country, ensuring territorial integrity, inviolability of its borders;
- ensuring peace in the Fatherland, protecting the state from military, economic, environmental, information and other threats;
- Approval of the country's civil and interethnic harmony, an atmosphere of social stability;
- The achievement of well-being in every family and all people;
- Implementation in society of the idea of justice, the principles of democracy and self-government. Uzbekistan is a long-lived and sacred home where our ancestors lived. He is one of the ancient centers of human thinking, science and culture. The roots of a great civilization appeared on this earth, significant values and traditions were formed. G

Heraclitus, the philosopher of the ancient world, called this land "the cradle of philosophical thinking." For centuries, civilization in our country contained a specific style of thinking, a way of life. Tolerance, humanism, modesty, the coexistence of various ideas and diverse points of



view and the complementarity of ideological trends - all these were the features of this civilization. For this reason, in our country, as a rule, there could exist side by side, different nations and religious beliefs, and representatives of Zoroastrianism and Buddhism, Judaism, Christianity and Islam lived in peace and mutual consent. In our country, representatives of various religions could hold discussions among themselves, being in the same house of worship; however, they did not insult each other's human dignity.

In such discussions, representatives of different religions learned from each other good manners, applied positive customs to religious rites and rituals. Humane religious and secular traditions and rites were introduced into the actions and soul of our people.

In the philosophical views of the great thinkers of our region, universal ideas were priority. And in our daily lives, we must be guided by these views. They serve as the spiritual foundation of peace, harmony, stability and progress in our country.

The national idea of Uzbekistan is characterized by the following national characteristics:

- The priority in the minds of the people of the principle of "living in friendship and good neighborliness, peace and harmony, close cooperation";
- giving a sacred meaning to the concepts of "family", "mahalla", "Homeland";
- Respectful attitude to parents, others and respect for elders, care for the younger generation;
- Love for the native language as a life-giving source of spirituality of the nation;
- Veneration of women - the personification of motherhood, love, beauty and tenderness, a symbol of eternity of life;
- Patience, mercy and hard work;
- Honesty.

Thanks to the above characteristics, the ideology of national independence enables a person to realize who he is, what he is capable of, what achievements he has and what disadvantages, which way he should go. This contributes to the fact that the national idea serves to unlock the potential of man and to realize the fidelity of the path chosen by our people; will be a spiritual bridge connecting the past with the future; contributes to the fact that each of us has the right to own the spiritual wealth created by our people in the past through the deep-rooted oriental way of thinking, which helps to understand the essence of today's events.

National ideology is the ideological pillar of creating a great future, of course, based on rich historical experience. The national idea of Uzbekistan, being a social phenomenon, a nationwide phenomenon, becomes the leading one regarding the ideologies of various political parties and public groups. It does not elevate any idea into an absolute, and it does not turn into a political weapon in order to strengthen the existing government. This ideology, which has a universal content, serves the socio-political progress of all; expresses the fundamental interests of all political parties, nations and nationalities, social groups and strata.

The ideology of independence is based on the following universal values and feeds on them:

- Law supremacy;
- ensuring fundamental human rights and freedoms;

- Respect for representatives of various nationalities, their culture and national values;
- Religious tolerance;
- The desire for secular knowledge, enlightenment;
- The study and application of the best practices of various peoples in the construction of society, the achievements of universal culture, etc.

The national idea of Uzbekistan indicates the most acceptable road, allowing to realize the innermost hopes of each person. It is a force uniting the people and the state, a source of high faith and belief. It equally belongs to all nations, nationalities, representatives of social groups and various religions living in Uzbekistan. It absorbs advanced ideas and rejects inhumane views, it is considered a relevant and creative theory that quickly adapts to a new environment.

Our national ideology is not confined to the narrow, limited interests of individual political forces and parties; not a short-term campaign product. Acting as a criterion for awakening historical memory, drawing lessons from past phenomena and awareness of identity, it fulfills the task of expressing the fundamental goals of our people and an ideological banner uniting members of society. Through this ideology, people draw conclusions from their past, determine the need to go to a specific goal and on a specific path, and, on this basis, determine the future.

Our wise people say that "Who has a strong hand wins one, whose knowledge is strong - thousands wins." The true meaning of the expression "Knowledge is power" lies precisely in this. Along with the aforementioned, such qualities as faith and conviction, honesty and conscientiousness, mercy and generosity, honesty and favor, shame and shyness are inherent in our people. And developing the best qualities of each person, giving them due attention and respect, it is necessary to raise them to the level of universal values, to widely promote them.

You should use the exemplary 89 aspects of such customs and traditions as hospitality, the culture of housekeeping, a sincere relationship in the family, among relatives, friends. Representatives of more than one hundred nations and nationalities live in such a multinational country like Uzbekistan. The successes of the implementation of the national idea and the fruits of the prosperity of our Motherland belong equally to all citizens living on this earth. Therefore, it is important to educate in the heart of every citizen a sense of master of his country, pride in the success of his land, the formation of all people, regardless of nationality and religiosity, the natural concept of "Uzbekistan - a single homeland." Only in this case will the feeling of the active creator of the future Motherland, the feeling of patriotism, devotion to the country and people, courage and readiness for the feat become even more desirable for the hearts of all citizens.

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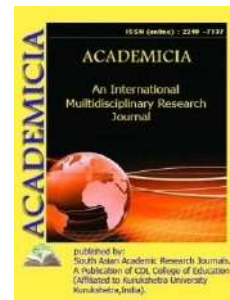
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## MODERN METHODOLOGICAL BASES OF FOREIGN LANGUAGE TEACHING IN PRIMARY SCHOOL

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### ABSTRACT

*At present, it is generally recognized that a foreign language must be taught already in elementary school. About what, as well as relying on what principles to learn English in elementary school, and now we will talk. This task is directly related to the problem of mutual understanding of people, the search for common ways of making progress. One of the solutions to this problem may be, according to Z.N. Nikitenko, the humanization of education, that is, introducing students to the cultural heritage and spiritual values of their people and other peoples of the world.*

**KEYWORDS:** *humanization, heritage, Pedagogical, Contradictory*

### INTRODUCTION

The social transformations taking place in our country have created certain conditions for the restructuring processes in the education system. Russian primary education is developing. But, despite the fact that the term “developmental education” is actively used in psychological, pedagogical and methodological literature, the content of this concept remains not quite clear, and the answers to the question of what developmental education is are quite contradictory.

Education in a modern school is aimed at solving two main problems. First, the school should equip students with solid and in-depth knowledge of the fundamentals of science; secondly, it is obliged to prepare its graduates “for life”, to form in them the most important skills necessary for inclusion in various spheres of society. The developing effect of training, subordinate to the task of assimilating knowledge, abilities and skills, can become a “by-product” result, an “unplanned” product of such training.

The development of business and personal contacts, the expansion and strengthening of economic and cultural ties between nations highlight the task of educating a person before the school, the main asset of which is universal culture and universal values. This task is directly related to the problem of mutual understanding of people, the search for common ways of making progress.

One of the solutions to this problem may be, according to Z.N. Nikitenko, the humanization of education, that is, introducing students to the cultural heritage and spiritual values of their people and other peoples of the world. A special role in this belongs to the foreign language, with the help of which "a direct and indirect dialogue of cultures - foreign and native, - has become one of the main provisions of the modern concept of education."

The specificity of a foreign language as an educational discipline is determined by the fact that it, characterized by the features inherent in the language as a sign system in general, at the same time has a number of distinctive features of mastering and possession of it, distinct from the native language. At the same time, for a number of characteristics, it differs significantly from any other school subject. English as a subject is characterized by:

- interdisciplinary (the content of speech in a foreign language can be information from different fields of knowledge, for example, literature, art, history, geography, mathematics, etc.);
- Multi-level (on the one hand, it is necessary to master various linguistic means that are related to aspects of the language: lexical, grammatical, phonetic, and on the other, skills in four types of speech activity);
- multifunctionality (can act as the goal of training and as a means of acquiring knowledge in various fields).

Being an essential element of the culture of a people - native speaker of a given language and a means of transmitting it to others, a foreign language contributes to the formation of a holistic picture of the world among schoolchildren. Proficiency in a foreign language contributes to the formation of personality and its social adaptation to the conditions of an ever-changing multicultural, multilingual world.

A foreign language broadens the linguistic horizons of students, promotes the formation of a culture of communication, and promotes overall speech development. This shows the interaction of all language educational subjects that contribute to the formation of the foundations of philological education of schoolchildren.

At primary school age, the child continues social and personal development. This age period is characterized by the appearance of a fairly conscious system of ideas about people around you, about yourself, about moral and ethical standards, on the basis of which relationships with peers and adults, relatives and strangers are built. The level of formation of all personality manifestations fully depends on the orientation of the educational process on the organization of various practical activities of schoolchildren (cognitive, labor, artistic, etc.). This determined the need to highlight not only the content of knowledge that should be presented to the student and formed at him, but also the content of practical activity, which includes specific skills of students, the possibility of creative application of knowledge, elementary skills of self-education.

Learning a foreign language starts from the 2nd grade. Students of this age are characterized by a high susceptibility to learning, which allows them to master the basics of communication in a new language for them with less time and effort than students in other age groups.

In turn, the study of a foreign language contributes to the development of communicative abilities of younger students, which positively affects the development of students' speech; the formation of their cognitive abilities; the formation of general educational skills.

The active nature of the subject "Foreign Language" corresponds to the nature of the younger student, perceiving the world holistically, emotionally and actively. This allows you to include foreign language speech activity in other activities characteristic of a child of a given age (play, aesthetic, etc.) and makes it possible to carry out a variety of intersubject communications.

The main purpose of a foreign language is to form a communicative competence, i.e. ability and willingness to carry out foreign language interpersonal and intercultural communication with native speakers.

In sample English programs, the following goals for teaching English in primary school are distinguished:

- the formation of communication skills in English, taking into account the speech capabilities and needs of younger students; elementary communicative skills in speaking, listening, reading and writing;
- Development of personality, speech abilities, attention, thinking, memory and imagination of a primary school student; the formation of motivation for further mastery of the English language;
- ensuring the communicative and psychological adaptation of younger students to the new language world in order to overcome the psychological barrier in the future and use the English language as a means of communication;
- mastering elementary linguistic representations accessible to primary school students and necessary for mastering oral and written speech in English;
- introducing children to a new social experience using the English language: introducing younger schoolchildren to the world of foreign peers, foreign children's folklore and accessible samples of fiction; fostering friendly relations with representatives of other countries;
- The formation of speech, intellectual and cognitive abilities of younger students, as well as their general educational skills.

As can be seen from the above goals, training should be developmental in nature and implement the basic principles of developing, competency-based approaches.

The introduction of a foreign language from the second grade caused a large number of difficulties for teachers. Teachers who worked in secondary and high school had to face new difficulties - how to start teaching English to children of seven years old? What to rely on? What to consider? What are the features of teaching a foreign language in primary school? First of all, you need to understand what principles of teaching foreign languages at the initial stage should be based on.

Principles are the initial, basic principles in which the most essential aspects of theoretical and practical activity are reflected and generalized.



The principles of training are understood as the initial provisions that determine the goals, content, technology of training and are manifested in their interconnection and interdependence. According to the methodologists, the principles are designed to determine the strategy and tactics of teaching English at the initial stage at almost every point in the educational process. It follows that the teacher needs to be guided by them in organizing and conducting the educational process on the subject.

An analysis of the literature, which examines the principles of learning, shows that there are different approaches to the allocation of principles and the disclosure of their content.

The basis of teaching any subject at school, including a foreign language, is based on didactic principles, first formulated by the great teacher Jan Amos Komensky in the book "Great Didactics". For centuries, these principles have maintained and still retain their strength, but, of course, they were refined, received, on the basis of changing conditions, an appropriate interpretation in a given period. These principles are: scientific, accessible and feasible, visual in training, an individual approach to the student in a collective work with the class, etc.

In modern didactics, the following teaching principles are distinguished:

1. Focus on the decision in the interconnection of the goals of education, training and the general development of students;
2. Science, the relationship of learning with life;
3. Systematic and consistent; availability;
4. Visibility; consciousness and activity of students with the leadership role of a teacher; a combination of various methods, as well as training tools, depending on the tasks and content of the training;
5. The combination of various forms of training depending on the tasks, content and teaching methods;
6. Creation of necessary conditions for training;
7. Strength, awareness and effectiveness of the results of education, training and development.

It should be noted that there are general methodological principles (universal, which apply to all subjects) and specific principles - those that are characteristic for teaching a particular subject.

The principles of training allowed us to solve a number of didactic and methodological problems:

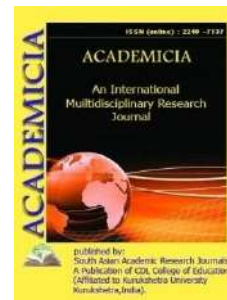
- The formation of language skills and speech skills both collectively and differentially;
- Organization of the learning process in accordance with the principle of communicative orientation;
- Formation of a holistic view of the culture and people of the country of the language being studied;
- avoiding the construction of false stereotypes and generalizations about representatives of the studied cultures;
- Selection of thematic content for cultural enrichment by means of IN;

- Co-study of the cultures of the countries of the native and foreign languages with the aim of forming global planetary thinking;
- the formation of socio cultural strategies that allow students to use the experience of communication in new situations of intercultural communication with representatives of other countries and cultures, as well as allowing students to resolve the inevitable cultural conflicts that arise during intercultural communication;
- the use of IN as one of the many tools of sociocultural education.

It seems to us that these specific principles of teaching foreign languages reflect the essence of this subject and distinguish it from others.

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## INTERACTIVE METHODS FOR TEACHING RUSSIAN

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### ABSTRACT

*Modernization of education requires not only the active saturation of educational institutions with technology, but also fundamentally changes educational priorities, changes approaches to building a paradigm in general, and building individual educational trajectories, in particular. Significant changes in education are associated with the active introduction of interactive teaching methods in the educational process.*

**KEYWORDS:** *Fundamentally, Individualization, Trajectories,*

### INREODUCTION

In our opinion, the necessary potential is largely possessed by training aids and methods using information and communication technologies. They will be able to ensure individualization of training, adaptability to the abilities, opportunities and interests of students, the development of their independence and creative abilities, access to new sources of educational information, the use of information modeling of the studied processes and objects, etc. In fact, today we are talking about creating a new learning environment based on information technology, aimed at independent learning activities, the development of the abilities and personality of students. In this regard, university teachers should be aware that a modern education model based on a competency-based educational paradigm should be aimed at creating a motivated personality capable of:

- \* quickly navigate in a dynamically developing and updating information space;
- \* receive, use and create a variety of information;
- \* make informed decisions and solve life problems on the basis of acquired knowledge, skills.

This can be achieved only by changing the organization of cognitive activity of students from a simple relay of knowledge to the development of their creative abilities, the disclosure of their capabilities, preparation for life in modern conditions on the basis of a system-activity approach.

Considering the fact that the modern lesson in the Russian language requires special preparation and conducting it requires a large amount of creative effort from the teacher. The introduction of information and communication technologies can improve the effectiveness of the teacher, as well as make this activity more diverse. Information and communication technologies not only give students the opportunity to keep up with the times, but also make the learning process more interesting.

Today, ICT occupies an important place in the educational work of all levels of education. Most educational institutions with computer classes implement a program for the study of academic disciplines by using all the technical innovations available to the user: various presentations, documentaries and on-line archives of the world's leading libraries. And also modern information and communication technologies implement the most important didactic principle - the principle of visibility. The objects represented by information and communication technologies are more informative, colorful and allow you to consider the processes from a wide range of perspectives, and the proximity of knowledge to real life makes this knowledge more understandable. In addition, information and computer technology can make learning problematic, creative, and focused on research activity.

The introduction of information technology solves issues related to the development of the personality of the student, the formation of his emotional and cognitive-cognitive sphere. Teachers consider the problem of motivation in the context of personality-oriented learning, study the didactic possibilities of using ICT in the educational process, individual ICT software tools in terms of their impact on the motivation of educational activities. As a result of this, students form a value attitude to information and communication technologies as an effective means of increasing their level of knowledge. In the learning process, various methods are used, each of which has its own advantages and disadvantages and is typical for a particular type of activity (whether it is a lesson-repetition, lesson-review of new material or lesson-presentation). Here, a lot depends on the personality of the teacher himself, his professional competence in the field of subject and ICT.

ICT programs in the Russian language contribute to the growth of motivation in relation to this subject, the development of the correct speaking, writing, etc. skills, as well as students' control and self-control skills. As a result, the use of information technology in the educational process significantly increases the effectiveness of students learning. Also, the use of information technologies allows students to discover the possibilities of creating serious research, design work with multimedia presentations, etc. For example, the use of an interactive whiteboard in combination with audio means allows you to implement the principles of visibility, accessibility and systematic presentation of the material.

Moreover, these opportunities are realized not only in the viewing mode, as it was when using presentations in the classroom, but, using a special marker and other features of the board, we can combine proven methods and techniques of working with a regular board, and a set of interactive and multimedia features .

The use of information and communication technologies in the Russian language classes is quite relevant for the development of the personality of the learner and the formation of the following competencies among students: the ability to compare the advantages and disadvantages of various sources of information, choose the appropriate technology for its search, create and use adequate models, procedures for studying information processing, etc. .d.

Based on the foregoing, the planning of classes in the Russian language using ICT can be divided into stages, which we will consider in more detail.

At the conceptual stage, the didactic goal is determined with the focus on achieving the following results:

- the formation, consolidation, generalization or improvement of knowledge;
- development of skills;
- assimilation control, etc.

Based on the objectives of the lesson and its pedagogical tasks, the necessity of using ICT tools in the educational process is argued. In this regard, it is necessary to choose educational electronic resources of a particular methodological purpose: training, information retrieval, imitation, demonstration, modeling, controlling, educational and game, etc.

The technological stage allows you to formulate requirements for didactic goals and methodological purpose, to conduct their multivariate analysis and selection. At this stage, the form of the lesson is also chosen: presentation, research, virtual tour, workshop, thematic project, training lesson, etc.

In addition, a more detailed analysis is being carried out, including refinement or modernization of the electronic resource. It is at this stage that the teacher determines the necessary hardware and software (multimedia computer, software).

At the operational stage, the basic structural elements of the lesson are distinguished, the methods for the interaction of various components (teacher - student - educational material) and their functional relationships are selected.

Here it is observed how the detailing of the functions assigned to ICT tools and the ways of their implementation is carried out, as well as the choice of ways the student interacts with the electronic resource and the teacher.

The phased planning of the lesson is carried out, for each of its stages the purpose, duration, form of organization of student activity, the functions of the teacher and its main activities, the form of intermediate control, etc. are determined, on the basis of which the technological map is filled.

Every year, information and communication technologies are increasingly used in the learning process. Programs for teaching the Russian language are increasingly used in the organization of the educational process in educational institutions.

The effectiveness of the use of ICT in the lessons of the Russian language is as follows:

- 1) a large information capacity of educational material;
- 2) the intensification of the independent work of each student;

3) the creation of a communicative situation through the development of communication skills in the main types of speech activity: listening, reading, speaking, writing;

4) mastery of various language models and structures;

5) increasing the cognitive activity of the student, as well as strengthening the motivation of learning.

Non-traditional forms of classes in the Russian language are realized, as a rule, after studying a topic, performing the functions of educational control, and are carried out with the mandatory participation of all students.

In such classes, it is possible to achieve a variety of goals of a methodological, pedagogical and psychological nature, which can be summarized as follows:

- \* control of knowledge, skills and abilities of students on a specific topic;

- \* provides a business, working atmosphere, a serious attitude of students to the lesson;

- \* Provides for minimal participation in the lesson of the teacher.

Integrated classes in the form of games, discussions, tests and many other forms are methodically highly effective, implementing non-traditional forms of training, development and education of students.

M.M. Potashnik in his book "Management of the quality of education" noted that in the 21st century it is unacceptable to use inefficient, outdated teaching technologies that exhaust both the student and the teacher. New information technologies for seekers and those who like to learn new things, for those who are not indifferent to the level of their professional competence, who are concerned about how much he is, the teacher meets the requirements of the century to come.

The nature of comprehensive integrated training is strongly dictated by the use of modern developing technologies, a combination of theoretical and practical exercises. Among them:

- travel classes, interactive classes ("activity sheets", "workbooks", specialized guides, museum newspapers and magazines, catalogs, slides, video programs, museum program brochures, museum events calendars and special guides aimed at self-study of the exposition on a particular topic),

- design and research activities with media presentations;

- master classes;

- socio-gaming technologies (press conferences, art therapy);

- exhibitions of creative works (essays, expositions, essays, reviews, annotations);

- theatrical contests, role-playing games;

- meeting-conversations with the intelligentsia and creative youth;

- presentation programs on the basis of expositions (thematic evenings, holidays, fairs).

- holding seminars, conferences;

- organization of exhibitions, video presentations;



- creation of expositions, thematic and anniversary exhibitions;
- cultural and educational programs involving multidisciplinary specialists - engineers, irrigators, land reclamators, psychologists, art therapists;
- excursion and tourist programs (walking and bus excursions, weekend itineraries, family excursions);
- museum-pedagogical events (museum lessons, role-playing games, master classes);
- creation of thematic educational films, teaching aids;
- Interactive programs of historical, musical and artistic cycles.

You can also use the following interactive techniques and methods:

- 1) reception "What do I know?"
- 2) Reception "Association"
- 3) Reception "Mutual Question"
- 4) reception "Letter"
- 5) methods: "Phone", "Alphabet", "Snowball", "Figure on the wall" and various language simulators.

When using the above and other methods and techniques for using ICT, depending on the students' language preparedness, the teacher can make appropriate changes, and use some game techniques at all stages of the training session, gradually complicating the phonetic material. It is necessary to organize independent work of students in teaching cross-cutting topics using various interactive techniques. For example, you can distribute tables to students and ask them to prepare for reading after a certain time or tasks like "Test yourself!", Which give them the opportunity to independently test their knowledge, and to the teacher - the level of students' knowledge.

One of the interactive techniques is the case method. This is a teaching method in which students and teachers participate in a direct discussion of business situations and tasks. They are invited to analyze the real situation, the description of which simultaneously reflects not only some practical problem, but also actualizes a certain set of knowledge that is necessary to solve this situation. Case study training helps to develop the ability to solve practical problems taking into account specific conditions, makes it possible to formulate such qualification characteristics as the ability to analyze, the ability to clearly formulate and express one's position.

The case method is a description of a real situation, like a "piece" of real life, events that actually happened and described by the authors in order to provoke a discussion in the classroom. This is not just a true description of events, but a single information complex that allows you to understand the situation. A well-made case provokes a discussion, linking students to real facts, allows you to simulate a real problem, which in the future will have to face in practice.

Case may be

- \* personal, when there are specific individuals, managers, politicians, leaders;
- \* organizational and institutional, when there are organizations, enterprises, firms, communities;

\* multi-subject, if it includes several actors.

The main function of the case method is to teach students to solve complex unstructured problems that cannot be solved analytically. He activates, develops analytical and communicative abilities, leaves trainees face to face with real situations.

The case will correspond to the clearly set goal of creation; have an appropriate level of difficulty; illustrate several aspects of the situation; be relevant today; illustrate typical situations; develop analytical thinking; provoke a discussion and have several solutions.

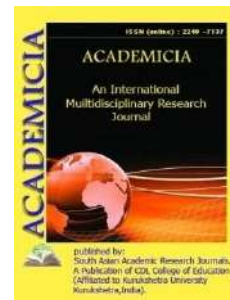
Another interactive technique is the SWOT analysis method in strategic planning, which consists in dividing factors and phenomena into four categories: strengths, weaknesses, opportunities and threats. Here, a teacher of the Russian language can implement a concept that involves the need to provide students with solid knowledge of the material of the program with the simultaneous implementation of different aspects of development and personality formation of each student, taking into account his individual abilities and capabilities. The ways and means of implementing these principles should be significantly creative and at the same time effective.

For non-philologists, the Russian language is not only the purpose of learning, but also a means of achieving the goal - participation in educational and professional communication. As many years of experience at the university show, the lack of understanding of the mechanisms of understanding, memorizing, designing, the ability to reproduce and transform statements, synthesize them with others, and generate new ones leads to the fact that when learning the Russian language, more interactive methods should be used that will allow students to have an adequate level intellectual development.

Thus, the use of information and communication technologies makes learning fun, allows you to more interestingly and graphically present educational material in the Russian language, as well as motivating students to independently study additional material in order to increase the level of knowledge in this academic discipline.

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## **TOLERANCE IS THE BASIS FOR CREATING A HUMANISTIC CULTURE IN THE WORLD**

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### **ABSTRACT**

*The article reveals some issues related to the development of pedagogical science at the present stage. The role of pedagogy in the formation of a tolerant personality is shown.*

**KEYWORDS:** *Teacher, Student, Tolerance Formation, Pedagogy, Integration.*

### **INTRODUCTION**

The current stage of development of the world community is characterized by rapidly unfolding innovation processes, and innovation is increasingly acquiring the status of a general indicator of cultural development. The condition for progress is the readiness of public and individual consciousness for positive changes in all areas of society. This trend is observed in many countries of the world, since the reform of the educational system has become an urgent problem for mankind. In this process, the role of pedagogy as a science of upbringing, education and training of the younger generation is great.

It is pedagogy that possesses the art of influencing the educator on the pupil with the aim of forming his worldview, thinking, and consciousness. Therefore, it is called the science of harmonious education of a person.

The task of pedagogical science today is to help the student become perfect through the system of educational institutions. To do this, first of all, you need to learn to learn thoroughly, quickly, economically, and also to learn to think and act professionally.

Pedagogical science as a priority area of science in the Republic of Uzbekistan is focused on increasing the effectiveness of training on the basis of armament with educational models and technologies that have arisen on the basis of new pedagogical theories, improving the system of lifelong education that contributes to the progress of the state and society in independent Uzbekistan.

At the current stage of development of pedagogical science, all financial, economic, political, social and other systems are becoming global. Therefore, it is necessary to arrange them so that they can interact. Only under this condition, in the opinion of well-known teachers, psychologists, politicians, philosophers, economists, it is possible to solve problems in education. It is necessary to theoretically study the formation, directions of development of the education system, its influence on other systems. Because pedagogical science, thanks to its practical integrative function, occupies a special place in the enrichment of pedagogy of different nations. As for Uzbekistan, today it is a multinational republic, where representatives of 136 nations and nationalities live. Over 140 national cultural centers operate here, which is a vivid manifestation of the attention and care of the country's leadership to strengthen interethnic relations and ensure the stability of the social sphere in the republic. Interethnic and interfaith tolerance is a characteristic feature of the historical development of our country, and is considered in the republic as one of the fundamental goals of state policy and social development. "The polyethnism of Uzbekistan is our wealth, the subject of our pride" [1], "emphasizes the President of Uzbekistan Islam Karimov.

The education of a tolerant person who knows how to work, communicate and collaborate with representatives of various nationalities is the basis of the educational activities of teachers, including teachers of secondary schools. But in today's conditions, it is still necessary to study and disseminate the positive features of foreign education systems in this area, theoretically substantiate the positive experience of Uzbekistan in the system of continuing education.

These are the developed charters of educational institutions; provisions and documents that determine the direction of management of institutions of general secondary education and higher educational institutions, as well as documents on the methodological work of heads of preschool educational institutions, directors of secondary schools, academic lyceums, professional colleges, university rectors, heads of district, regional, republican educational institutions, organization retraining and advanced training systems for teaching staff and its management. As for the comprehensive school, here special attention is paid to the principles and directions of the organization of the school principal; goals, objectives and content of the work of the Deputy Director for Academic Affairs; ways and means of work of the school administration with the teaching staff; the theoretical foundations of the scientific organization of teachers' pedagogical activity; pedagogical conditions for creating a spiritual and psychological environment in a comprehensive school.

Pedagogical science, based on the laws of the comprehensive development of the individual, determines the minimum and maximum, creative and heuristic levels of the foundations of the content of education, as well as the results of mastering and mastering education at one or another level, within the framework of state educational standards.

At the current stage of socio-economic development, research in the field of pedagogical psychology involves the search for promising areas. Here it is imperative to ensure the continuity

of pedagogical views of the past and modern pedagogical theories, because these sources require that in each person, in which the frame of reference serving the formation of a perfect person is found, universal, national, moral, entrepreneurial qualities and such features as steadfastness, education were raised in the educational process to the level of spiritual culture.

For these purposes, one must rely both on the spiritual and cultural heritage created in the past, and on the achievements of world civilization today. To ensure the continuity and consistency between modern pedagogical thinking and the views of the past, it is necessary to study the problems of pedagogical philosophy, which is considered the leading foundation of pedagogy. Moreover, the categories of freedom and freedom of thought should form the basis of the content of education and upbringing.

In this case, it becomes necessary to use in practice, first of all, the possibilities of pedagogical science that have not been realized until today. At this stage, pedagogical science has information about the ways of educating the personality, its worldview, its place in society, about the personality and interpersonal relationships, about the individual and the state, the relationship between the individual and society, the duty and duties of the individual, feelings of duty and conscience in a developing personality. Only when conducting scientific research on the philosophical problems of pedagogy as a basic part of pedagogical science, this science will be able to effectively manage the process of education and upbringing. Therefore, pedagogical science, in accordance with the requirements of the time, should theoretically study the activities of educational institutions and develop means for the practical use of the results. It is designed to develop and implement educational institutions principles of leadership of educational institutions. And also to create and theoretically substantiate educational models that ensure the sequence of the main stages of lifelong education and thereby implement the formation of mutually enriching knowledge, skills.

Along with this, pedagogical science should develop its statistical and social components. In determining the goals and objectives of the content of education and upbringing, pedagogical science strives, first of all, to raise the issue of personality development, combining its interests with the interests of the state and society, the activities and worldview of the individual to the level of a factor that develops the state and society.

Given the intensive development of society, the ever-expanding needs and opportunities for its progress, the acceleration of various social, political, economic, scientific, technical, information flows, pedagogical science should take on the task of creating a mechanism for using new forms and means of pedagogical forecasting. Pedagogical science should keep in mind the development and presentation of ways and means to increase the pedagogical activity of a teacher to the level of tolerance, patterns and content of secondary and higher pedagogical education, its new models.

Public organizations and the mahalla occupy a special place in the system of education of students in secondary schools. It is especially important today to create a mechanism for determining and putting into practice pedagogical directions in the management of educational institutions.

The integrative system of pedagogical science also includes the tasks of organizing internal control in an educational institution, combining control with practical assistance to school teachers; creation of scientific and pedagogical foundations for compiling activities for the

development of an educational institution. In addition, a process continues in the continuing education system aimed at educating a person with global thinking, able to actively participate in the socio-cultural process, changing for the better himself and the surrounding reality.

Such a person should be formed taking into account specific features in the field of knowledge, skills and relationships. He must know local / global relationships and dependencies; links between areas of knowledge; common human needs; yourself as a holistic person (your own views, values and worldview, strengths, weaknesses, potential); problematic issues at the interpersonal and global levels.

To see systems and connections, interpersonal relationships, to be able to cooperate, to analyze trends in education; have an individual personal judgment and be able to make decisions; have creative thinking and a comprehensive approach to the issue; be able to solve problems; ensure your individual growth (emotional, intellectual, spiritual, physical).

In addition, have the flexibility to adapt to change; desire to learn and teach others; be able to work in a team; have a sense of solidarity with other people; curiosity about questions, trends, and circumstances; show respect for other people and cultures; Believe in your own abilities and potential; recognize lifelong learning; be sincere, be able to take responsibility.

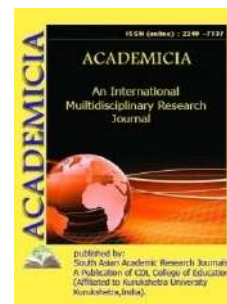
Thus, the key to solving global problems is the integrative function of pedagogical science, which helps transform education into a leading factor in economic growth. At the same time, education forms the investment attractiveness of countries and provides a technological breakthrough. To do this, flexible and accurate adaptation of education to current and future needs of the labor market, the formation of the ability of students to productive and creative work and social partnership is carried out.

It is education that sets the dynamics of the qualitative development of society and is one of the effective fields of national harmony, social integration, a unifying social factor capable of forming tolerance among a growing generation.

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## RESEARCH ACTIVITIES IN THE DEVELOPMENT OF PROFESSIONALISM AT TEACHERS

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### ABSTRACT

*A modern person needs such qualities as: the ability to work effectively with information, be able to work in collaboration, have communication skills, and be responsible for his own education. The essence of personality-oriented pedagogy is to recognize the student as the main acting figure of the entire educational process. An equal student with a teacher is a partner in educational activities. Here, the teacher does not force the student to study the required material, but creates the best (optimal) conditions for the student's self-development. In the traditional educational system, the main guideline was the transfer of ready-made knowledge, which encouraged the mechanical memorization of theoretical material and did not provide an opportunity for students to fulfill themselves.*

**KEYWORDS:** *Personality-Oriented, Effectively, Encouraged*

### INTRODUCTION

In modern conditions of reforming the education system, increasing the requirements for the level of professionalism of a teacher and his personal responsibility for the effectiveness of his work, the problem of improving pedagogical skills appears not only as an objective social need, but also as a subjective need for the teacher himself.

Pedagogical excellence is the art of training and education, requiring constant improvement. This is a professional ability to direct all types of educational work on the comprehensive development of the student, including his worldview and abilities.

In the educational system at all levels, intensive innovative work is being carried out, which is becoming more and more relevant and promising. According to the President of the Association

of Independent Schools of the Southeast United States S. Robinson, first of all, the process of the need to change the learning process is due to economic needs [1].

Accelerated globalization affects not only the availability of jobs, but also the type of available work and, therefore, the knowledge and skills needed to get a job. In the current era of globalization, the need has arisen for high-quality education. A modern teacher should be a teacher-trainer of student learning activities.

The main skills of a 21st century student should be: ability to collaborate, critical thinking, communicative, initiative, ability to solve problems, etc. From the point of view of the constructivist theory of teaching, the purpose of teaching should be oriented toward the achievement by the student of a more thorough understanding of the subject, ensuring the use and application of knowledge in situations outside the classroom. A student of a new generation should be self-regulatory, able to independently acquire the necessary knowledge. "Teachers should be competent not only in the development of students' knowledge and skills, but also in their personal development, taking into account the importance of individualization of education and the formation of students' meta-consciousness - teaching skills on how to learn" [2, 104]. Therefore, in the education system, a transition to the position of personality-oriented pedagogy is necessary. The essence of personality-oriented pedagogy is to recognize the student as the main acting figure of the entire educational process. An equal student with a teacher is a partner in educational activities. Here, the teacher does not force the student to study the required material, but creates the best (optimal) conditions for the student's self-development.

One of the tasks of a modern school is to unleash the potential of all participants in the pedagogical process, providing them with opportunities for the manifestation of creative abilities. The solution to these problems is impossible without changing the teacher's attitude to his activities and a look at teaching and how to teach. Teacher training courses in the framework of retraining and advanced training of pedagogical personnel of the republic have become a big impetus in the system of domestic education in recent years, which made it possible to realize creative potential on the platform of ideas.

In the traditional educational system, the main guideline was the transfer of ready-made knowledge, which encouraged the mechanical memorization of theoretical material and did not provide an opportunity for students to fulfill themselves. Now education is more and more focused on the creation of such technologies and ways of influencing the personality, which provide a balance between social and individual needs and which, by launching the mechanism of self-development, self-improvement, self-education, ensure the individual's readiness to realize his own individuality and changes in society. A modern student from a socially passive becomes active, independently acquiring knowledge. If a student previously broadcast ready-made knowledge in the lessons, now it is a reflective person who can evaluate his actions.

By conducting research in action as part of the school, the quality of instruction can be improved. This process is not so much "in" and "about" education as it is "for" it and helps to analyze, reflect and solve school problems. Research in action is the practice of change or the so-called change-based learning. It should be said that research in action is not a method, it is a strategy consisting of different methods and techniques. I conducted a study in action on the topic "How teaching critical thinking improves the teaching process". To combine the existing experience and new scientific concepts into a single system, to increase the effectiveness of the lesson and

the quality of assimilation of knowledge, to increase the professionalism of teachers, the need arose to introduce this particular aspect into school practice. The purpose of the study in action was to improve the skills of teachers to effectively use the methods and techniques of developing critical thinking.

In order to achieve the highest results, the necessary methods and techniques were used. In an age of competitiveness and demand, having received initial ideas about the ideas of seven modules, teachers began to independently introduce the methods and strategies of innovative methods into the learning process. Coaches helped their colleagues in choosing the direction of work and ways of actively using new approaches in training to improve relevant and necessary skills. To enhance professionalism, "coaching is a promising area for the development of education" [3, 75].

To achieve significant dynamics in the student in improving knowledge, thinking, the effectiveness of practical actions, for the professional formation of the personality of the teacher, mentoring plays a big role. In this process, the mentor offers solutions to complex problems and professional support for students. It contributes to the formation of less qualified teachers' readiness to help themselves, to find their own solutions to problems. The emphasis is on the career and personal development of the student.

To enhance professionalism, achieve success and further improve, coaching and mentoring are effective ways to help teachers. These processes are aimed at analysis, reflection and subsequent actions that will allow the teacher to achieve success in their work.

During practice, teachers need to constantly reflect in order to learn from their experiences. At the moment, every teacher working in a new format is reflective, i.e. a teacher who thinks, analyzes, and studies his experience. Reflection is the key to the teacher's self-development, this is an appeal to the activity with the goal of its further purposeful improvement, which involves the teacher's awareness of his inner world, of his actions. It is in reflection that the results of one's work are comprehended. The teacher sees that through practice, their students comprehend the theory. According to the American philosopher John Dewey, "reflection flips the subject from different angles and with different lighting, so that nothing substantial goes unnoticed ...".

Using modern teaching technologies, teachers are happy to use everything that is new, interesting and useful. They see their task not in teaching the student exact knowledge, but rather in navigating in the vast world of information, choosing the main thing, knowing and understanding the relationships and reasons. Therefore, search and research methods of work are often used, work with additional sources of knowledge, encyclopedias, etc. They use group forms of work with elements of search and research activity, where not only educational, but also educational tasks are solved in the lessons. The lessons taught instill an interest in learning, increase student motivation. In order for children to be interested in learning, it is not at all necessary to make each lesson entertaining. The secret of interest is not at all interesting, but in the successes of children, in their sense of growth, movement, achievement of work. Yesterday I did not understand - today I understood. That's where the joy is! Yesterday I didn't know how - today I learned. That is what happiness is! It turns out that children should study well, it is necessary that they ... study well "[4]. To do this, you need to make out in time and try to develop each child's particular abilities. And how to develop or maintain the diligence and

interest of the child is the teacher's talent, his desire for a situation of success, his kind word, his support, praise and cooperation.

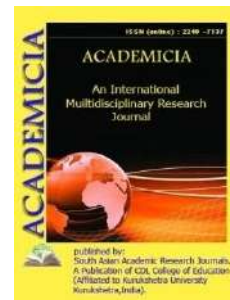
Teachers use the formed conceptual understanding of the theoretical foundations not only in lessons, but also in the educational process. With the introduction of innovative processes in teaching and learning, there has been a positive increase in the quality of knowledge, the dynamics of the activity of students and parents of the school, their interest in those transformations that are taking place in the educational institution. The ongoing parent-teacher meetings and extra-curricular activities in a new format are evidence of this. Parents, interested in school problems, are active in the life of a comprehensive school, create favorable conditions for improving their personality.

Teachers who use strategies and techniques for teaching critical thinking notice that this kind of thinking allows a person to make sound judgments about their actions and the actions of other people, reasonably reason, act logically and consistently, accept the point of view of other people, and acknowledge their mistakes. A person is capable of "... comprehending, analyzing, synthesizing and evaluating information obtained through observation, experience, reflection and reasoning, which in the future may serve as the basis for action." All these transformations are aimed at the formation of independent, motivated, enthusiastic, confident personalities with developed critical thinking.

A modern person needs such qualities as: the ability to work effectively with information, be able to work in collaboration, have communication skills, and be responsible for his own education. We must educate a person who is trained throughout life. To achieve this goal, we must work in collaboration. The famous American industrialist G. Ford said: "Teamwork consists in the ability to work together on a common vision, in the ability to direct individual achievements towards the goals of the organization. This is a stimulant that allows ordinary people to achieve unusual results. " By introducing modern innovations into school practice, teachers have moved away from the traditional form of conducting lessons.

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## MOTIVATIONAL-VALUE DETERMINANTS THAT SHAPE LEADERSHIP ORDERS IN AN INDIVIDUAL DURING ADOLESCENCE

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### ABSTRACT

*Leadership is considered as an integration function of divided (collective) subject. Activity approach suggests that action object wholly determines the psychological peculiarities of action subject, including collective subject. This rule has been discovered when comparing the leadership in the teams of two power plant shops which have sharply different labor object' structures.*

**KEYWORDS:** *Leadership, Sheared Leadership, Collective Team, Activity Approach*

### INTRODUCTION

In modern conditions, interest in the problem of leadership has grown significantly. Scientific studies of the late 20th and early 21st centuries in the field of management indicate the formation of a new managerial paradigm - leadership, which is manifested through the approval of new organizational structures, procedures, behaviors, values and principles as the basis of managerial activity. This is due to the fact that leadership is the key to achieving the effective activities of organizations: planning, regulation, formation of employee motivation, monitoring their activities and other functions that a leader, leader or manager should perform.

The problem of leadership has been of interest to people since ancient times. However, so far no full agreement has been reached on the concept of leadership and the methods of its formation. A systematic, focused study of leadership has been started since the time of Friedrich Taylor.



Systematizing theoretical and experimental foreign studies of leadership, the scientists identified the following main areas: theories of leadership traits (F. Galton, C. Byrd, S. Smith, D. Kruger), situational theories (J. Schneider, L. Carter, P. Pigors ), the theory of “expectations of interaction” (S. Djibb), etc. The problem of leadership as a socio-psychological phenomenon was investigated by K. Levin, R. Wood, S. A. Gib, T. Mitchell, R. Stogdill and others. R. Stogdill, in his book *Leadership Handbook* [1], grouped the basic ideas of scientists on leadership in accordance with eleven key ideas that reflect different approaches to understanding and exploring this phenomenon throughout the 20th century. R.L. Krichevsky supplemented this classification with later, including modern, formulations of Western scientists. In abbreviated form, it looks as follows:

1. Leadership as the center of group interests, when the leader is considered as the spiritual and emotional center of the group, determining its structure, atmosphere, ideology and group processes. In this case, the leader is seen as a central figure, an integrator of group processes and relationships. A similar idea of leadership is contained in the earliest definitions of S. Cooley, E. Mumford, L. Bernard and other authors.

2. Leadership as a characteristic of the personality and the effects generated by it. This understanding of leadership has dominated literature from the 1920s through the 1930s. It is typical for him to consider leadership as a manifestation of the strength of the individual, as a combination of traits that give the individual the ability to motivate others to perform the task, and a leader as possessing the largest, compared with other members of the group, set of desirable personality and character traits. According to R. Stogdill, in the interpretation under discussion, leadership actually acts as an expression of the unidirectional influence of the leader on followers (the latter are usually referred to in the literature as members of the group led by the leader). Moreover, R.L. Krichevsky notes that the approach to leadership as a kind of personal quality or a set of traits and skills, often criticized by academic psychologists, is very popular these days among domestic and foreign practitioners dealing with the selection, certification and training of managerial staff.

3. Leadership as the art of reaching agreement or submission refers to the process or ability of a leader to organize people for effective cooperation, during which he uses mainly various indirect ways of influencing people to encourage them to act in the right direction. In particular, B. Moore defined leadership as an individual's ability to influence followers and achieve obedience, loyalty, respect and cooperation on their part. Similar definitions of leadership are found in F. Philips, W. Bennis, F. Allport and others.

Leadership as action and behavior. The focus here is on the behavioral aspects of leadership, in particular the actions that a leader takes to manage and coordinate the work of a group. According to one of the leading experts in the field under discussion, F. Fiedler, leadership behavior is usually understood as specific actions taken by the leader in the course of managing and coordinating the work of members of his group.

5. Leadership as a tool to achieve a goal or desired result. These concepts recognize the instrumental value of leadership as a means of integrating group members and shaping the coherence of their actions to obtain the desired result. According to R. Kettel, leadership can be determined on the basis of the individual's effective influence on the actions of followers to



achieve the group's common goal. C. Davis presented leadership as a human (subjective) factor that unites a group and motivates it to achieve a certain result.

6. Leadership as an interaction in which people voluntarily unite around a more successful person, feeling a personal interest in him and recognizing that he is an important carrier of the goals, programs and methods of action, as well as the values and norms of the group. According to this approach, the necessary condition for effective leadership is awareness and support from the members of the group. According to P. Drucker, as a result of the leader gaining confidence in other members of the group, they become his followers, and his success determines the willingness of followers to follow him. According to S. Brown, there can be no leader without followers, so the leadership process cannot be separated from the needs and goals of the followers.

7. Leadership as the ability to convince. The distinction between leadership and management is emphasized here. If the latter is the art of forcing and using the power of power or the threat of its use in order to force people to follow a certain direction, then the leader controls with the help of persuasion, encouragement and motivation to action. Such a leader's behavior is characteristic of many political and public, most often informal organizations. Therefore, the definition of leadership as a form of persuasion is more characteristic of authors studying political leadership and social movements. They view beliefs as an important tool to influence people's expectations and beliefs in the social, political, and religious spheres of society. 8. Leadership as the exercise of influence.

In this concept, leadership is considered as a process of influencing the activities of the group as a whole and individual followers in particular. So, according to the definition of R. Stogdill, leadership is the process of influencing the activities of a group to achieve a common goal. According to F. Hayman, leadership is a process of direct interaction, as a result of which the individual influences the behavior of others, prompting them to achieve a certain result. Moreover, not only the leader affects the followers, but he himself experiences their influence. This is written by E. Hollander in the third American edition of the fundamental guide to social psychology, analyzing various definitions of leadership. M. Chemers in the four-volume reference book on social psychology published in Europe, referring to the variety of interpretations of leadership, refers to leadership as the most widespread view of leadership as a process of influence through which a person enlisted the support of others and directed their efforts towards achieving group goals.

9. Leadership as a power relationship. Leaders use power in their actions, in connection with which some authors consider leadership relations, primarily as imperious. In their opinion, the main task of the leader is to make others obey and act in the direction desired by him or the organization. Moreover, the leader, being the initiator of interaction, stimulates followers and establishes control over them, changing their initial intentions. Some leaders, more than others, seek to transform any leadership opportunity into explicit power relationships. Ultimately, this leads to authoritarian trends in leadership. Such definitions, according to O.V. Evtikhova, more applicable to political and organizational leadership.

10. Leadership as a result of role differentiation. According to this concept, leadership can be considered as role differentiation, which is based on the process of interaction and mutual influence. M. and K. Sheriff understood the leadership assigned to one of the group members as

a special role within the system of relationships, which is determined by the mutual expectations of the leader and followers. A similar point of view was later developed by S. Gibb, who argued that leadership is one of the aspects of the role differentiation process and, like any other role behavior, acts as a function of the dynamic interaction of personal properties and the social system.

The above classification of various approaches to the study of leadership shows how broad and diverse the views of researchers on the nature and nature of leadership. Each of the above models reveals only one of the facets of the nature of this phenomenon.

There are also many definitions of leadership as the degree of the leader's leading influence on the group in order to optimize the solution of the task. Leadership is also considered as managerial status, a social position related to decision-making in a managerial position.

Such an interpretation of leadership proceeds from a structurally functional approach, which provides for the consideration of the group as a complex, hierarchically organized system of social positions and roles. The occupation of positions in it related to the performance of managerial functions and gives a person the status of a leader. Moreover, leadership is considered as:

- Influence on a group of people, which contributes to their achievement of common ideas;
- Interpersonal communication, manifested through the communicative process and aimed at achieving the goal;
- The ability to influence individuals and groups to make them work together;
- The main process of organizing group decision-making, the historically formed social need of people to organize the process of their activities.

Leadership is also one of the processes of organizing and managing a small social group, which contributes to the achievement of group goals on time and with optimal effect. It is characterized by relations of domination and submission, power and influence in the system of interpersonal communication in a group. This process is largely determined by the existing social relations in society. From the above functions it follows that leadership is a process of influence on people generated by the system of informal relations itself, and management presupposes the presence of clearly structured formal relations through which it is realized.

Leader (from the English leader - leading, first, leading the way) - a person in a group who enjoys a large, recognized authority, has influence, which manifests itself as controlling actions. At the same time, the group recognizes its right to make responsible decisions in situations significant for it. This is the most authoritative person, really occupying a central role in organizing joint activities and regulating relationships in a group. A leader is a person whose opinion is heard, who can lead people, who have learned to control, motivate and guide himself and others to achieve his goals and solve assigned tasks. The influence of a leader usually has two sources:

- Credibility (members of the group recognize the leader by position, experience, professionalism, education, etc.);
- Charismatic personality traits (humanity, morality, etc.).

An initial understanding of business leadership meant being ahead or first: occupying a high position, first place.

But in the 21st century, leadership began to be viewed from a different angle. It involves not so much managing material resources as managing time, knowledge, and trust of group members. Leadership does not exist in isolation from the successes of those people on whom the achievement of the desired result depends, it is also associated with the satisfaction received from work. Scientists interpret modern business leadership in two ways.

First, all leadership is inseparable from those who constitute a group of followers. The key to leadership here is the acquisition of as many followers from among the employees as possible. This is what most business leaders do.

Secondly, self-confident and visionary leaders turn followers into new leaders and, thus, a group of followers becomes a team of leaders. This approach allows you to replicate the business, increases the market activity of the enterprise and the level of its success, which is determined by the capabilities of his team. Therefore, the effectiveness of leadership depends on the ability of the leader to provide the opportunity for the development of those who are next to him in the same team, which strengthens the organization's potential.

So, leadership competency is most clearly manifested in the ability to create a team of leaders. The installation of great business leaders is a positive interaction with the group. In this case, the leader takes a position of interdependence with other leaders and maintains relations with them that encourage cooperation rather than rivalry. Success is achieved by the skill of the whole group, and not just the skill of the leader. To increase group effectiveness, it is necessary to learn not only how to train leaders most productively, but also to create an organizational environment in which a leader can work well. In this case, leadership is seen as a process of organizing interpersonal relationships in a group, and a leader as a subject of control of this process. The possibility of leadership training is allowed, as the experience of leadership behavior can be formed, including in simulated situations, thereby developing appropriate leadership qualities relevant in modern conditions. An effective leader can successfully use all types of communications, all communication channels: verbal, book, multimedia and others. For the formation of an effective leader, it is necessary that the social subject be a "communicative personality", which helps to influence the followers, this resource of influence has a pronounced personality component. Currently, the concepts of "leader" and "success" have become synonymous. A leader must be successful. The only way to transform a person into a leader is to, as himself, begin to act using all his abilities, skills, abilities, energy, which are either given by nature, or those that they have already developed. Leaders are not born, they become! Leader functions arise from two controversial aspects of group life. In relation to the external goal related to the business sphere of the group's life, one can distinguish such functions as:

- ☐ Awareness of the group goal;
- ☐ Analysis and control of the external environment;
- ☐ Development of a plan to achieve the goal;
- ☐ Distribution of responsibilities of group members and organization of their interaction;

□ ensuring the external security of the group, maintaining contacts and interaction with other groups;

In relation to the internal life of the group, the leader has the following functions:

- ensuring the inclusion of group members in joint activities;
- ensuring the independence of group members and their individuality;
- ensuring the efficiency of the group structure, the influence of some members of the group on others, necessary to achieve the group goal;
- ensuring control, distribution of responsibility and power in the group in an optimal way;
- Maximum use of the capabilities and abilities of group members to achieve success.

A dynamic leader is a stabilizer of group interaction, but he is also a destroyer of stability, as he is forced to do this, directing the group to achieve an external goal. So the function of a leader is twofold, and he himself is an embodied contradiction. And only harmoniously combining these opposites, can he take place as a leader. After all, a group, like any dynamic system, develops in the unity of opposites, the resolution of conflicts between which is the source of movement. Under these conditions, the function of a leader is to stabilize this movement, keep it within the boundaries of the measure, and compensate for shortcomings. This is where the compensatory or complementary function of the leader in the group is manifested. According to scientists, the leader's strength consists of personal qualities and experience, vision of the future and self-confidence, knowledge of their strengths and weaknesses. It is due to the presence of the leader's potential, its disclosure, development and successful self-realization. There are many definitions of the qualities of an effective leader. At the same time, there is no such list of qualities the possession of which would guarantee leadership itself. Situations and tasks are no less important, and the group in which leadership takes place is not only an environment, but also an element of this leadership, often more important than others. Leaders not only indicate the direction, but also show their followers how to achieve their goals, awaken their business activity and responsibility. A leader can understand the importance of others to achieve overall success. He is obliged and able to see the prospects of employees, employers, customers and 17 colleagues.

Vision of the future favorably distinguishes the leader along with a real assessment of the current situation. Thus, the role of a leader is crucial in organizing the joint activities of the group and ensuring the effectiveness of its work. The personality of the leader and the style of his behavior as a dominant person largely determine the fate of each participant and the whole group as a whole. In other words, leaders influence the socialization of individuals. How diverse are people and groups, just as diverse are leaders and their behavior. But in all cases one regularity can be traced: the leader and the style of his behavior reflect the circumstances, the essence of the group, as well as the personality traits of not only the leader himself, but also his followers.

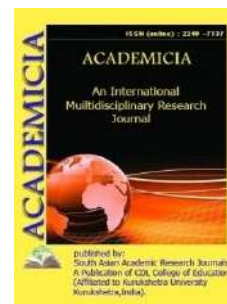
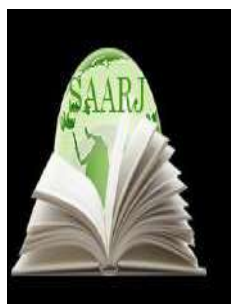
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## ENVIRONMENTAL ISSUES IN UZBEKISTAN AT THE MODERN STAGE OF DEVELOPMENT

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### ABSTRACT

*The main environmental problems that pose a real threat to the sustainable socio-economic development of the Republic of Uzbekistan are global, regional and national in nature. The strategy for ensuring the environmental safety of the Republic of Uzbekistan proceeds from the vital interests of the individual, society and the state in the environmental sphere. The article provides information on environmental safety issues in the Republic of Uzbekistan, in particular, on reforms in the field of environmental protection at the present, new stage of development of the Republic of Uzbekistan.*

**KEYWORDS:** *Strategy, Environment, Ecology, Safety, Legislation, Cooperation.*

### INTRODUCTION

The environmental degradation of our planet, especially air, water, and soil pollution from toxic chemicals, hazardous waste, and other factors, is a global concern. The modern concept of socio-economic development of society, based on meeting the ever-growing needs of human-being, has encountered many contradictions.

In the region of Central Asia, one of the most dangerous zones of environmental disaster has formed, becoming a tragedy for the lives of many people. Severe shortage and pollution of water resources, air pollution, desertification, qualitative deterioration of land resources, drying of the Aral Sea are the means of the threat to the sustainable development of the region. According to its environmental and socio-economic impact, the Aral Sea problem, according to the UN experts, is one of the greatest disasters of the twentieth century.



The main environmental problems that pose a real threat to the sustainable socio-economic development of the Republic of Uzbekistan are global, regional and national in nature.

Global problems: The Republic of Uzbekistan is part of a worldwide movement to mitigate and weaken modern environmental challenges, such as the destruction of the ozone layer, climate change, and the prevention of desertification and land degradation.

**Regional and national issues:**

The resource intensity and raw materials orientation of the economies of the countries of the region, an inefficient management system and intensive nature management have led to the formation of a number of common environmental problems in the territory of Central Asian countries.

Unsustainable use of the region's natural resources, including water-land, fuel and energy, biological, deserves special attention, without taking into account further development prospects.

The Strategy for ensuring environmental safety of the Republic of Uzbekistan proceeds from the vital interests of the individual, society and the state in the environmental sphere, as defined by the Concept of National Security and the Constitution of the Republic of Uzbekistan.

The vital interests of the individual include: ensuring optimal environmental conditions for human life, protecting people's health.

The vital interests of the state include:

- Sustainable development, stability of the environmental situation in the region, the formation of a healthy lifestyle;
- ensuring a high level of scientific and technological development in priority sectors of the economy;
- Creation of an effective system of national security, ensuring the organic inclusion of Uzbekistan in the regional and global systems of collective security and cooperation and their structures.

During the years of independence, Uzbekistan became a full-fledged subject international environmental political relations, strengthened strategic directions and legal foundations of their policies. A fundamental regulatory framework has been created in the country, about 30 laws and more than 150 regulatory documents governing environmental protection and nature management have been adopted and are in force. It provides for the formation and improvement of an effective legal mechanism for ensuring public participation in this process, the consistent implementation of the environmental control system.

The environmental policy of the Republic of Uzbekistan is carried out on the basis of the Constitution, legislation, the National Security Concept of the Republic of Uzbekistan, the principles of the Rio de Janeiro and Johannesburg Declarations on the Environment and

Sustainable Development, taking into account the obligations of the republic arising from international conventions and agreements, as well as legislative experience of leading states.

Since, the Republic of Uzbekistan is a party to a number of international environmental treaties and regional agreements. The country is a party to three Rio conventions: the Climate Change Convention, the Convention on Biological Diversity and the Convention to Combat Desertification. In addition to them, the country signed and ratified the following treaties: Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (12.22.1995); Convention for the Protection of the World Cultural and Natural Heritage (12.22.1995); Convention on International Trade in Endangered Species of Wild Fauna and Flora (07.01.1997); Bonn Convention on the Conservation of Migratory Species of Wild Animals (05.01.1998); Stockholm Convention on Persistent Organic Pollutants (05.22.2001), Paris Agreement (02.10.2018), International Plant Protection Convention (12.23.2019).

## **MATERIALS AND DISCUSSION**

The adoption and implementation of the Strategy of Action in five prior initiatives of the country's development in 2017-2021 became the basis for the beginning of a new stage in the development of the Republic of Uzbekistan, characterized by deep and large-scale transformations in all spheres of life and activities of the state.

In order to ensure environmental safety, the development of social infrastructure that improves the living conditions of the population and other tasks stipulated in the Action Strategy for the five priority initiatives of development of the Republic of Uzbekistan in 2017-2021, the Decree of the President of the Republic of Uzbekistan "On improving the public administration system in the field of ecology and environmental protection", the resolution of the President of the Republic of Uzbekistan "On measures to ensure the organization of activities of the State Committee of the Republic of Uzbekistan on Ecology and Environmental Protection and "On measures to radically improve and develop the waste management system for the period of 2017-2021".

In accordance with the decree of the President of the Republic of Uzbekistan dated April 21, 2017, the transformed State Committee of the Republic of Uzbekistan on ecology and environmental protection was entrusted with broad tasks to improve the environmental situation, collect, store, transport, recycle and process household waste.

On February 2, 2018, the meeting was held under the chairmanship of the President of the Republic of Uzbekistan Shavkat Mirziyoyev, dedicated to the analysis of ongoing work to improve the ecological situation and environmental protection, and to identify urgent tasks in this area.

The meeting noted the need to strengthen state supervision in the field of pollution prevention. For example, in such industrial cities as Andijan, Angren, Bukhara, Navoi, Fergana, Almalyk, Bekabad, Chirchik, Tashkent and Nukus, the level of air dust exceeds sanitary standards by an average of 2.7 times.

In connection with this and other factors, the decision-makers of the State Committee for Ecology and Environmental Protection were entrusted with the task of developing, based on international experience, the National Concept for Environmental Protection.

In order to identify priority areas of state policy in the field of environmental protection, introduce effective mechanisms for the prevention, detection and suppression of violations of environmental laws, strengthen the personal responsibility of heads of state bodies and business entities, citizens for the sanitary and environmental condition of settlements of the republic, as well as ensure the achievement of National goals and objectives in the field of sustainable development for the period up to 2030 by Presidential Decree Republic of Uzbekistan dated October 30, 2019 No. UP-5863 dated October 30, 2019, the Concept of Environmental Protection of the Republic of Uzbekistan until 2030 was approved, providing for measures to:

- Preservation and quality assurance of environmental objects (atmospheric air, water, land, soil, subsoil, biodiversity, protected natural areas) from anthropogenic impact and other negative factors;
- The prior usage of materials, products, industrial and other facilities that pose the least environmental hazard;
- expansion of protected natural areas;
- ensuring the environmentally sound use of toxic chemical and radioactive substances;
- Improving the environmentally sound waste management system;
- the formation of an ecological culture of the population, increasing the level of transparency of the activities of state bodies in the field of environmental protection and strengthening the role of civil society.

On October 4, 2019, the Presidential Decree approved the Strategy for the transition of the Republic of Uzbekistan to the green economy for the period of 2019-2030. The main objectives of the strategy:

- improving the energy efficiency of the economy and the rational consumption of natural resources;
- Inclusion of green criteria in priority areas of state investments and expenditures;
- Government incentives for projects to implement the principles of a green economy;
- Training for the green economy;
- Strengthening international cooperation in the field of "green" economy and others.

For the conditions of Uzbekistan, renewable energy sources such as solar, wind, small hydropower, biomass and geothermal energy are relevant. According to expert estimates, the potential of renewable energy in our country is equivalent to the use of 51 billion tons of oil. The technologies existing today make it possible to obtain energy equivalent to 179 million tons of oil, which is three times higher than the volume of fuel extracted in the republic, and also to prevent the emissions of millions of tons of carbon dioxide, various sulfur compounds, nitric oxide and other pollutants.

The Ecological Party of Uzbekistan was established at the Constituent Congress on January 8, 2019. The creation of the Ecoparty is a special page in the history of Uzbekistan, a strategic

direction in the development of the state. This has become a kind of brand of modern Uzbekistan, indicating a prior attention to environmental problems.

Acting under the motto “We are responsible for the future!”, The party considers its main mission to ensure the rights of present and future generations to live in a favorable environment, to consolidate the efforts of all social groups to achieve environmental sustainability and improve public health indicators.

At the initiative of the Ecological Party of Uzbekistan, a decision was made that concerned the public and caused widespread debate on social networks about the falling of trees. At the party's proposal, the Concept of Environmental Protection of the Republic of Uzbekistan until 2030, approved by the Decree of the President of the country of October 30, 2019, declared a moratorium on falling of valuable tree species from November 1, 2019 to December 31, 2020.

In general, the party's priorities are as follows:

- to ensure that the task of achieving environmental safety becomes a priority of state policy;
- the search and elimination of the causes of environmental, socio-economic and other problems, and not the fight against their consequences;
- the unification of efforts of all citizens aimed at protecting the environment and the formation of an environmentally sustainable society.

## CONCLUSION

Over the years of independence, the republic has created a modern, fundamental regulatory framework to ensure environmental protection and rational use of natural resources.

Uzbekistan fulfills its obligations to achieve the UN Sustainable Development Goals, recognizing their importance and relevance in the context of national sustainable development.

To achieve these goals in our country only in recent years, a number of strategic documents have been adopted: an Action Strategy for the five priority areas for the development of Uzbekistan in 2017-2021, a Strategy for the transition to a green economy, a Strategy for the further development and reform of the electric power industry of the Republic of Uzbekistan, The concept of environmental protection of the Republic of Uzbekistan until 2030 and others.

On January 8, 2019, the Ecological Party of Uzbekistan was formed. Its main goals are to ensure the implementation of state policy aimed at achieving sustainable development, environmental safety, creating a favorable environment, preserving natural resources for present and future generations, and helping to ensure that environmental protection and the conservation of natural resources become the business of the state, and society, and every citizen of the country. The implementation of these measures in our country will ensure the sustainable development of the social, economic and environmental spheres, the essence of which is to establish the principles of the right of every citizen to a favorable environment, to meet social needs without harming future generations, and wise use of natural resources.

Signing and subsequent ratification of the Paris Climate Agreement, which has become the most important document of the world community in recent years, was important for Uzbekistan. In

order to fulfill the country's obligations under the Paris Agreement, a Strategy was developed and approved on October 4, 2019 by the President's Decree on the transition of the Republic of Uzbekistan to the green economy for the period 2019-2030, aimed at the consistent modernization of industry, improving energy efficiency and energy saving in key sectors of the economy, which will stabilize greenhouse gas emissions.

The country is conducting consistent work in the field of environmental protection, the rational use of natural resources, and the improvement of sanitary and environmental conditions.

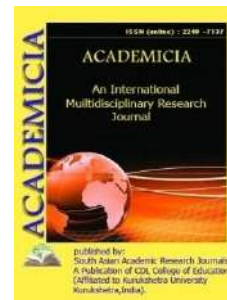
In the past two years, Uzbekistan has taken unprecedented measures to mitigate the socio-economic and environmental consequences of the Aral Sea disaster. 461 thousand hectares were sown on seeds on a dry sea bottom, and furrows were prepared for planting seedlings of salt tolerant plants on an area of 1.1 million hectares. These and other measures are aimed at counteracting the removal of dust and salt from the dried seabed, mitigating the impact of climate warming in the region on the environment and public health.

A state system for monitoring the state of the environment has been created and operates in the republic, which covers all objects of nature conservation. Certain experience has been accumulated, appropriate methods and databases have been created. At the same time, a unified monitoring system requires improvement using the latest world technologies.

One of the urgent tasks to improve the ecological situation and protect the environment remains the systemic processing and disposal of household waste with the widespread introduction of the experience of leading foreign countries.

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## **FEATURES OF ELECTRONIC LEARNING**

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### **ABSTRACT**

*This article gives some definitions of e-learning given by scientists and also discusses the pedagogical features of e-learning.*

**KEYWORDS:** *E-Learning, Internet Education, Pedagogical Technologies, Traditional Education, Pedagogical Principles, Virtual Sphere.*

### **INTRODUCTION**

In this article, we will look at e-learning and its pedagogical features. On this basis, we use telecommunication networks and technologies that provide information stored in the database as e-learning and used in the preparation of educational programs, its processing technologies, tools and broadcasts on these information lines. We understand the organization of the learning process that ensures the interaction of all participants in the learning process. (used by Бубнов В.А. [1]). We will also look at some of the definitions given to e-learning by other scholars.

University of Melbourne professors M.S. Bowles described e-learning as "the use of the Internet as an educational tool has led to tremendous change in society." (used by Bowles, M.S. [2]). But to date, no agreement has been reached on the main content of e-learning. Gerhard Casper, a former president of Stanford University at the time, said, "I don't really know how e-learning will develop. But I can say for sure that in the next few decades, we will see a transition from full-time education to online education." (used by Muller, H. [3]).

The term "e-learning" is widely used to refer to "computing and communication technologies for teaching and learning. Some of them are used effectively, and some do not work well." (used by



Allen, M. [4]). M.Allen described e-learning as the delivery of well-designed curricula using computer technology.

E-learning can be defined through teaching and learning based on pedagogical technologies.Chin Paul describes it as “e-learning is not a means of transmitting content, but an interactive process between teacher and student”. (used by Chin, H. [6]). M. Sloman describes e-learning as teaching using electronic means, i.e. the Internet, intranet or extranet (used by Sloman, M. [7]).

Shank and Sitze argue that “e-learning involves the use of network technologies such as the Internet and business networks to provide, apply and evaluate formal and informal learning”. (used by Shank, P. & Sitze, A. [6]). They also stressed that online education doesn't just have to be online.The use of technology in education is the foundation of extracurricular education.

Based on the above definitions, we consider the role of e-learning in pedagogy.Modern technology has entered traditional education in a way that has updated and preserved some aspects.The most important of these is the e-textbook, which allows students to use once-created multimedia educational content multiple times in an interactive mode.In this way, students not only follow the process of creating content, but also create it themselves.E-learning shapes the content of social networks, forums, conversations.Wiki and Internet forums are creating new forms of communication. In addition, they allow the development of a dynamic model of improving the content of the site, the formation of educational materials.Modern technologies ensure the popularity and speed of the communication process.

In the traditional education system, textbooks are updated every 3-4 years, but e-learning materials are updated daily.This shows how important modern technologies are in the educational process.It should be noted that e-learning allows the transition to another source through a hyperlink in an optional e-learning resource while retaining traditional learning features.

Today, the teacher must learn to communicate remotely.On this basis, it can perform tasks such as creating, supplementing, editing training materials.The lectures used in traditional education are not organized here.In traditional education, students are given previously unknown information. In the process of e-learning, all learning materials are delivered to students in various formats of information in an organized manner. So now the teacher takes a creative approach to the lecture, provides the sources of information used in the lecture to prepare the students independently, or the students themselves look for additional sources of information on the lecture. Then, on the basis of this, the report will be discussed in the form of questions and answers.During the discussion, students 'opinions on the report are considered and a general conclusion is reached.

The use of pedagogical technologies in e-learning should be adapted to the level of pedagogical processes.The use of modern technological tools (e-textbooks, forum LMS, automated search in databases) in the implementation of reproductive education leads e-learning to traditional software education.

Modern e-learning allows to implement open learning methods in the field of public education:

- no time limit;
- learner, listener - is a subject in the case of alternative learning opportunities, in which he must make an important decision;
- goal - the subjectivity and originality of the person in active work..

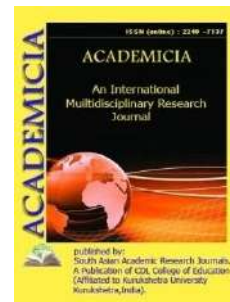
The study of the course in the virtual field requires the construction of the learning process on the principle of openness, such as the implementation of the pedagogical process in a subject-oriented form, and provides the following:

- content (educational material using multimedia);
- competence of the student;
- study guide to help students work on the course;
- Syllabus;
- the tutor function of the teacher.

This is another demonstration of how important the e-learning system is today.

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## TASK CAUCHY AND CARLEMAN FUNCTION

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### ABSTRACT

*In this paper we discuss the continuation polyharmonic function its values and the values of its normal derivative on the smooth side of  $S$  the boundary of the infinite  $D$ . Using this integral representation, we obtain some properties of the polyharmonic functions of this class.*

**KEYWORDS:** *Cauchy Problem, Carleman Function, Polyharmonic Functions, Partial Derivatives, Normal Derivatives.*

### INTRODUCTION

The paper proposes an explicit continuation formula for solving the Cauchy problem for the polyharmonic equation in the statement of M.M. Lavrentieva. The continuation formulas found here are complete analogues of the classical Riemann, Voltaire and Hadamard formulas that they constructed to solve the Cauchy problem in the theory of linear equations of the second order. Sh. Yarmukhamedov in 2003 in the article "The Cauchy Problem for the Polyharmonic Equation" having solved the problem, obtained the result when the region is simply connected with the boundary  $-\partial D_\rho$ , consisting of a cone surface. Juraeva N.Yu. 2004 in the article "The

Cauchy Problem for Polyharmonic Functions" [3], proved some theorems when  $D$  - unlimited area lying in the layer  $\{y: y = (y_1, y_2, \dots, y_m), (y_1, y_2, \dots, y_m) \in R^m, 0 < y_m < h\}$  with border  $\partial D = L \cup S$ ,  $L = \{y: y_m = 0\}$ ,  $S = \{y: y_m = f(y_1, \dots, y_{m-1})\}$  Where  $f(y_1, \dots, y_{m-1})$  has first-order bounded partial derivatives.

In this paper, similar results are obtained in the case when the region has the following form:

Let be  $R^m$  -  $m$ - dimensional real Euclidean space,  
 $x = (x_1, x_2, x_3, \dots, x_m)$ ,  $y = (y_1, y_2, y_3, \dots, y_m)$ ,  $x \in R^m, y \in R^m$

$$x' = (0, x_2, \dots, x_m), y' = (0, y_2, \dots, y_m), r^2 = |x - y|, s = |x' - y'|^2, h = \frac{\pi}{\rho}, \rho > 0, \alpha^2 = s$$

$D$  - unlimited area lying in the layer  $\{y: y = (y_1, y_2, \dots, y_m) \in R, 0 < y_m < h\}$  with border  $\partial D = \{y: y = (y_1, y_2, \dots, y_m), y_1 = 0\} \cup S$ ,  $S = \{y: y = (y_1, \dots, y_m), y_m = f(y_1, \dots, y_{m-1})\}$

где  $f(y_1, \dots, y_{m-1})$  the function satisfies the Lyapunov condition with a fixed constant.

The following problem is solved (Cauchy problem). Let me  $u \in C^{2n}(D)$  и  $\Delta^n u(y) = 0, y \in D$  (1)

$$u(y) = F_0(y), \Delta u(y) = F_1(y), \dots, \Delta^{n-1} u(y) = F_{n-1}(y), y \in S$$

$$\frac{du(y)}{d\bar{n}} = G_0(y), \frac{d\Delta u(y)}{d\bar{n}} = G_1(y), \dots, \frac{d\Delta^{n-1} u(y)}{d\bar{n}} = G_{n-1}(y), y \in S, \quad (2)$$

where  $F_i(y), G_i(y)$  given on  $\partial D$  continuous functions,  $\bar{n}$  - external normal to  $\partial D$ . Restore required  $u(y)$  в  $D$ .

We assume that the solution  $u(y)$  tasks (1)–(2) exists and is continuously differentiable,  $2n - 1$  times up to the end points of the boundary and satisfies a certain growth condition (correctness class), which ensures the uniqueness of the solution. Then an explicit continuation formula is established, which is a multidimensional analogue of the classical Carleman formula from the theory of analytic functions.

Functions  $\varphi_\sigma(y, x)$  и  $\Phi_\sigma(y, x)$  at  $s > 0, \sigma \geq 0$  we define the following equalities: if

$$m = 2k, k = 2, 3, \dots \text{to } (-1)^{k-1} (k-2)! \varphi_\sigma(y, x) K(x_m) = \frac{d^{k-2}}{ds^{k-2}} \operatorname{Im} \left[ \frac{K(\omega)}{\sqrt{s}(\omega - x_1)} \right], \quad \omega = i\sqrt{s} + y_1$$

if  $m = 2k + 1, k = 2, 3, \dots \text{to}$

$$(-1)^{k-1} 2^{-k} (k-2)! \varphi_\sigma(y, x) K(x_m) = \frac{d^{k-1}}{ds^{k-1}} \operatorname{Im} \int_0^\infty \left[ \frac{K(\omega)}{\omega - x_1} \right] \frac{du}{\sqrt{u^2 + s}}, \quad \omega = i\sqrt{s + u^2} + y_1$$

With all the odd  $m \geq 3$ , as well as even  $m$  condition  $2n < m$ , we believe

$$\Phi_\sigma(y, x) = C_{n,m} r^{2(n-1)} \varphi_\sigma(y, x), \quad C_{n,m} = (-1)^{n-1} \left( \Gamma\left(\frac{m}{2} - n\right) 2^{2n} \pi^{\frac{m}{2}} \Gamma(n) \right)^{-1}$$

For all even  $m, m = 2k, k = 1, 2, \dots$  with the condition  $2n \geq m$  we believe

$$\Phi_\sigma(y, x) = C_{n,m} \int_0^\infty \operatorname{Im} \left[ \frac{K(\omega)}{\omega - x_1} \right] (u^2 - s)^{n-k} du \quad \omega = iu + y_1 \text{ where}$$

$C_{n,m} = (-1)^{\frac{m}{2}-1} \left( \Gamma(n) \Gamma\left(n - \frac{m}{2} + 1\right) 2^{2n} \pi^{\frac{m}{2}} \Gamma(n) \right)^{-1}$  and function  $K(\omega)$  has the form

$$K(\omega) = \frac{\exp(\sigma\omega - a \operatorname{chi} \rho_1(\omega - h/2))}{(\omega + x_m + 3h)^{n+1}} \quad m = 2n + 1, n \geq 1 \quad K(\omega) = \frac{\exp(\sigma\omega - a \operatorname{chi} \rho_1(\omega - h/2))}{(\omega + x_m + 3h)^n}$$

$m = 2n, n \geq 2,$

**Theorem 1.** For function  $\varphi_\sigma(y, x)$  occurs inequality

$$|\varphi_\sigma(y, x)| \leq \begin{cases} C \sigma^{n-2} \alpha^{-m} \exp(\sigma y_m - a \cos \rho_1 y_m \operatorname{chi} \rho_1 \alpha), & \alpha \geq 1 \\ C \sigma^{n-2} (r^{-m+2} + \alpha^{-1} r^{-m+3} + \sum_{p=1}^{n-2} \alpha^{-2p} r^{-2(n-p-1)}) \exp(\sigma y_m - a \cos \rho_1 y_m \operatorname{chi} \rho_1 \alpha), & 0 < \alpha \leq 1 \end{cases}$$

**Lemma -1.** If  $\varphi_\sigma(y, x)$  harmonic function в  $R^m$  by variable  $x$  including point  $y$ , then

$$\Delta r^k \varphi_\sigma(y, x) = r^{k-2} \varphi_{\sigma,1}(y, x),$$

equality is true where

$$\varphi_{\sigma,1}(y, x) = \sum_{j=1}^n (x_j - y_j) \frac{\partial \varphi_\sigma(y, x)}{\partial x_j} + \varphi_\sigma(y, x)$$

function is also a harmonic function в  $R^m$  by variable  $x$  including point  $y$ .

$$\frac{\partial r^k \varphi_\sigma(y, x)}{\partial x_j} = \frac{\partial r^k}{\partial x_j} \varphi_\sigma(y, x) + r^k \frac{\partial \varphi_\sigma(y, x)}{\partial x_j} = k(x_j - y_j) r^{k-2} \varphi_\sigma(y, x) + r^k \frac{\partial \varphi_\sigma(y, x)}{\partial x_j}.$$

**Evidence:** 
$$\frac{\partial^2 r^k \varphi_\sigma(y, x)}{\partial x_j^2} = k r^{k-2} \varphi_\sigma(y, x) + k(x_j - y_j) \frac{\partial r^{k-2}}{\partial x_j} \varphi_\sigma(y, x) + k(x_j - y_j) r^{k-2} \frac{\partial \varphi_\sigma(y, x)}{\partial x_j} + \frac{\partial r^k}{\partial x_j} \frac{\partial \varphi_\sigma(y, x)}{\partial x_j} + r^k \frac{\partial^2 \varphi_\sigma(y, x)}{\partial x_j^2}.$$

There fore

$$\begin{aligned} \sum_{j=1}^n \frac{\partial^2 r^k \varphi_\sigma(y, x)}{\partial x_j^2} &= \Delta r^k \varphi_\sigma(y, x) = k n r^{k-2} \varphi_\sigma(y, x) + \sum_{j=1}^n k(x_j - y_j) \left( \frac{\partial r^{k-2}}{\partial x_j} \right) \varphi_\sigma(y, x) \\ &+ 2k \sum_{j=1}^n (x_j - y_j) r^{k-2} \frac{\partial \varphi_\sigma(y, x)}{\partial x_j} + \sum_{j=1}^n r^k \frac{\partial^2 \varphi_\sigma(y, x)}{\partial x_j^2} \end{aligned}$$

as  $\varphi_\sigma(y, x)$  harmonic function в  $R^m$  by variable  $x$  including point  $y$

$$k \sum_{j=1}^n (x_j - y_j) \frac{\partial r^{k-2}}{\partial y_j} \varphi_{\sigma}(y, x) = k \sum_{j=1}^n (k-2)(x_j - y_j)^2 r^{k-4} \varphi_{\sigma}(y, x) =$$

$$= k(k-2) \sum_{j=1}^n (x_j - y_j)^2 r^{k-4} \varphi_{\sigma}(y, x) = k(k-2) r^{k-2} \varphi_{\sigma}(y, x)$$

$$\Delta r^k \varphi_{\sigma}(y, x) = (kn + k(k-2)) r^{k-2} \varphi_{\sigma}(y, x) + 2k r^{k-2} \sum_{j=1}^n (x_j - y_j) \frac{\partial \varphi_{\sigma}(y, x)}{\partial x_j}$$

$$\text{If } \varphi_{\sigma,1}(y, x) = (kn + k(k-2)) \varphi_{\sigma}(y, x) + 2k \sum_{j=1}^n (x_j - y_j) \frac{\partial \varphi_{\sigma}(y, x)}{\partial x_j}$$

Marking,  $c = (kn + k(k-2)) = k(n + k - 2)$ , we have

$$\frac{\partial \varphi_{\sigma,1}(y, x)}{\partial x_i} = c \frac{\partial}{\partial x_i} \varphi_{\sigma}(y, x) + 2k \left( (x_1 - y_1) \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_1 \partial x_i} + \dots + (x_{i-1} - y_{i-1}) \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_{i-1} \partial x_i} \right) +$$

$$+ 2k \left( \frac{\partial \varphi_{\sigma}(y, x)}{\partial x_i} + (x_i - y_i) \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_i^2} + \dots + (x_n - y_n) \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_n \partial x_i} \right)$$

In addition, for a second-order partial derivative

$$\frac{\partial^2 \varphi_{\sigma,1}(y, x)}{\partial x_i^2} = \frac{\partial}{\partial x_i} \left( c \frac{\partial}{\partial x_i} \varphi_{\sigma}(y, x) + 2k \frac{\partial}{\partial x_i} \sum_{j=1}^n (x_j - y_j) \frac{\partial \varphi_{\sigma}(y, x)}{\partial x_j} \right) =$$

$$= c \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_i^2} + 2k \left( (x_1 - y_1) \frac{\partial^3 \varphi_{\sigma}(y, x)}{\partial x_1 \partial x_i^2} + \dots + (x_{i-1} - y_{i-1}) \frac{\partial^3 \varphi_{\sigma}(y, x)}{\partial x_{i-1} \partial x_i^2} \right) +$$

$$+ 2k \left( 2 \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_i^2} + (x_i - y_i) \frac{\partial^3 \varphi_{\sigma}(y, x)}{\partial x_i^3} + \dots + (x_n - y_n) \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_n \partial x_i^2} \right)$$

since the harmonic function in a variable including the point

$$\Delta \varphi_{\sigma,1}(y, x) = \sum_{j=1}^n \frac{\partial^2 \varphi_{\sigma,1}(y, x)}{\partial x_j^2} = 2 \sum_{j=1}^n \frac{\partial^2 \varphi_{\sigma}(y, x)}{\partial x_j^2} + \sum_{j=1}^n (x_j - y_j) \frac{\partial \Delta \varphi_{\sigma}(y, x)}{\partial x_j}$$

this implies the assertion of the lemma.

**Consequence 1.** For function  $\Phi_{\sigma}(y, x)$  fair estimate

$$|\Phi_{\sigma}(y, x)| \leq Cr^{2n-2} \alpha^{-m} \exp(\sigma y_m - a \cos \rho_1 \beta_2 ch \rho_1 \alpha), \quad \alpha \geq 1$$

$$|\Phi_{\sigma}(y, x)| \leq C \sigma^{n-2} (r^{2n-m} + \alpha^{-1} r^{2n-m+1} + \sum_{p=1}^{n-2} \alpha^{-2p} r^{2(p+2)}) \exp(\sigma y_m - a \cos \rho_1 \beta_2 ch \rho_1 \alpha), \quad 0 < \alpha \leq 1$$

**Theorem 2.** For function  $\varphi_{\sigma}(y, x)$  there is an inequality



$$\left| \frac{\partial}{\partial n} \varphi_{\sigma}(y, x) \right| \leq \begin{cases} C \sigma^{n-1} \alpha^{-m} \exp(\sigma y_m - a \cos \rho_1 \beta_2 ch \rho_1 \alpha), \alpha \geq 1 \\ C \sigma^{n-1} \left( \frac{|\cos \theta| + r}{r^{m-1}} + \sum_{p=1}^{n-2} \alpha^{-2p-1} r^{-2(n-p-1)-1} \right) \exp(\sigma y_m - a \cos \rho_1 \beta_2 ch \rho_1 \alpha), 0 < \alpha \leq 1 \end{cases}$$

$\alpha_i$  - guide cosines of the normal vector. We denote by the space of polyharmonic functions defined in the order, having continuous partial derivatives of the order up to the end points of the boundary and satisfying the condition:

$$\sum_{k=0}^{n-1} \left( \left| \Delta^k u(y) \right| + \left| \text{grad} \Delta^{n-k-1} u(y) \right| \right) \leq C \exp(\exp \rho_2(y')). \quad (3)$$

**Theorem -3.** Function,  $\Phi_{\sigma}(y, x)$  fixed  $x \in D$  function  $\Phi_{\sigma}(y, x)$  satisfies

$$\sum_{k=0}^{n-1} \int_{\partial D \setminus S} \left[ \left| \Delta^k \Phi_{\sigma}(y, x) \right| - \left| \frac{\partial \Delta^k \Phi_{\sigma}(y, x)}{\partial \bar{n}} \right| \right] ds_y \leq C(x) \varepsilon(\sigma),$$

where the constant depends on  $x$  and is the external normal to, when  $\sigma \rightarrow \infty$ .

We denote by the space of polyharmonic functions defined in  $D$  of order  $n$ , having continuous partial derivatives of order  $2n-1$  up to the end points of the boundary and satisfying the condition:  $\sum_{k=0}^{n-1} \left( \left| \Delta^k u(y) \right| + \left| \text{grad} \Delta^{n-k-1} u(y) \right| \right) \leq C \exp(\exp \rho_2(y'))$ .

**Theorem - 4.** Let for the function  $u \in B_{\rho_2}(D)$  at any point the inequality

$$\sum_{k=0}^{n-1} \left| \Delta^k u(y) \right| + \left| \frac{\partial \Delta^{n-1-k} u(y)}{\partial \bar{n}} \right| \leq C \exp \left( a \cos \rho_3 \left( y_1 - \frac{h}{2} \right) \exp \rho_3 |y'| \right) \quad (6)$$

where  $\rho_1 < \rho_2 < \rho_3 < \rho$ . Then for any point  $x_0 \in D$  equality holds

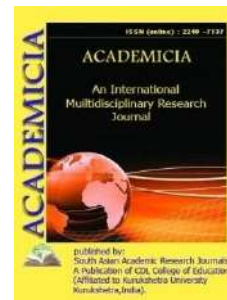
$$u(x_0) = \sum_{k=0}^{n-1} \int_{\partial D} \left[ \Delta^k \Phi(y, x_0) \frac{\partial \Delta^{n-1-k} u(y)}{\partial \bar{n}} - \Delta^{n-1-k} u(y) \frac{\partial \Delta^k \Phi(y, x_0)}{\partial \bar{n}} \right] ds.$$

Note that for arbitrary  $F_i(y)$ ,  $G_i(y)$  task (1)–(2) insoluble.

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## **AGAKHI'S ATTITUDE AS A MASTER TO HIS APPRENTICE IN THE LITERARY WORK**

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### **ABSTRACT**

*The given article is about Mukhammad Riza Erniyazbek's son Agakhi's activity as a master. On the basis of works created about Agakhi in belles-lettres, the symbol of Agakhi as a master has been analyzed. This literary truth has been proved comparing straightly to the historic facts.*

**KEYWORDS:** *Literary Fact, Spirit Positively, Belles-Lettres, Statesman.*

### **INTRODUCTION**

Mukhammad Riza Erniyazbek's son Agakhi is an outstanding representative of classical literature in the XIXth century. He is an intellectual image who submitted changes to not only in the literature of his age but also in his life period as an intercessor of socio-political and cultural affairs. His poems, historic and translation works which made his name immortal, influenced not only to XIXth century, but also nowadays spirit positively. A lot of work have been carried out as an acknowledgement to our ancestor. For instance, six-volume of his works were published, his divan "Taviz ul-oshiqin" was printed two times, the republican scientific-theoretical forum was held devoted to his 210th anniversary called "Agakhi-a poet, a historian, a translator". Also in novel, drama and other genres of our modern literature, several works are created about our historic image. In these works, as a literary image Agakhi is seen as a poet, a statesman, a master, a father and a beloved. As we know, the historic facts in belles-lettres differ from the real ones. Because each literary fact has some changes accordingly to authors' imagination. But the author's approach should suit the historic fact and image observing the measures when putting the historic fact into belles-lettres.

"Death does not create anything, but it reveals the ready and hidden truth. If life is fully submitted into literary work, it loses its reality and cannot be even a literary fact..." The writer

who addresses to the real fact should synthesize the reality in his fantasy, it means that he ought to enrich it with his own imagination, choosing the characteristically important facts and create the literary fact. So, as Abdulla Kahharones said, "real fact appears when you feel it through the prism of your soul, when it absorbs your thoughts, and when you express it adding your desires and ideals". As we mentioned above Mukhammad RizaErniyazbek's son Agakhiy was a versatile person. In nowadays literary works, he is characterized as either a beloved or a master and a statesman. Some literary works are mainly based on his one feature and his other characteristics are partially lightened up. We would like to And we are going to look into the attitude of Agakhi as a master to his apprentices in the literary works via the given article. It is Important to mention that, relation between master and apprentice is a specific tradition among the eastern people. Also a lot of proverbs, sayings and fairy-tales were created about relationship between master and apprentice in Uzbek folklore. Especially, the uzbek proverb "Master is as great as father" ("Ustozotangdekulug") shows the complete respect to the master. These phrases were proved in the life and working activity of Agakhi. Mukhammad RizaErniyazbek's son Agakhiy was the master of many young apprentices. Among his apprentices there was even the Khan of Khiva Khanate Feruz. Being the master of the head of a big state, shows how great Agakhi's status was. Whatever literary work was created, in each of them it was mentioned of Agakhi's being the master of a khan. It is considered to be a great historic event that can't be forgotten. Very few writers could gain such honour and recognition. Such case can also be seen in the life of the king of poetry and gazal Alisher Navoi, which is out of Agakhi's life. These two outstanding creators used to be both masters and friends with the kings. And this shows how their working activities were honored.

In the novel by ErkinSamandar "The traces of whirlwind or Agakhi" which is about the life and working activity of Agakhi, the relationship between master and apprentice is reflected very brightly. Exactly by these kind of works can we be the witness to the selflessness of Agakhi in educating the successors of the XIX th century classical literature. In the work Agakhi's model as a master is seen like father and friend syncretically. The model of Agakhi as a master is revealed by relating to patriotism, which should be mentioned as the achievement of the author. The work deals with the relationship between Agakhi and Feruz, Agakhi and Abdumalik Tora, Agakhi and Yakubdjan.

So many characters in the work are given as Agakhi's enemies. Exactly via those characters Agakhi's prestige of being a master is shown. The way of brightening up one image's positive specific features contrasting it to another opposite one shows how proficient the author is. These descriptions didn't affect the historic fact. Contrarily, they increased Agakhi's effective characteristics. In its turn the following words uttered by M. Gorki to a poetess G. Serebryakova can be proof to our idea: "... in a historic prose the events and conditions should be exact and true to life describing daily details". "If the reader begins doubting a little, they won't believe the writer."

Chapter I starts with the description of Master Agakhi's beautiful garden and suddenly shifts to apolitical process. Then another image of a king Abdumalik Tora, who considered Agakhi as his distant master, appears. In the following discussion in the stronghold the khan Feruz and Abdumalik Tora are contrasted to each other, but the fact that both of them were ticklish tasted poets and considered Agakhi as their master shows their general features between each other. The point of showing the general features of those two is to implicit the signal of being able to

unite the two states into one and resist the enemy. And then the image appears under the character of “steppe spider(qoraqurt)”. Just when two heads of states come to compromise, the agreement fails because of Malangkhanardar’s swords “Father and son are enemies”.

In its turn the fact that Agakhi is a specific figure is shown via his own thoughts and decisions. Agakhi had felt that Malangkhan intentionally spreads dissent in order to make the meeting intense. In the following chapters the opinion of master Agakhi is confirmed. Abdumaliktorahad also no idea about it. Then it turns out that the only reason to these events is trait which proved master Agakhi’s thoughts.

In just the same politically difficult situation, the relationship between Agakhi and the khan of Feruz is expressed accordingly to those events of that period. Feruzkhan considered Agakhi as his master not only in creative sphere but also in state affairs. Feruz used to follow Agakhi’s advice in solving any political issue. The khan even visited Agakhi’s house when the master was ill in bed. Or just consulted with Agakhi through a letter. And this shows how great Agakhi’s prestige was in the political sphere of the state.

Agakhi’s love as a master turns into love of a father in the process of the work. It can be seen with the examples of the fate of children which caused Russian Empire fight against the Khiva khanate. In fact the fate of those children which led to the war wasn’t so important to the “yellow rooks(soriqargalar)”. In its turn the destiny of twenty one children as slaves is revealed through the images of Bobokul and Sotlik bola(child) in contrast to each other.. Sotlik bola(child) is the image under the character “karakurt”(steppespider) who suffered from tyrant Shamuradinak. Inak tortured Sotlik bola(his real name was Serafim) who was only seven years old. The following extract shows how it was influential. “Inak wounded him. Inverted the ground under his feet. It seemed like the stones and rocks moved around and fell on the head of Serafim, threshed and injured him. His sensitive part of his body was cut down ...”. And the image Babakul(real name Borya) was brought up by his boss mirab(water-supervisor) and the neighbor of that mirab Agakhi. He was circumcised at the age of five and learned how to pray namaz from Yakubdjan. From the words of the author, that boy if not to take into account the fact that he was fair-haired, the boy looked like a typical Khorezmian. These contrasts are solved at the end of the work. Mainly, one day Serafim puts out Shamurad’s eyes. And Babakul who was educated by Agakhi, served the master like his son. Agakhi gave the boy who had been brought as a slave, a great blessing: a family. The role of the family in every person’s life is incomparable. “... According to the results in pedagogical and socio-psychological researches, the role of the family in bringing up the children spiritually, emotionally and morally, is proved to be incomparable”

The follower, apprentice and a person whom Agakhi considered like his own son, was Yakubdjan. Agakhi was more like a father than a master to the character of Yakubdjan. Master Agakhi adopted him(Yakubdjan) in his early childhood. Agakhi taught him all secrets of poetry and brought him up treating him like a father. The character of Yakubdjan is embodied as an honest person who was taught by Agakhi in the writings. “Once told to answer unjustly to the complaint letter, he couldn’t help being exasperated, he bursted. Having told his own opinion, he left snapping the door”. Agakhi’s syncretism love as a master and a father is brightened up via the character of Yakubdjan. On the one hand Agakhi remarks Yakubdjan as a master, on the other hand Agakhi worries about him like a father. Yakubdjan who was the victim of pure love,

intensifies the dramatic effect of the work. Agakhi's writings where he wrote about his suffering from being childless are expressed effectively. In its turn, it is important to point out that the model of a father is also has its contrasting side. Here the characters of the father of Abdumaliktoranir Muzaffar and Agakhi who treated his apprentices like a father are contrasted to each other. Emir Muzaffar treated his child like his enemy while Agakhi considered his apprentices like their father.

The relationship between Abdumaliktoranir and Agakhi as a master and an apprentice, is also brightened up without repeating the above mentioned facts. So many writers considered Agakhi, who was famous of his time as a distant master. Even though they never saw Agakhi, they used Agakhi's works and style as a model for themselves. Abdumaliktoranir was one of them. He had never seen Agakhi, but they could build a master-apprentice relationship in a very short time. The harmonious similarity between Agakhi and the prince Abdumaliktoranir in the way of their outlook and making decisions with a deep reflection attracts Agakhi's attention, and they make a relationship as a master and apprentice in a short period of time. One thing ought to be remarked that this is the second time Agakhi had been acknowledged as a master by the kings. Via their conversations mainly the opinions about Agakhi's human qualities can be understood. For instance, the viewpoints of two sides about outcome, kindness and evil deed are set forth. Especially, Abdumalik who suffered from betrayal, makes the conversation serious by his opinions on people who don't deserve kindness. In its turn Agakhi's viewpoint about this situation is reflected in the following couplet.

Parvarishilatikan gul bo'lmas, (A thorn doesn't turn into a flower with care)

Ham tarbiyatilazog' bulbul bo'lmas. (And neither does cuckoo into a nightingale with care)

Asliyomongayaxshilikmingqilsang, (If you do so much good to an evil)

Yaxshilikoningniyatibilkulbo'lmas. (You can't make him wish good)

The event of Bukhara emirate being occupied is submitted in the work intentionally. This was like a warning to the leaders of the Khiva khanate. Abdumaliktoranir dreams about while sleeping after the conversation with Agakhi. Kulpashsha's sorrowful situation is brightened up so expressively via the dream. Abdumaliktoranir's dialogue with his father Muzaffar in his dream can be an example to this fact. Here Emir Muzaffar's condition at Kulpashsha is described as following. "He was tired and hasty. He looked like a helpless king as if he kept his throne by losing his will. Neither a king, nor a citizen". The whole view is formed by Abdumaliktoranir's phrase "Is there a way out to the helplessness?". Also in Abdumalik's speech embodies a patriot who considers to fight up to death for their motherland than living and serving to the enemy. "Government with no right. Government which makes the people kneel before the enemy and follows the rules of the enemy. It is better to shepherd in the desert".

The author tries to express the spirit of Agakhi in every detail of the work. This can be seen in the description of the landscape. Every description of the scenery changes correspondently to the events of the work. The author tries to brighten it up referring to the experiences of Agakhi. For instance, the descriptions of the sceneries of Agakhi's garden in chapter one and chapter five are also contrasted. For example, in chapter one the beauty of Agakhi's garden is described brightly, and in chapter five when the enemy's attack was inevitable, the garden is described as the following. "Although the flowers were full in bloom, the diverse colours on the leaves were fewer

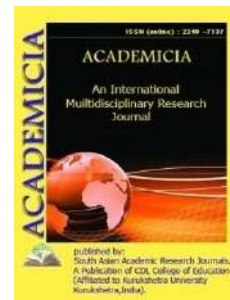


than before, although the mulberry ripened, but it has fewer fruit, the streams were passive, with no bright waves as it was before. The nightingales which used to sing every year, disappeared, only several of them are there and they don't sing they mourn, just mourn".

Agakhi, with his works filled with moral ideas, is the edifying light not only of his epoch, but also for the people of nowadays. The literary heritage of Agakhi has been a school for the writers and poets for so many centuries. They respect Agakhi, considering him as their master. It is for sure that we should be proud of the fact that we have such a wonderful genius master. And Agakhi deserves this respect and love.

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## THE STATE OF THROMBOCYTIC LINK OF HEMOSTASIS IN CASE OF INSULIN RESISTANCE SYNDROME

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### ABSTRACT

*The significance of insulin resistance syndrome in the formation of platelet pathology of hemostasis was studied. The object of the study was 110 patients with metabolic syndrome. As comparison groups, 2 groups were identified (one - individuals without insulin resistance syndrome, the second group - patients with type 2 diabetes). The introduction into the diagnostic methods of hemostasis in the case of insulin resistance syndrome reduces the risk of the formation of cardiovascular diseases and the associated increased mortality of the population. The functional activity of platelets in violation of the sympathoadrenal and vaginal phases of the glycemic curve was studied.*

**KEYWORDS:** *Insulin Resistance, Diabetes Mellitus, Hemostasis, Glycemic Curve, Myocardial Infarction.*

### INTRODUCTION

In recent years, much attention has been paid to metabolic syndrome (MS), which is based on insulin resistance [1,5]. This syndrome includes a number of risk factors (RF): arterial hypertension (AH), impaired glucose tolerance (IGT), dyslipoproteinemia (DLP), obesity, hyperuremia and other risk factors. It should be noted that in individual studies, the number of components included in the MS varies [2,4]. However, hypertension, body mass index (BMI), hyperlipidemia and hyperinsulinemia remain the main components of MS.

The metabolic syndrome, being a clinical example of comorbidity, refers to clusters of risk factors for cardiovascular countervailing [3, 6]. Insulin resistance, arterial hypertension, dyslipidemia, hyperglycemia, united by the framework of the metabolic syndrome, lead to the development of atherosclerotic changes in blood vessels and are accompanied by a change in hemostasis. Among the mechanisms involved in the processes of atherothrombosis, platelet hyperactivity is of the greatest importance, and the close relationship between the processes of

atherogenesis and thrombosis in conditions of hyperglycemia, dyslipidemia, and arterial hypertension pathogenetically justifies long-term antiplatelet therapy [5,7,8].

The role of MS in the development of cardiovascular diseases and high mortality from them can be considered proven. However, the specific mechanisms of the formation of cardiovascular diseases in the case of insulin resistance syndrome require much further study. One of the main risk factors for the formation and death of a number of cardiovascular and endocrine diseases are disorders in the hemostatic system. However, studies of recent decades have shown the important role of insulin resistance syndrome in the formation, more severe course and increased mortality in the metabolic syndrome [2,7].

Unfortunately, to date, questions about the role of insulin resistance in the formation of hemostatic disorders have not been studied. Meanwhile, the development of technologies for evaluating the hemostasis system, as well as methods for correcting disorders in the coagulation and anticoagulation systems of the blood, may be an important prerequisite for reducing morbidity and mortality [3,8].

The role of MS in relation to other internal diseases still needs to be studied. To date, there is convincing evidence of the important role of diabetes in the formation of hemostatic disorders. However, in the literature there is practically no information about the role of IGT in this process. Meanwhile, IGT, in a certain sense, can serve as a marker of insulin resistance (meaning impaired glucose tolerance 2 hours after glucose loading). In some cases, IGT can be considered as a pre-stage of diabetes mellitus. Therefore, clarification of the role of IGT in the formation of hemostasis disorders, as well as the development of methods for its treatment with IGT, can play a decisive role in the primary and secondary prevention of increased thrombosis and, as a result, a decrease in cardiovascular risk [4,6].

Purpose of work. To study the significance of insulin resistance syndrome in the formation of platelet pathology of hemostasis.

## **MATERIALS AND METHODS**

The object of the study are 110 patients with metabolic syndrome. As comparison groups, 2 groups will be determined (one - individuals without insulin resistance syndrome, the second group - patients with type 2 diabetes).

All 2 groups were randomized according to the main demographic and clinical indicators.

The survey included the following methods: interrogation, biochemical instrumental.

Interview Methods:

- a standard WHO questionnaire for detecting angina pectoris (the presence of pain or other unpleasant sensations localized behind the sternum and / or / in the left half of the chest and left arm, appearing during physical activity and ceasing after a decrease in intensity or cessation of physical activity);
- a standard WHO questionnaire to identify possible myocardial infarction (history of severe pain piercing the front of the chest and lasting 30 minutes or more, in the absence of cicatricial changes on the ECG).

### **Instrumental methods:**

- The ECG was recorded on a 6-NEK electrocardiograph at rest in 12 generally accepted leads. Analysis of IHD data was carried out according to the Minnesota code according to the

following criteria: a certain myocardial infarction - the presence of cicatricial changes on the ECG (categories 1-1.2 minnesota code MC); angina pectoris - the presence of a pain syndrome that meets the criteria of the WHO questionnaire, in the absence of categories 1-1.2 MC; painless coronary heart disease - in the presence of ischemic changes on the ECG (categories 4-1.2 and 5-1.2 MC) in the absence of left ventricular hypertrophy, angina pectoris and categories 1-1.2 MC; a possible history of myocardial infarction (according to the WHO questionnaire) - in the absence of cicatricial and ischemic changes on the ECG, as well as angina pectoris; possible coronary heart disease, including possible cicatricial changes in the myocardium by ECG (categories 1-2-8 and 1-3 MC), possible myocardial ischemia (categories 4-3, 5-3 MC), arrhythmic form (categories 6-1.2; 7 -1 and 8-3 MC), myocardial ischemia in the presence of left ventricular hypertrophy (categories 4-1.2 and 5-1.2 in the presence of 3-1.3 MC).

**Results.** When assessing blood pressure (BP), the average values of 2 measurements taken at intervals of at least 2 minutes were taken into account. The following values were taken for AH (in mmHg): systolic blood pressure (SBP) > 140 and / or / diastolic blood pressure (DBP) ≥ 90. According to the current classification (WHO, 1999), the following categories are distinguished (in mm. Hg): optimal blood pressure (SBP < 120; DBP < 80); normal blood pressure (SBP < 130; DBP < 85); high normal blood pressure (SBP 130-139; DBP 85-89); 1 degree of hypertension (SAD 140-159; DBP 90-99); Grade 2 AH (GARDEN 160-179; DBP 100-109); Grade 3 hypertension (SBP > 180; DBP > 110). However, given the fact that in this study, hypertension was considered only as one of the components of MS, these categories were grouped as follows: normal blood pressure: SBP ≤ 139; DBP ≤ 89, AG - SBP ≥ 140; DBP ≥ 90. However, hypertension was recorded regardless of blood pressure if the patient took antihypertensive drugs within 2 weeks prior to the examination.

- overweight, according to the recommendations of the International Group on Obesity (1997), is fixed at the Kettle index (KI) calculated by the formula: weight (kg) / height (m)<sup>2</sup>, ≥ 25, and KI levels ≥ 30 are taken as obesity. However, in population studies for BMI it is recommended to take KI values > 29 (Rose G.A., Blackburn H., 1968). Therefore, in this work, KI ≥ 30 indicators were taken as the BMI criteria, since this KI level differs little from the BMI criteria recommended for population studies and, at the same time, meets the obesity criteria recommended by the International Obesity Group.

### Biochemical studies:

- the lipid content in venous blood was determined during initial screening on an AA-2 autoanalyzer from Technicon, and upon repeated examination on an Hospitex analyzer. We studied the levels of cholesterol (cholesterol), triglycerides (TG) and β-lipoproteins (β-LP). The values of cholesterol > 260 mg% were taken for hypercholesterolemia (HC), the level of TG > 180 mg% for hypertriglyceridemia (GTG), and the level of β-LIP > 55 opt.ed for hyperbetalipoproteinemia (HβLP). (upon repeated examination, the concentration of β-LP was determined by the calculation method). For a comparative study of the criteria for assessing lipid parameters, the work also used the criteria of the European Society of Cardiology, the European Society of Atherosclerosis, the European Society of Hypertension and the criteria of the US National Cholesterol Education Program.

- the state of glucose tolerance was evaluated on the basis of indicators of the standard glucose tolerance test (SGTT) with the determination of fasting glycemia, as well as 1 and 2 hours after

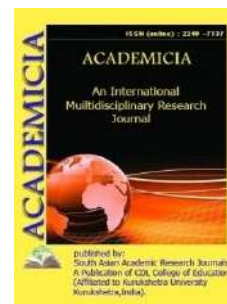
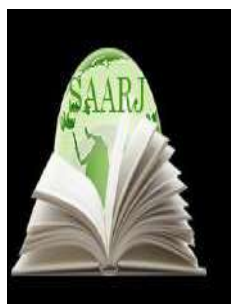
taking the subject 75 g. glucose. Evaluation of the data was carried out according to the following criteria (in mg%): normal glucose tolerance: with fasting glycemia <100, 1 hour after glucose loading <160 and 2 hours <100; impaired glucose tolerance: fasting glycemia <100; 1 hour after glucose loading > 160 and / or 2 hours > 100; diabetes mellitus: fasting glycemia > 100, 1 hour after glucose loading > 180, 2 hours > 130. At the same time, the modern WHO recommendations (WHO, 1996) were used in the work, according to which cases of glycemia after 2 hours are accepted after glucose loading  $\geq 140$  mg% with normal fasting glycemia (<100 mg%).

## CONCLUSIONS

The introduction into the diagnostic methods of hemostasis in the case of insulin resistance syndrome reduces the risk of the formation of cardiovascular diseases and the associated increased mortality of the population. The functional activity of platelets in violation of the sympathoadrenal and vaginal phases of the glycemic curve was studied. New methods for the prevention and treatment of platelet hemostasis disorders have been developed which allow achieving economic efficiency by reducing hospital stays, as well as medical efficiency due to minimal morbidity, disability and mortality.

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## AN INSIGHT INTO THE PHRASEOLOGICAL FEATURES OF ABDULLA QADIRI'S NOVEL "DAYS GONE BY" AND ITS TRANSLATION INTO ENGLISH

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### ABSTRACT

*The given article highlights briefly the issues related to the translation of phraseological units like idioms and phrasal verbs, effectively usage of them while translating, at the same time looks through and learns the meanings of phrasal verbs and idioms in the translation of the novel by Carol Ermakova.*

**KEYWORDS:** *Phraseological Unit, Phrasal Verb, Idiom, Translation, From Head To Toe, Go By Name, Meaning, Different Combinability Of Words, A Specific National Feature, Hold Up, Stylistic-Expressive Component In Meaning.*

### INTRODUCTION

For the next decades, as in all countries, translation theory have been consistently developing in our country. The quality of translation is gradually improving as well. "Days Gone By" is well-known for its historical writing style including in great deal of phrasal verbs, proverbs and sayings in it. "Days Gone By", has been widely studied in the fields of literature, linguistics, translation and interpretation and other issues of translation worldwide. It was translated into English several times.

"Regrettably, Abdulla Qadiri's work is not well known abroad. For this reason, we have decided to publish *Days Gone By* in English, and release a new edition in Uzbek using the Latin alphabet our young people are more familiar with nowadays. For the English –speaking readers, we have included brief footnotes explaining some quintessential aspects of the Uzbek culture so vividly portrayed here, as well as to give a little back-ground to historical events referred to in the novel.



The new edition contains artwork by one of the best representatives of Uzbek contemporary art, BoburIsmailov.

We hope that this new publication will play a significant role in bringing Uzbekistan's rich literary heritage to a worldwide audience, and are delighted to present one of its brightest lights, Abdulla Qadiri."

In 2018, "Days Gone By" was translated into English by Carol Ermakova. The first example of the Uzbek literature was also published in Nouveau Mond, the French publishing house in 2019. She first visited Russia as a student in the turbulent Perestroika years, later returning to live and work in St. Petersburg, and then Moscow. Ms.Ermakova has travelled widely throughout the former Soviet Union, including several visits to Central Asia, most notably Tashkent, Bukhara and Samarkand. She now lives in the North Pennines, working as a freelance translator specializing in contemporary Russian literature.

Translating a phraseological unit is not an easy matter as it depends on several factors: different combinability of words, homonymy, synonymy, polysemy of phraseological units and presence of falsely identical units, which makes it necessary to take into account of the context. Besides, a large number of phraseological units have a stylistic-expressive component in meaning, which usually has a specific national feature. The afore-cited determines the necessity to get acquainted with the main principles of the general theory of phraseology.

The following types of phraseological units may be observed: phrasemes and idioms. A unit of constant context, consisting of a dependent and a constant indicators may be called a phraseme. An idiom is a unit of constant context which is characterized by an integral meaning of the whole and by weakened meanings of the components, and in which the dependent and the indicating elements are identical and equal to the whole lexical structure of the phrase.

In this article we analyse the use and meaning, translation of the phrasal verbs and idioms which are used in the novel "Days Gone By", the first novel written by Abdulla Qadiri (1894-1938), has been read and loved by many generations of Uzbeks. His first novel, Days Gone By (O'tkankunlar) was first published in 1922 when the author was just 28 years old, and was one of the most influential Uzbek writers of the twentieth century. Born into a modest family, he developed an interest in literature while working as a book copier and was soon writing short stories, plays and newspaper articles of his own, and he won the hearts of his people with its simple yet evocative prose and gripping storyline. To quote the critics: "Abdulla Qadiri burst into Uzbek literature like a peal of thunder. Bright as a flash of lightning, he caught the attention of all."

Other works include the novel The Scorpion from the Altar (Mehrobdanchayon) and acclaimed satires KalvakMahzumningxotiradaftaridan (From Mahzum the Simpleton's Diary) and Toshpo'lattajangnimadeydi? (What Does Irritated Toshpo'lat Say?), published in Uzbek and Russian.

Qadiri was working on a third novel when his creativity was cut short; in 1937 he was arrested, and subsequently executed at the age of just forty-four.

## MATERIALS AND METHODS

Translation problems of classical work “Days Gone By” are the main issues in interpretation of the literary text today including revealing the use and meaning of the phrasal verbs and its’ cognitive-conceptual analysis where some phrasal verbs have different definitions in the dictionaries.

Using phrasal verbs and idioms appropriately while translating is not an easy work. A phrasal verb depends on the different particles which come after the verbs and identify the meaning of the phrasal verbs. While translating “Days Gone By” from Uzbek into English translator came across to the translation problems, and one of the most difficult of them is using phrasal verbs and idioms in the translation. Firstly, we should give the definition of phrasal verb. What is a phrasal verb? Does Uzbek language also have a phrasal verb?

A phrasal verb is a verb formed from two (or sometimes three) parts: a verb and an adverb or preposition. These adverbs and prepositions are often called particles when they are used in a phrasal verb.

Most phrasal verbs are formed from a small number of verbs (for example, get, go, come, put and set) and a small number of particles (for example, away, out, off, up and in).

Phrasal verbs sometimes have meanings that you can easily guess (for example, sit down or look for). However in most cases their meanings are quite different from the meanings of the verb they are formed from. For example, “hold up” can mean “to cause a delay” or “to try to rob someone”. The original meaning of hold (for example, to hold something in your hands) no longer applies.

Uzbek language doesn’t have phrasal verbs. There are only verbs that denote action and statives. And while translating a translator uses phrasal verbs instead of the above mentioned action verbs and statives. Here some sentences from the book “Days Gone By” in which used phrasal verbs and idioms effectively and appropriately while translating into English. There is a definition of each phrasal verb and an idiom before the sentences to clarify the meanings of it.

### Used phrasal verbs:

1. The definition of *sit down*- “to be in a position in which the lower part of your body rests on a seat or on the ground, while the upper part of your body is upright/to lower your body into a sitting position.”

Uzbek: Бирок Отабек тўшаги ёнига ўлтурдида, яна ўйлаб қолди...(p: 9)

English: However, having *sat down*, Atabek remained motionless, lost in thought... (p: 25)

Uzbek: Qizining yonig’ao ‘*lturibso*’ zlasho’rniga yum-yum yig’lay boshladi. (p:115)

English: *Sitting down* beside her, instead of broaching the subject, Oftobayim began crying bitterly. (p:197)

2. The definition of *go on*- to continue happening or doing something as before.

Uzbek: - Манимча, уйланишдек нозик бир иш дунёда йўқдир, ғ деди Раҳмат ва Отабекка юз ўғирди. - Уйлангач, хотининг таъинига мувофиқ келса бу жуда яхши; йўқса, мунчалик оғир гап дунёда бўлмас.(p:3)

English: Turning to Atabek, he *went on*: “Once married, it is of the utmost importance that the wife should suit the husband’s nature. Otherwise, there is no more troublesome task in the whole wide world.” (p:15)

3. The definition of *look in* – to visit someone for a short time on your way to another place, especially if they are ill or may need help.

Uzbek: Кутидор билан бек ялт этиб Кумушка қарадилар. (p: 55)

English: Kutidor and Atabek swiftly *looked in* her direction.(p: 101)

4. The definition of *look into something* – to try to discover the facts about something such as a problem or a crime.

Uzbek: Хотинҳамичкаригакиргач, Офтобойимэшиқниқиябеклади-да, қайғулиқбирбоқишбиланхотингақаради. – Негақайғулиққўринасан, Офтоб?

English: “Why are you so sad, Oftob?” asked the woman, *looking into her friend’s doleful eyes*. (p: 54)

5. The definition of *look at someone/something* – to direct your eyes towards someone or something so that you can see them:

Uzbek: Отабек Раҳматнинг сўзини ихлос билан эшитди ва “сен нима дейсан?” дегандек қилиб Ҳомидга қаради. (p:4)

English: After listening to Rakhmat with sympathy and attention, Atabek *looked at Hamid*; what would he say to this? (p: 15)

6. The definition of *come over someone*– if a feeling comes over you, it suddenly affects you in a strong way:

Uzbek: Отабек қизиқ ҳолатда қолди: бир турлик титраб кетди, кўзлари қинидан чиқар даражага етди. (p: 25)

English: Something strange *came over Atabek*: he shuddered, his eyes goggled, all but popping from their sockets.(p: 51)

7. The definition of *prepare for* – to make food ready to be cooked or eaten, for example by cleaning or cutting it.

English: Their day’s business done, the lodgers now made their way back to the shelter of the caravanserai, where many of the residents were already bustling about, *preparing for* the evening meal.

Uzbek: Саройаҳликундузгиишқучлариданбўшабхужраларигақайтқанлар, кўбхужраларкечликошпиширишиламашгул, шунингучункундузгигақарағандасаройжонлиқ: кишиларнингшақиллабсўзлашишлари, хоҳолабулишишларисаройникўккакўтаргудек.

8. The definition of *agree with* – to have the same opinion with somebody else.

Uzbek: “Хомушлигим сизга ҳам сезилдими, билмадим ... Марғилон ҳавоси мижозимга тўғри келмаганга ўхшайдир...” (p: 11)

English: “You have noticed my despondency ... In truth, I am in a quandary...Evidently this Margilan climate *does not agree with me*.” (p: 28)

9. The definition of *give over to something* – to allow (oneself) to be fully affected by, controlled by, or involved in (something); dedicate, devote.

Uzbek: Кўб ўйласа ҳам бир қарорга кела олмади. Аммо эртага бекнинг ўзини синаб кўрмакчи бўлиб кўзи уйкуга кетди. (p: 11)

English: Finally, he determined to winkle everything from Atabek the very next day. Relieved, he *gave himself over to sleep*. (p: 27)

10. The definition of *drift off* – start to fall asleep.

Uzbek: Тун тонг отарга яқинлашган, унинг уйкулик мияси ҳеч бир турлик бу муаммони еша билмас эди.(p: 11)

English: Night retreated softly, giving way to approaching dawn and, wearied by his futile efforts to solve this mystery, Khasanali began *to drift off*. (p: 27)

11. The definition of *hang over someone*– if something hangs over you, you worry about it or feel upset about it.

Uzbek: “Бир неча кундан бери хомушроқ кўринасизми?” (p: 11)

English: “For how many days now, has this sorrow been *hanging over* my bek?” (p: 28)

Idioms are expressions whose meaning cannot be completely understood from the meanings of the component parts. According to the classification of phraseological units by N.Amosova phrasemes and idioms are subdivided into movable and immovable. These qualities depend upon the structure of the unit. A phrase is called movable when one of its elements may vary. For example, *the apple of one's eye* means somebody dear for a person. In other words, this phrase refers in English today to something or someone that one cherishes above all others. Originally, the phrase was simply an idiom referring to the pupil of the eye:

Uzbek: Меналбаттакўзингизнинг оқуқорасибўлган ёлғиз қизингизни ярамас, бўлмағур кишига тутиб берарсиз, деб билмайман. (p: 23)

English: Of course, I would never even entertain the thought you might wish to give our beloved daughter, the apple of our eye, to a bad or unsuitable person. (p: 49)

### Used idioms:

1. *To be out of earshot* – too far away to hear somebody/something or to be heard.

Uzbek: Отабек Раҳматнинг саволига жавоб бермай эшикка қаради. Ҳасаналини хужрадан узоқлатиб сўнгра жавоб берди. (p: 2)

English: Atabek fell silent for a while, then glanced at the door. Only when he was satisfied the old man *was out of earshot* did he reply. (p: 13.)

2. *To be at a loss for words* – having nothing to say; stunned to the point of speechlessness.

Uzbek: Масаланинг бу янглиғ бошланишига ва бунинг устига эрининг мойилланишига Офтобойим нима дейишни билмай қолди.(p: 23)

English: Oftobayim was at a loss for words, seeing her husband clearly tending towards accepting the proposal. (p: 48)

3. *To be in one's hands* – in someone's possession or under their control.

Uzbek: -Чункинима бўлганда ҳам сизнинг оталиқ исмингиз бор, ҳам кўброқ ихтиёр сизнинг кўлингиздадир. (p: 23)

English: “You are her father, after all. *Everything is in your hands*”. (p: 48)

4. *from head to toe* – completely covering your body; over the entire body, in its entirety.

Uzbek: Ҳасанали бошдан-оёқ бекни кузатди, оталиқ муҳаббати билан бекнинг орқасини силади ва ёшли кўзлари билан дуо қилиб унга рухсат берди. (p: 31)

English: Khasanali eyed Atabek fondly *from head to toe*, patted him on the back in a fatherly manner and blessed him, with tears in his eyes. (p: 61)

5. *Can't believe one's eyes* – was totally shocked or surprised.

Uzbek: Отабек кўргучи кўзларига ишонмагандек: (p: 55)

English: Atabek *could not believe his eyes*. (p: 100)

6. *Keep an eye on* – keep a watch on something or someone closely; watch carefully; give attention to.

Uzbek: Ҳасанали шаъмни олиб, ўз хужрасига чиқди. Унинг хужраси Отабекнинг билан бир қаторда бўлиб, газмол, пояфзал ва шунинг сингари моллар ила тўлган ва Отабекдан бошқа, алоҳида хужрада туриши ҳам шу молларни сақлаб ётиш учун эди. (p:10)

English: Khasanali took the candle and went to his own chamber located beside Atabek's, it was piled high with fabrics, footwear and other goods. And indeed, that is why Khasanali had taken this room for himself, *to keep an eye on the stock*. (p:25)

7. *To be all ears* – means to be listening closely; to be eager to hear something; to pay close attention when being told something or to be willing to pay close attention; very eager to listen to what someone is going to say

Uzbek: - А - а – а, - деди Ҳасанали ва қайтадан қулоғини тирқишга олиб борди. Энди унинг бутун борлиғи қулоқ бўлиб айланган, ўзини унутиб барча диққати хужра ичига оқган эди. (p: 11)

English: “Aha!” said Khasanali, pressing his ear to the crack in the door once again. Now he pulled himself together, *he was all ears*, his attention fixed on Atabek's chamber. (p: 27)

8. *To raise eyebrows* – means to cause other people to react with surprise or mild disapproval. To raise an/your eyebrow means to move your eyebrows up in a way that shows surprise or mild disapproval. Both of these phrases are often used figuratively.

Uzbek: Ҳасанали тусини бузмади. (p: 12)

English: Khasanali did not so much as *raise an eyebrow*: ... (p: 29)

9. *Don't take on so* - means “no need to upset yourself”. Become very upset, especially needlessly.

Uzbek: Мен бундай йиғлоқ қизларнинг кўпини кўрдим, шундай қизларнинг уялмай-суялмай чимилдиқда ҳатто йигитдан ҳам ортдириб ҳаракат қилганларини ҳам кўрдим, сенинг қизинг ҳам шуларнинг биттаси, қайғирма Офтоб. (p: 27)

English: “I have seen many a maiden weep, but in the wedding bed they are friskier than the groom himself! Your daughter, no doubt, is one of them. *Do not take on so, Oftob.*” (p: 55)

10. *Know no bounds* – a feeling or quality that knows no bounds is very strong and seems to have no limits.

Uzbek: -“Қизиқ гаплар сўзлайсиз”,- деди Отабек, таажжуби ортқан эди.(p: 12)

English: “Your words are shocking!” Atabek’s amazement *knew no bounds.*(p:29)

## RESULTS AND DISCUSSIONS

“Qadiri’s language is simple and unpretentious, his use of metaphor subtle and harmonious. His treatment of his heroine, Kumush, is exquisite. With a few select adjectives and descriptive phrases, this youthful beauty comes to life, winning the reader’s heart. Her name, Kumush – “silver” – resonates with purity and preciousness, a cold yet beautiful light, like moonlight on water. Her face is round and pale as the moon; in Eastern literature, this epithet is often found in poetry, a symbol of unassailable, sacral purity, and sublime beauty. Yet the moon – especially the full moon – is also associated with cold, with dark nights, the drama of human life, and predetermined fate”.

In discussion, I want to analyse the meanings of some sentences that have different meanings in the dictionaries. The first phrasal verb is “go by the name of something”. It means “to use a particular name, especially when it is not your real name” in Macmillan English Dictionary. But in Cobuild Advanced English Dictionary, it is used “when you are saying what someone is called”. And in Merriam-Webster Dictionary, the definition of “by the name of” is “to indicate the name that is used for someone or something”.

The phrasal verb “go by name” is used in the translation of “Days Gone By” several times. In the following sentences translator used this phrasal verb while naming the heroes:

English: The young man, presently engrossed in thoughts privy to none but himself, *went by the name of Atabek.*(p:11)

Uzbek: Қандоғдир бир ҳаёл ичида ўлтурғучи бу йигит Тошканднинг машҳур аъёнларидан бўлган Юсуфбек ҳожининг ўғли - *Отабек.*(p:2)

Uzbek: Бу икки кишининг биттаси гавдага кичик, юзга тўла, озроқкина соқол- муртлик, йигирма беш ёшлар чамалиқ бир йигит бўлиб, Марғилоннинг бойларидан Зиё шоҳичи деганнинг *Раҳмат отлиқ* ўғлидир, ... (p: 2)

English: One of them – a young man, about twenty-five years old, shortish, round-faced, with a sparse beard and moustache – was the son of Ziya-shakhichi, a very well-to-do man from Margilan. He *went by the name Rakhmat.*(p:12)

In the following sentence translator used the name of our main hero “Atabek”, instead of the word “bek” that was origin in Uzbek version of the book.

Uzbek: Кутидор билан бек ялт этиб Кумушка қарадилар. (p: 55)



English: Kutidor and Atabek swiftly looked in her direction.(p: 101)

The same translation in the following sentence. The possessive pronoun “her” is used instead of the name of our heroine. Translator avoided repeating the words here.

Uzbek: Кутидор билан бек ялт этиб *Кумушка* қарадилар. (p: 55)

English: Kutidor and Atabek swiftly looked in *her* direction.(p: 101)

Now pay attention to the use of the phrasal verb “feel something for someone” in translation. The definition for this phrasal verb is “to sympathize with someone”. Here we can see that the translator is a master of her profession!

Uzbek: Ҳасанали бекнинг ҳар бир сирига ўзини маҳкам деб ҳисоблаганликдан, дарҳақиқат, Отабекка *махрам бўлишга лойиқ бир меҳрибончиликқа эга бўлганликдан* хўжазодаси билан очиқ сўзлашиш фикрига келди.(p: 11)

English: But he *felt a sense of responsibility* for Atabek’s state. Overcome with fatherly concern, the loyal servant settled on a candid conversation with his young master. (p: 28)

The next phrasal verb is “*take to one’s bed*” that means “to go to bed and stay there because of illness”. This phrasal verb is used in the translation of the sentence “менҳамишдан чиқади рғанўхшайман...”.

Uzbek: “Марғилоннинг ҳавоси бузиқ экан, бир-икки кундан бери маним ҳам аҳволим ўзгариб бошлади. Марғилондан тез жўнамасақ мен ҳам *ишдан чиқади рған ўхшайман...*” (p: 11)

English: “The weather here in Margilan is miserable. I have been feeling unwell myself for two days now. It would be wise to leave as soon as possible, before I must *take to my bed.*” (p: 28)

## CONCLUSION

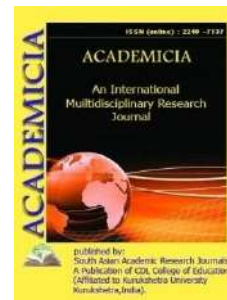
The creative legacy of Abdulla Qodiri is, unfortunately, not well-known for foreign readers and they have not received enough information. Therefore, these translations of the work, along with acquaintance with the writer’s works, give foreign readers information about the period, the unique national values and traditions of the Uzbek nation. The Days Gone By is the main play of Abdulla Qodiri. The reason of calling “The Days Gone By” is that the author aimed to demonstrate the original spiritual life of the Uzbek people on the basis of expressing “black days” of nation’s history. The writer tried to describe beautiful decorum, great respect to other people, great spirituality in communication of people with each other, different systems of lifestyle of nation at that period.

In conclusion, I want to mention about the word translator. “A translator” is a person who translates from one language into another, especially as a profession. Translators deal with a lot of challenges. Apart from making sure that text is grammatically correct and uses appropriate tone, they must also decide when and how to translate certain cultural aspects and linguistic nuances. This includes translating phrasal verbs and idioms. In my research, I tried to analyse phraseological features of the translation of “Days Gone By”. We can find that translator used phrasal verbs and idioms effectively and appropriately while translating. And, I am so thankful sincerely to Lola Karimova-Tillyaeva who gave an opportunity to translate and publish “Days Gone By” in English, and release a new edition in Uzbek using the Latin alphabet that our young

people are more familiar with nowadays. I also want to express my gratitude to Carol Ermakova that she gave us such a great chance as to work on the book of our nation!

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## ANOMALIES IN THE DENTITION OF CHILDREN IN THE BUKHARA REGION

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### ABSTRACT

*Prevention of dentoalveolar anomalies is one of the most important tasks of orthodontics. It is a complex of medical, hygienic and social measures, the main task of which is to prevent pathogenic and etiological factors contributing to the occurrence.*

**KEYWORDS:** *Dentition Anomalies, Prophylaxis Of Dentition Anomalies, Risk Factors, Orthodontia, Children Of School Age.*

### INTRODUCTION

Maxillofacial abnormalities are the presence of deviations from the norm in the development of dentitions, their ratios in different planes and bone tissues of the jaws. They can have both congenital and acquired character. The study of the frequency and structure of anomalies of the dentition is due to the widespread prevalence of this pathology among children of all age groups. Analysis of publications by domestic authors on the epidemiology of dental diseases over the past 30 years indicate a high level of pathologies of the development of the dentition. I. G. Nizamov et al. (2003) analyzed the prevalence of dentoalveolar anomalies in various regions of our country and abroad, according to the literature from 1966 to 2002, and found that the prevalence of this pathology is 25-75%. In the structure of the prevalence of dental diseases in children, dentofacial anomalies take third place after caries and periodontal diseases and, according to the WHO, make up an average of 50% [A. V. Anokhina et al., 2003].

The prevalence of dentoalveolar anomalies and deformities in various regions of Russia, according to researchers, ranges from 30.9% to 76.5% (A.G. Korneev, 2005; I.M. Teperina, 2004; E.A. Vakushina, 1999). An analysis of the literature data indicates that there is no tendency to decrease this pathology over the past years (A.B. Anokhina, 2003; A.B. Alimsky, 1999). Moreover, the incidence over the past 5 years has increased by 1.5 times.

A certain dependence is observed - the older the age group, the greater the number of children in need of therapeutic orthodontic measures and the lesser in preventive. (FL. Khoroshilkina, 1999;

Jl.C. Persia, 2003; Gherunpong S., 2006), therefore, the greatest attention should be paid to identifying the most effective methods of treatment and prevention at the stages of temporary and shift bite in children; since pathology, which is not eliminated at the stage of its formation, retains its significance, acquiring over time more severe and severe forms (O.I. Arsenina, 1998)

**Purpose of the study.** In this work, we set the following goals: Studying the prevalence and changing the structure of dentofacial anomalies. And among schoolchildren, there was a study of the prevalence of dentofacial anomalies and an increase in the level of orthodontic care for the children based on the choice of optimal terms and the most rational methods of treatment.

## CHECKING METHODS AND MATERIALS

This article presents the results of a comprehensive medical and social study conducted in the period 2017-2018.

86 schoolchildren of a secondary school in the city of Bukhara aged 6 to 12 years were examined (of which 34 were girls, 52 were boys). All children were examined by a doctor orthodontist.

The research program included traditional methods of clinical and dental examination, such as clinical and dental research methods, the study of functional occlusion and the assessment of occlusive relationships, a biometric study of diagnostic models of the jaw and the study of facial proportions.

All information about the patient, including passport data, complaints, anamnesis, objective diagnostic indicators and diagnosis in a special patient examination card is formed by us.

The data obtained was processed by the method of variation statistics using special computer programs.

## Research objectives

1. To study the prevalence of dentition and anomalies in children 6 and 12 years old.
2. To identify the frequency of occurrence of individual dentofacial anomalies and deformations.
3. To evaluate the effect of early tooth extraction on the formation of deformities of the dental arch.

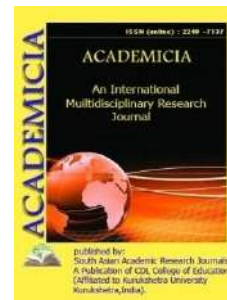
## CONCLUSION

Our research results may differ from data from other authors. However, it is important to note that the availability of such data for various regions, cities and other settlements will play an important role in creating the database.

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## WHITE TREATMENT OF WHITE SPOT CARIES IN THE APPLICATION OF MODERN MEDICINE

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### ABSTRACT

*Poor oral hygiene attaches cariesogenic microorganisms firmly to the dentition and creates tooth decay. Adhesives accumulate at the retention points of the teeth when consumed, (fissures, cavities, contact surfaces, fillings, dentures), resulting in the process of decay and decay. As a result, caries develops on the tooth enamel surface.*

**KEYWORDS:** *Orthodontic Appliances, Tooth Enamel Surface, Caries, Demineralization Foci, ICON-0.4 Tool.*

### INTRODUCTION

The development of excellent treatments for the prevention of caries is one of the achievements of dentistry. He considered dental caries as a disease of polyetiological origin. AI Rybakov fully describes the endogenous and exogenous factors that contribute to the development of caries during the development of each person. Hereditary factors are of great importance.

Diseases experienced by the mother in the formation of organs and systems of the fetus; In diseases of the thyroid gland, metabolic disorders, pregnancy toxicosis and drug overdose, chronic maternal infections and allergic diseases, mental trauma and extreme conditions have a great impact on the fetus. All these diseases affect the dental system and hard tissue of the teeth. The period from 6 months to 6 years. This period pays great attention to natural nutrition, chronic and infectious diseases. Exogenous factors are considered by the author to be non-compliance with the rules of oral hygiene, deformity and trauma of the bite, impaired salivation, changes in intraoral pH. Childhood and adolescence from 6 to 20 years. Exogenous and endogenous causes of dental caries distinguishes factors. Endogenous factors include diseases (somatic), excessive consumption of carbohydrates, puberty, high levels of metabolism, micronutrient deficiencies, liver dysfunction, malnutrition. Decreased immunity of dental tissue, fluoride deficiency, changes in dental pulp. Exogenous factors include poor oral hygiene, pricus



deformity, injury, impaired salivation, intraoral pH, difficulty in extracting some teeth, tooth depulstation, and diseases of the dental jaw system. 20 years is the period up to 40 years.

The endogenous factors that cause caries at this age are diseases of the gastrointestinal tract, liver, endocrine system disorders, diseases of the cardiovascular system. Exogenous factors are diseases of the dental system, lack of oral hygiene, impaired salivation. 40 postpartum period. According to the author, it represents the interrelationship between the presence of plaque and diseases of internal organs and systems. The correlation of these factors is the primary mechanism in the caries process. Since 2000, microinvasive treatment of proximal surface caries has been achieved. This method was developed by Professor H. Meyer-Luckell and Dr. S. Paris. The method of treatment is carried out by demineralization at the level of tooth enamel using a deep fluoridation tool ICON 0.4.

**The purpose of the topic:** Improving the effectiveness of the use of ICON 0.4 in the elimination of demineralization foci on the damaged surfaces of the tooth enamel surface when using orthodontic appliances.

**Materials and methods:** The Bukhara Children's Dental Clinic received 56 orthodontic appliances for 11-13-year-old children with primary white spot caries.

**Results and analysis:** Fifty-six pediatric patients were studied in two groups using ICON 0.4 in children who had been placed with orthodontic appliances and treated with primary white spot caries.

A first group of 38 patients was administered to children with primary white spot caries before using ICON 0.4. When applied, the surface of the tooth is removed from the saliva of the oral fluid. Then dried and ICON 0.4 is applied. Sick children are advised not to eat for 2 hours, not to chew solid foods for 2-3 days, and to pay attention to the effectiveness of chewing. The course of treatment is prescribed once a month. This treatment condition is repeated for 3 months. When the analysis and results were examined, foci of demineralization were eliminated and treatment of moderate to deep caries was achieved. Patient children were given the opportunity to treat dental-jaw system abnormalities using orthodontic devices after treatment with ICON 0.4.

The second group V was performed by deep fluoridation using ICON 0.4 in the treatment of primary white spot caries that occurred after the use of orthodontic appliances in 18 patients. Examination of the results revealed that secondary dentin was formed instead of demineralization foci and that there were no complaints after treatment in sick children and no inconvenience in the use of orthodontic appliances.

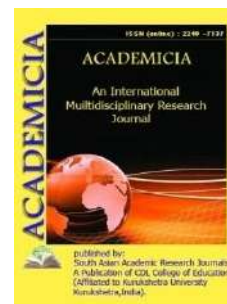
## CONCLUSION

Deep fluoridation of foci of demineralization using the tool ICON 0.4 has shown good results in the treatment of primary white spot, moderate, deep caries in both groups of sick children. In our scientific studies, it was found that the use of ICON 0.4 in deep caries forms secondary dentin and protects the pulp roof from exogenous and endogenous influences. In

the treatment of primary white spot caries, elimination of foci of demineralization at the tooth enamel level was achieved.

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## METHODS OF APPLICATION OF AUTOTROMBOTSITAR MASS IN PARADONTIC DISEASES

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### ABSTRACT

*Studies on the etiology of periodontal diseases and their treatment are carried out in our country, as well as in foreign countries. Currently, researchers are focusing on the use of a mass of autothrombocytes for the effective treatment of periodontal disease. The article notes the effectiveness and advantages of treatment when using this method.*

**KEYWORDS:** *Chronic Periodontitis, Autoimmune Mass, Periodontal Index, Hygienic Effectiveness, Tissues, Men, Women.*

### INTRODUCTION

The sharp increase in periodontal inflammatory diseases in the mature and middle-aged population has become a serious problem of modern dentistry. (Blashkova S. L., 2016; Durnovo E. A., 2013). In recent years, there has been a high incidence of acute and recurrent periodontal disease. (Bulkina N. V., 2012; Grudyanov A. I., 2017).

There are several advantages of using autothrombocyte mass in therapeutic practice: simplicity of use; absence of postoperative rehabilitation period; naturalness; availability of other types of drugs; the exception of the risk of infectious diseases (Akhmerov R.R., 2007; 2011; Ivanov P.Yu., 2012; Gfatter R., 2000; Marx R.E., 2004).

Unless traditional methods of treatment of periodontal inflammatory diseases increase the resistance of the periodontium to pathogenic risk factors, the use of autoimmune mass in chronic forms of the disease is relevant.

**The aim of the study:** To increase the effectiveness of treatment of periodontal inflammatory diseases using autothrombocyte mass.

**Research methods and materials:** The clinical study was conducted in the dental office of the Bukhara Regional Multidisciplinary Medical Center.

In total, 240 patients were examined. Of these, 160 (66.7%) were patients diagnosed with general periodontitis between the ages of 35 and 65, including 78 (48.8%) men and 82 (51.2%) women. The mean age of the patients was  $42.9 \pm 7.5$  years. Also, 20 healthy non-gender-related periodontal control groups were isolated (of which only gums were examined). Selected for the study, 160 patients with common periodontitis were divided into two groups.

The first, core group consisted of 80 people, of whom 42 (52.5%) were men and 38 (47.5%) were women. The first group of patients underwent complex treatment with autothrombocyte mass.

In the second, control group, there were 80 patients, of whom 47 (58.8%) were women and 33 (41.2%) were men. In the complex treatment of patients in the control group, the traditional method of treatment of general periodontitis was used. The standard method of periodontist admission was used in the examination of patients.

At the initial examination, patients' complaints were as follows:

- bad breath;
- bleeding gums when eating solid food and brushing teeth;
- discoloration of property;
- the presence of dental caries (tartar);
- opening of the neck of the tooth;
- periodontal pockets and gums;

Based on clinical data, the diagnosis of "Chronic generalized periodontitis" was made.

The main complaints of patients with general periodontitis: bleeding gums (83.1%) and pain in them (26.2%), bad breath (23.1%), purulent discharge from the periodontal pocket (PK) (16.9%), loosening of teeth (13.8%), neck opening of the teeth (18.5%) and sensitivity in them (20%).

We assessed the general condition of the patients according to their words before starting treatment. From the collected anamnesis data, it was found that 72 patients (44.6%) considered themselves practically healthy, while the remaining 88 (55.4%) patients had a history of some disease or allergic reactions.

In most cases, 21.5% of patients reported having gastrointestinal disease, 16.9% of patients with ENT disease, and 12.3% of patients with cardiovascular disease.

According to the anamnesis of patients, 137 (85.6%) of them were diagnosed with periodontitis for the first time at the time of their visit to the dental office of the Bukhara Regional Medical Association. The remaining 23 (14.4%) patients knew they had periodontal inflammatory disease but did not receive specialized care from a specialist.

When examining the oral cavity, we focused on anatomical functional disorders. Because this process has a pathogenetic role in the development of periodontal inflammatory diseases. Gingival ischemia was observed in the frontal teeth of the lower jaw in 25.4% of patients, 22.4%

- small oral cavity, 23.8% - pathology of the sublingual girdle, 21% - traumatic effects, 77.8% of patients with pathological pricus, 11.5% % of fractures, 44.4% of partial defects of dentition, 32.1% of gingival recession, 17.9% of enamel eruption or complete absence, 41.8% of orthopedic devices, 71.2% of dental caries . Periodontal analysis revealed gingival bleeding in 100% of patients, gingival hyperemia in 95.6%, significant swelling in 51.2%, pain on palpation of the gums in 47.1%, purulent discharge in the periodontal pocket, 74.1% in which the movement of the teeth was recorded.

### Research results.

In the initial phase of treatment, an index assessment was performed in all patients in the two study groups. This procedure was repeated 3 days, 7 days, one month, 6 months, and one year after treatment.

On the first day of treatment, patients complained of bleeding gums when brushing teeth, swelling in the gums, pain, bad breath from the mouth, gnashing of teeth, and impaired chewing. Some patients also complained of worsening of the general condition: general weakness, irritability, loss of appetite.

On objective examination: hyperemia in the gums on the 1st flight, swelling, swollen consistency of the gums, PCh depth average  $5.8 \pm 1.2$  mm, purulent serous exudate separation and granulation in some places began to appear. In some patients, tooth movement reached grade II-III. Milk bleeding averaged  $2.91 \pm 0.11$  according to the Muhlemann index. Significant amounts of dental caries and tartar were found in the teeth. Oral hygiene was assessed as follows: tooth aproximal surface view index API  $77.61 \pm 7.37\%$ ; A PHP of  $2.41 \pm 0.25$  indicates that insufficient attention has been paid to oral hygiene.

### CONCLUSION

The disappearance of clinical signs of inflammation during the observation period, compliance of API and PHP indices with the normooptimal hygienic level of the oral cavity, reduction of PCh depth to an average of  $1.2 \pm 0.5$  mm confirm the use of autothrombocyte mass in the complex treatment of chronic generalized periodontitis.

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## DEFINITIONS THE DIVISION FACTOR AT PURIFICATION OF OIL SLIME OF MECHANICAL IMPURITY

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### ABSTRACT

*In this article are given results of definition of a factor of division at purification of oil slime of mechanical impurity in centrifugal field and also the sizes and mass of firm particles as a part of oil slime from 10 microns to 500 microns are determined.*

**KEYWORDS:** *The Mass of Particles, Oil Slime, Mechanical Impurity, Centrifugal Fields, A Division Factor, Gravitational Weeding.*

### INTRODUCTION

Oils, accumulated on the sewage facilities of the refinery, can be divided into two main groups: dropping directly on the sewage treatment plants and accumulated over a number of years stored in the slurry accumulators. The oilshlam consists mainly of solid sandy, clay particles, industrial dust, coke and soot, corrosion products, suspensions of hydroxide metals, alkaline-land carbonates, carbonates Oils as a certain dispersed system of coagulation structure has the properties of thixotropy, i.e. After the mechanical effect (dilution of water and intensive mixing) is restored over time. Oils Used to obtain claying in the production of which to reduce the volumetric density of clays use various organic additives, including polyglycols, sulphide yeast bard, diesel fuel, fuel oil, kerosene, piol For most centrifuges, the fraction of the separation F does not exceed 3500 and is an average of 500-1000 [2,3]. The greater the separation factor, the higher the separating ability of the centrifuge. The separation factor can be increased by increasing the radius of the drum and to an even greater extent - increasing the number of revolutions. ( $\omega^2 = \frac{\pi^2 n^2}{900}$ ), Since the value of F is proportional to the square of the number of revolutions [4]. To determine the division factor, we conducted a series of experiments in the gravitational and centrifugal fields, also theoretically calculated to determine the precipitation rate of solid particles of mechanical impurities in various fields. In order to determine the rate of

free precipitation of solid particles in the gravitational field, the Stokes formulas were used, in m / s (for Re (0.2) [5]:

$$\omega_{oc} = \frac{d^2 g (\rho_r - \rho_c)}{18\mu}, \quad (1)$$

where: DE is an equivalent particle diameter, m; g - acceleration of free fall,  $G = 9.81 \text{ m / s}^2$ ; (- particle density,  $\text{kg / m}^3$ ; (- dynamic viscosity of the medium,  $\text{PA} \cdot \text{s}$  with. The determination of the precipitation rate of a spherical single particle in a fixed unlimited medium was determined using the Archimedescript:

$$Ar = Ga \frac{\Delta\rho}{\rho_c} = \frac{Re^2}{Fr} \frac{\rho - \rho_c}{\rho_c} = \frac{d^3 (\rho - \rho_c) \rho_c g}{\mu^2}, \quad (2)$$

где  $Ga = Re^2 / Fr$  –

Galilean's criterion. The frude criterion was calculated by the following formula:

$$Fr_y = n^2 d / g, \quad (3)$$

where the N-frequency of the flux rotation, C-1; D-diameter of hydrocyclone, m;  $G = 9.81 \text{ m / s}^2$

Acceleration of free fall. Reynolds criterion determined:  $Re = \frac{\omega d \rho}{\mu}$ ,

where (- flow rate,  $\text{m / s}$ ; d - hydrocyclone diameter, m; (- density medium,  $\text{kg / m}^3$ ; (- dynamic environmental viscosity coefficient,  $\text{PA} \cdot \text{s}$ . Based on the calculations, hydrodynamic mode inside the hydrochlor

$$Ly = \frac{Re^3}{Ar} \frac{Re Fr \rho_c}{\rho - \rho_c} = \frac{\omega_{oc}^3 \rho_c^2}{\mu_c (\rho - \rho_c) g}. \quad (4)$$

Centrifugal force (in H), acting on a particle, is:

$$C = mn^2 / R = m\omega^2 R, \quad (5)$$

where: m - the mass of the particles, kg; (- the angular speed of rotation of the particle, C-1; N is the circumferential speed of rotation of the particle, C-1; R- Radius of the rotation of the particle, m. The power of gravity:

$$P = mg. \quad (6)$$

Solving equations (1) and (5), we get:

$$K_p = \frac{C}{P} = \frac{m\omega^2 R}{mg} = \frac{\omega^2 R}{g}, \quad (7)$$

Where: CR - separation factor. To determine the precipitation rate of solid particles of mechanical impurities, various particles (stone, sand, earth) of various sizes were taken (stone, sand, earth), i.e. from  $10 \mu\text{m}$  to  $500 \mu\text{m}$ . The sedimentation diameter of solid particles (in  $\mu\text{m}$ ) was calculated by the following formula:

$$d_s = \sqrt{1810^7 \mu H / (\rho_1 - \rho_2) g \tau}, \quad (8)$$

where, the dynamic viscosity of the medium, Pa · C; (1 - the density of the solid particle, g / cm<sup>3</sup>; (2 - the density of the medium, g / cm<sup>3</sup>; H is the height of the particle sedimentation, cm; G - acceleration of gravity, m / s<sup>2</sup>;

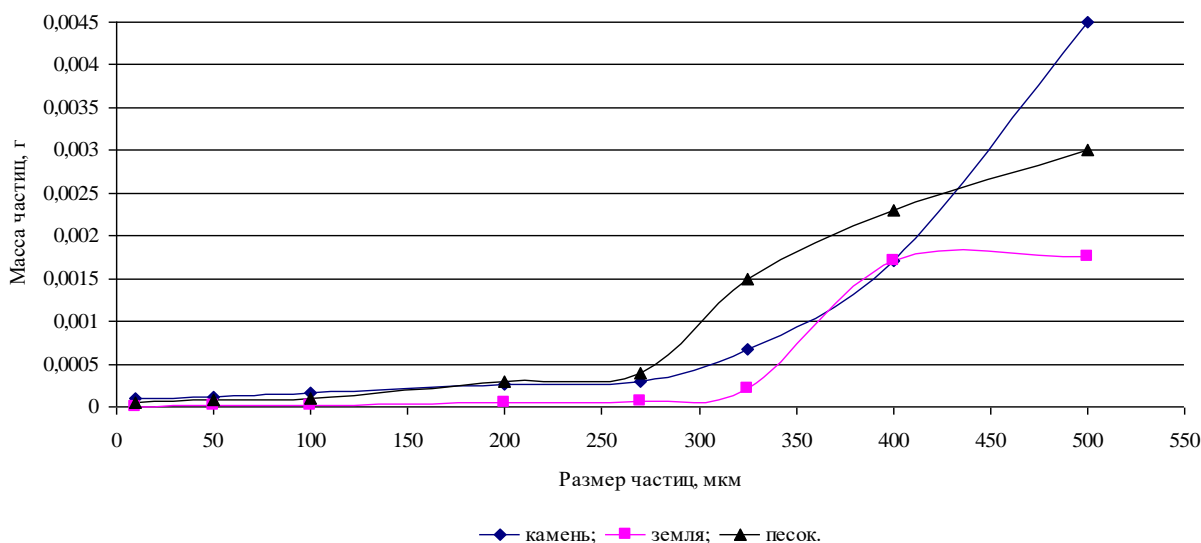
$$d_s = \sqrt[3]{\frac{6V}{\pi}} = 1,24 \sqrt[3]{\frac{M}{\rho}}, \quad (9)$$

where V is the volume of the particle, M<sup>3</sup>. As part of the captured mass contain various impurities (sand, earth, stones) with various sizes (within 10 ÷ 500 microns). To determine the size and mass of the particles, we conducted a series of experiments. Before determining the sizes of caught solid particles of mechanical impurities, they were dried into the furnace of the brand - Snol 1,6.2,5.1 / 11-II2 for 1-2 hours at a temperature of 100-150 (s. The mass of solid particles of mechanical impurities weighed with

**TABLE 1 SIZES AND WEIGHT OF SOLID PARTICLES IN THE STRUCTURE OF THE CAPTURED MASS**

Name of solid particles	Particle size, $\mu m$							
	500	400	325	270	200	100	50	10
	Mass of particles, g							
A rock	0,0045	0,0017	0,00067	0,00030	0,00027	0,00016	0,00011	0,000097
Land	0,00175	0,00170	0,00021	0,00007	0,00005	0,00001	0,000009	0,000006
Sand	0,0030	0,0023	0,0015	0,0004	0,0003	0,0001	0,000087	0,000054

Table 1 shows that the oil sludge contains various solid impurities, such as stone, earth, sand, etc. The mass of fine solid particles of the stone in the composition of the oil sludge with a size of 10  $\mu m$  to 500  $\mu m$  will change in the range of 0.0045 ÷ 0.000097 g, and the Earth is in the range of 0.00175 ÷ 0.000006 g



### Figure 1. Determination of solid particles depending on their size

Figure 1 shows that with an increase in the size of solid particles of mechanical impurities, their mass also increases, i.e. The mass of 10  $\mu\text{m}$  particles is 0.000097 g, the mass of 50  $\mu\text{m}$  particle is 0.00011. With a further increase in the size of solid particles up to 500  $\mu\text{m}$ , their mass was 0.0045, after determining the size and mass of solid particles The results of the studies on the definition of the value of the separation factor are shown in Table 2.

**TABLE2 THE VALUES OF THE RATE OF FREE DEPOSITION OF SINGLE SOLIDS IN CENTRIFUGAL AND GRAVITATIONAL FIELDS**

Particle size, m $\times 10^6$	Free deposition rate in gravitats.phol, m / s	The rate of deposition in the centrifugis. Field, m / s	Separation factor, cr	The values of the rate of free deposition of single solids in centrifugal and gravitational field Arkhimed
10	0,00095	1,55	1630,98	18,1
50	0,001	1,76	1630,98	20,1
100	0,0015	2,56	1630,98	29,5
200	0,0026	4,32	1630,98	50,22
270	0,0029	4,80	1630,98	56,09
325	0,0065	10,72	1630,98	98,1
400	0,016	27,20	1630	269,1
500	0,044	72	1636	784,8

From Table 2, it can be seen that 10  $\mu\text{m}$  of particles in the gravitational field is deposited in 0.00095 m / s, and in the centrifugal field is 1.55 m / s, the rate of deposition of 50  $\mu\text{m}$  particles in the gravitational field is 0.00 The sections of the Criminal Procedure for such particles is almost the same, i.e. This indicator is an average of 1631,485. The results of the studies are also illustrated in Fig.2.

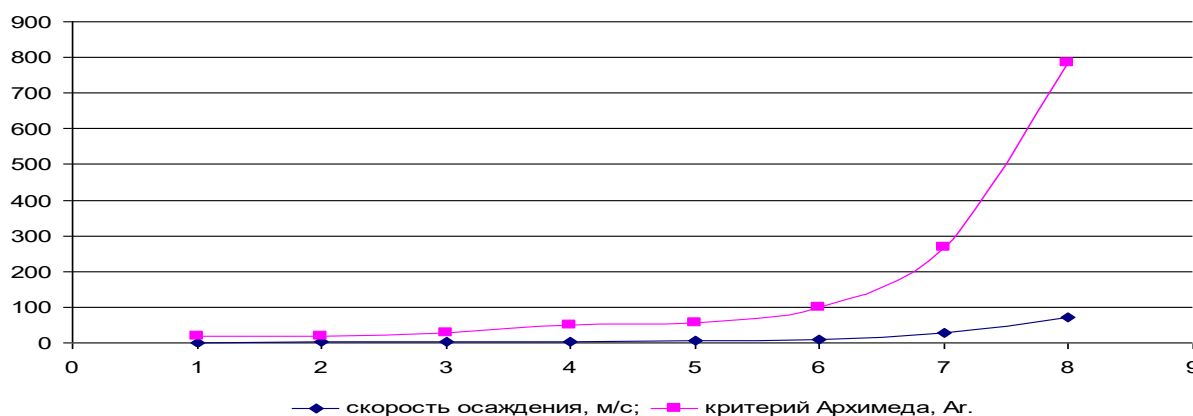
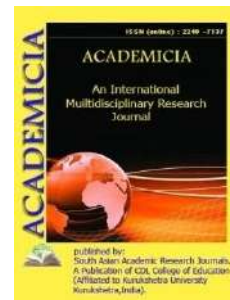


Figure 2. Change the criterion of the Archimedes depending on the rate of precipitation of solids in the centrifugal field

Fig. 2 shows that the criterion of Archimede AR also varies depending on the mass of the particle within  $18.1 \div 784.8$ . This is due to the fact that with an increase in the mass of solid particles of mechanical impurities, their deposition speed is also accelerated in gravitational and centrifugal fields. At the same time, the sections of the Kyrgyz Republic remains almost unchanged, and the criterion of Archimede AR varies depending on the mass of solid particles. Thus, studies indicate that the separation factor for cleaning the oil sludge from mechanical impurities was an average of 1631.485 in various sizes of solid particles from 10  $\mu\text{m}$  to 500 microns, and the criterion of Archimede This is explained by the fact that in the centrifugal field at high speed of the liquid flow of resistance of the medium (the force of Archimede Ar) on the separation of solids is almost impermanent, i.e. It is advisable to use the hydrocyclone when cleaning the diluted oil sludge.

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## ANALYTICAL INDICATOR OF SALIVA IN CHILDREN WITH CEREBRAL PALSY

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### ABSTRACT

*Dental diseases are among the most common diseases among other diseases, among which caries and its complications in cerebral palsy at the age of children take the leading place. In children, tserebral paralysis is determined by the disability of 3-5 patients of 1000 born babies. According to the results of dental examinations, the prevalence of dental caries and its complications in children with cerebral palsy varies from 80% to 85%.*

**KEYWORDS:** *Cerebral Palsy, Saliva, Oral Cavity, Morphological Structure.*

### INTRODUCTION

Today, the problem of obtaining and treating dental diseases in children with cerebral palsy is especially relevant. Renowned it is important to develop special treatment measures in children with pathology. Despite the active work of various specialists, medical specialists and parents, unfortunately, the number of patients diagnosed with cerebral palsy increases year by year.

Among children with cerebral pathology, there is a wide prevalence of dental diseases, including isolyanin (2005), the average age of a child diagnosed with cerebral palsy is 11,5 years. Permanent tooth decay in them begins at the age of 12 years, and given the low level of oral hygiene in these children, it is very important to take measures to prevent and treat diseases of their oral cavity.

Children can not intelligently drain the oral cavity, some children do not have the ability to self-care. All this is accompanied by a lack of attention of parents. The state of teeth in such children is often aggravated. This means that children have a sharp need for dental care, and this is the prevention and treatment of dental diseases in children. Due to the somatic pathology present in patients with cerebral palsy, it is difficult to use a traditional treatment regimen in certain oral diseases, which necessitates the need for new approaches izlash to address this problem.



The saliva of different glands is different in consistency: the submandibular and tongue oscillate glands and secrete glue and darker saliva than the ear Aldi gland. This difference in saliva consistency is due to the protein substance in it — mucin. Musin makes the saliva more specific mucus and slippery, it is thanks to this that it is easier to swallow food that is digested with saliva.

In addition to Musin, in the saliva there are lean protein — globulin, amino acids, creatinine, uric acid, mochevina, as well as inorganic salts. All these substances form a solid residue of saliva (0,5—1,5%). Its 2/3 part corresponds to organic substances, and the rest to mineral salts. Salpal salpal is alkaline-reactive.

Depending on the type of food a person eats, the amount of saliva separated per day varies; it is equal to 1000-1200 ML on the average.

Salivary enzymes. Carbohydrates in human saliva grape sugar there are gillolytic ferments that decompose. Lizosimfsrmenti (salivary uncle lazasi) starch to dextrins, while dskstrins maltose becomes a disaccharide calledtiradi. The second fer in saliva- maltose at the action of Menth — maltase two pieces of granulated grape sugar-piss off.

Even if the saliva enzymes are highly active, the starch at their exposure does not decompose, since the food does not stay in the oral cavity for long. Ptialin and maltase have an optimal effect in alkaline conditions. The concentration of 0,01% of hydrochloric acid slows down the action of salivary enzymes, while the high concentration slows down the action of salivary enzymes and decomposes them, so the gastric juice stops the action of salivary enzymes. Since the bite of the food does not absorb the gastric juice at once, the effect of saliva enzymes on carbohydrates can last some time, even in the stomach. The secretion of the salivary glands is provoked by the reflex pathway. Food substances or rejection substances that affect the receptors in the oral cavity cause unconditional salivary cleavage reflexes in the body.

If the effect is strong enough, then after 1-3 seconds the saliva is separated. This period, which passes from the moment of exposure to the separation of saliva, is called latent, or latent, period. If the potency is low, the latent period reaches 20-30 seconds. In the period when the exposure continues, the saliva divides, as soon as the exposure stops, the output of the saliva also stops. It is worth noting that in children with cerebral palsy, oral fluid is observed more than the norm of saliva in science it is called hypersalivation. Such a disease occurs as a result of an involuntary state of various features in the brain of the head in children, as well as the saliva itself becomes very detached. This causes the absorption of tooth enamel to develop caries and its complications.

**The purpose of the topic:** To determine the chemical composition of saliva in oral fluid in children with cerebral palsy and prevention of dental diseases.

**Materials and methods:** The composition and environment of the saliva of 52 boys and girls aged 11-13 studying in the special boarding school No. 27 in Bukhara were determined.

**Conclusions and analyzes:** In conducting scientific studies, hypersalivation was studied in two groups depending on the amount. The first group of 28 sick children was divided according to the spontaneous course of salivation. The remaining second group was identified in 24 sick children based on the movement of the oral cavity organs. In addition to mucin, saliva contains a small amount of protein - globulin, amino acids, creatinine, uric acid, urea, as well as inorganic

salts. All of these substances form a solid residue of saliva (0.5-1.5%). 2/3 of it is organic matter and the rest is mineral salts.

The first group consisted of 28 patients with 3.4% solid saliva residue when the salivary fluid component was examined, which is a 98.7% developmental marker in the occurrence of tooth enamel erosion and caries complications.

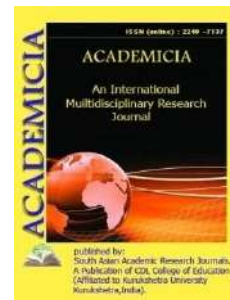
In the second group of 24 sick children, when the saliva fluid component was examined, the solid residue of saliva was 2.2%, indicating a 68.7% development in the decay of tooth enamel and the occurrence of caries complications.

## CONCLUSION

In children with cerebral palsy, salivation is consistently high. This appearance of hypersalivation leads to tooth enamel erosion and the development of caries complications. In addition, an increase in solid residue in saliva (protein - globulin, amino acids, creatinine, uric acid, urea, inorganic salts) causes gingivitis of the upper and lower gums. As a result, the development of a tumor form of hypertrophic gingivitis can be observed in sick children of this age.

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## RESULTS OF PREPARATION OF OIL SLIME FOR PRIMARY PROCESSING

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### ABSTRACT

*Results of a research on preparation of oil slime for processing are given in article, for dilution of oil slime different types thinners in various ratios are chosen (light and heavy naphtha, puфopmam, gasoline and hydrocarbon solvent). For the purpose of purification of oil slime of mechanical impurity it is used centrifugal cleaning which flow rate is varied within 10÷20 of m/s.*

**KEYWORDS:** Oil, Oil Slime, Flow Rate, Hydroclone, Mix, Gasoline, Centrifugal Cleaning

### INTRODUCTION

During the extraction, transportation and refining of oil, formation and accumulation of oil sludge occurs [1]. In general terms, all oil sludge can be divided into three main groups in accordance with the conditions of their formation: soil, bottom and tank type. The former are formed as a result of spills of oil products into the soil during production operations, or in emergency situations. Bottom sludge is formed due to subsidence of oil spills at the bottom of reservoirs, and tank-type sludge is formed during storage and transportation of oil products in containers of different designs [2,3,4].

The ratio of petroleum products, water and mechanical impurities (particles of sand, clay, rust, etc.) varies in a very wide range: hydrocarbons make up 5-90%, water 1-52%, solid impurities 0.8-65%. Such a significant change in the composition of oil sludge, the range of changes in their physico-chemical characteristics is also very wide. The density of oil sludge ranges from 830-1700 kg / m<sup>3</sup>, the pour point is from -3 ° C to + 50 ° C. The flash point lies in the range from 35 to 120 ° C [5,6,7].

During long-term storage, oil sludge with time is divided into several layers, with properties characteristic of each of them.

The top layer is a watered petroleum product with up to 5% fine particulate matter and belongs to the class of water-in-oil emulsions. The composition of this layer includes 70-80% oils, 6-25% asphaltenes, 7-20% resins, 1-4% paraffins. The water content does not exceed 5-8%. Quite often, the organic part of the freshly formed upper layer of oil sludge is close in composition and properties to the original oil product; the middle, relatively small volume layer is an oil-in-water emulsion. This layer contains 70-80% water and 1.5-15% mechanical impurities; the next layer consists entirely of settled mineralized water with a density of 1.01-1.19 g / cm<sup>3</sup>; finally, the bottom layer (bottom sludge) is usually a solid phase comprising up to 45% organics, 52-88% solids, including iron oxides. Since bottom sludge is presented in the form of a hydrated mass, the water content in it can reach up to 25%. In the process of processing sludge, various technological methods can be applied depending on their physical and mechanical characteristics. The collected oil sludge of a liquid-viscous consistency is subjected to separation into oil product, water and solid solids. This phase of refining has its purpose - the extraction of oil products with initial properties from the sludge and their use for its intended purpose. There are two main methods of phase separation of liquid-viscous oil sludge - mechanical and chemical. For deeper refining of petroleum products, they sometimes resort to complex technology. The destruction of stable water-oil emulsions by mechanical means is based on technological methods of artificially changing the concentration of the dispersed phase of the emulsion, followed by coalescence of small drops of this phase. To carry out the operation of interphase separation of liquid-viscous oil sludge, a large number of technological devices have been developed at present, including separators, centrifuges, and hydrocyclones of various designs [8, 9, 10].

Based on the foregoing, we have assembled an experimental laboratory technological line consisting of a two-stage hydrocyclone installation for cleaning oil sludge from mechanical impurities (Fig. 1). The production line consists of: a tank for supplying oil sludge 1, a tank for supplying a diluting agent 2, a collector for mixing the diluent with oil sludge 3, hydrocyclones for separating solids 4,5, silos for trapped mass 10 after cleaning the oil sludge from solids, pumps for injection of flow 12, valves for regulating the flow inside the pipes 15. Tank 3 is filled with oil sludge through pump 12, diluent is poured from tank 2 into tank 3 to dissolve the oil sludge in various proportions, then mixed for 30 ÷ 60 min. The temperature of the process is in the range of 60–70 ° C, after which, in order to clean oil sludge from mechanical impurities using pump 12, the diluted fraction was supplied in two-stage hydrocyclones 4 and 5 at a speed of 20 m / s. Formed during the process, the purified phase is discharged into the bunkers 10. Moreover, the flow rate of the feedstock is measured using a flow meter, and the hydraulic resistance of the hydrocyclone and the hydraulic pressure of the liquid in it is determined by a pressure gauge 14.

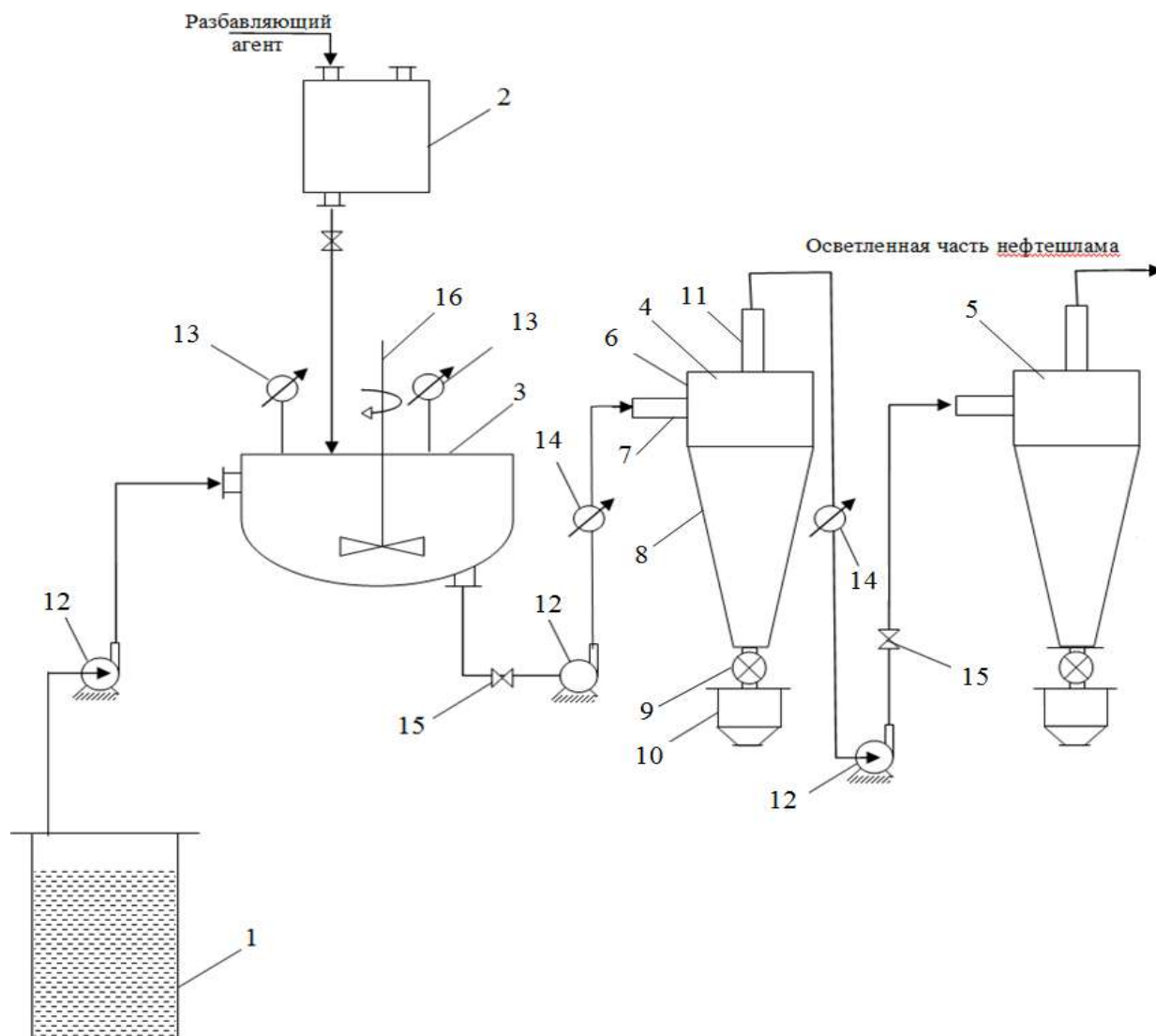


Fig. 1. Purification of oil sludge from mechanical impurities: 1- capacity for oil sludge supply; 2- capacity for supplying a diluting agent; 3.16-capacity with a stirrer; 4,5-hydrocyclones; 6- cylindrical part of the hydrocyclone; 7 - a supply pipe of a hydrocyclone; 8 - conical part; 9- lock gate; 10- hopper for trapped mass; 11 - drain pipe; 12 - pumps; 13- manometers and thermometers; 14- flowmeters; 15 - gate valves.

The geometric dimensions of the tank with a stirrer: height - 400 mm; diameter - 300 mm; stirrer rotation frequency - 300 rpm. The dimensions of the laboratory hydrocyclone are as follows: the diameter of the cylindrical part  $D$  is 10 mm, the height of the cylindrical part is 10 mm, the height of the conical part  $H$  is 30 mm, the diameter of the inlet (supply) pipe for the suspension  $d_{bx}$  is 15 mm, and the diameter of the drain pipe for the purified raw material  $d_{bb}$  is 15 mm

To determine the effect of the diluted liquid flow rate on the efficiency of cleaning oil sludge from mechanical impurities, we conducted a series of experiments. The experiments were

carried out in a hydrocyclone, i.e. in a centrifugal field (Fig. 1). In the course of the experiments, the flow velocity in the hydrocyclone was varied within 10–20 m / s. The results of the experiments are shown in table 1.

**TABLE 1 THE RESULTS OF OIL SLUDGE TREATMENT DEPENDING ON THE FLOW RATE (INITIAL CONCENTRATION OF MECHANICAL IMPURITY 25%)**

№	Diluted oil sludge speed, m / s	Light naphtha	Hydrocarbon solvent	Heavy naphtha	Reformat	Petrol
		<i>Residual concentration of particulate matter%</i>				
1.	10	7,18	1,91	4,03	2,96	5,14
2.	11	7,01	1,84	3,88	2,74	4,81
3.	12	6,82	1,77	3,72	2,59	4,39
4.	13	6,56	1,48	3,48	2,37	4,23
5.	14	6,24	1,21	3,12	2,11	3,93
6.	15	5,16	0,92	2,93	1,98	3,52
7.	16	4,62	0,21	2,18	1,86	3,21
8.	17	3,91	0,19	1,92	1,72	2,95
9.	18	3,01	0,16	1,74	1,66	2,57
10.	19	2,87	0,11	1,56	1,59	2,44
11.	20	2,04	0,02	1,43	1,22	2,31

With an increase in the rate of diluted oil sludge in a hydrocyclone from 10 m / s to 20 m / s, the residual concentration of solids of mechanical impurities also varies between  $7.18 \div 0.02\%$ , and the type of diluent also affects the separation of solid particles from diluted oil sludge. (light naphtha, heavy naphtha, reformat, hydrocarbon solvent and gasoline).

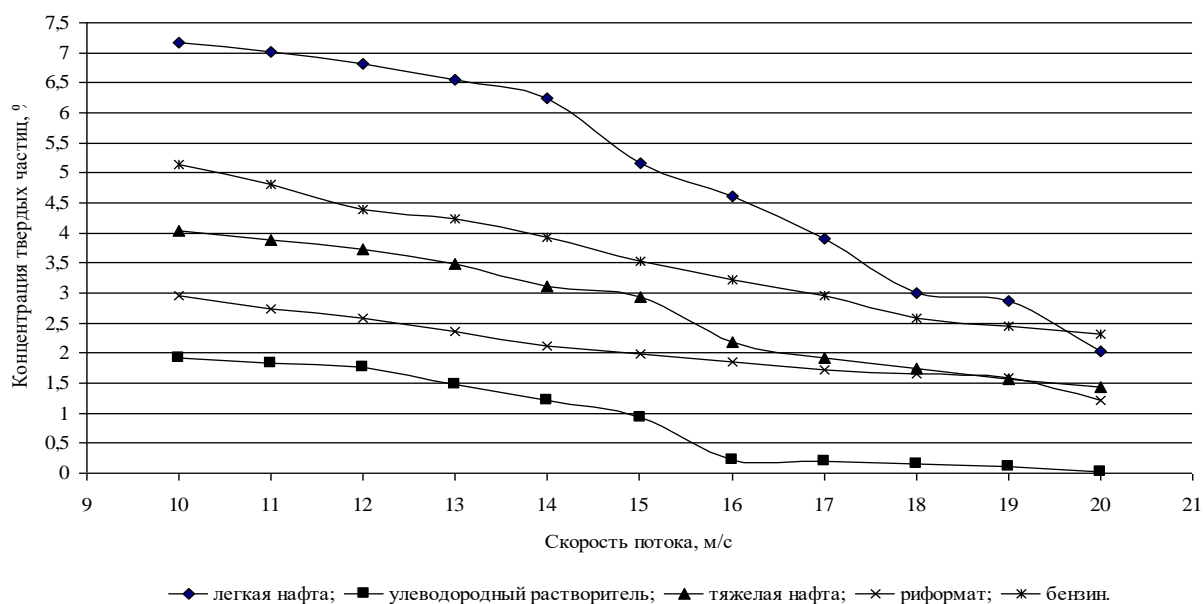


Fig. 2. The change in the residual concentration of solid particles depending on the flow rate.



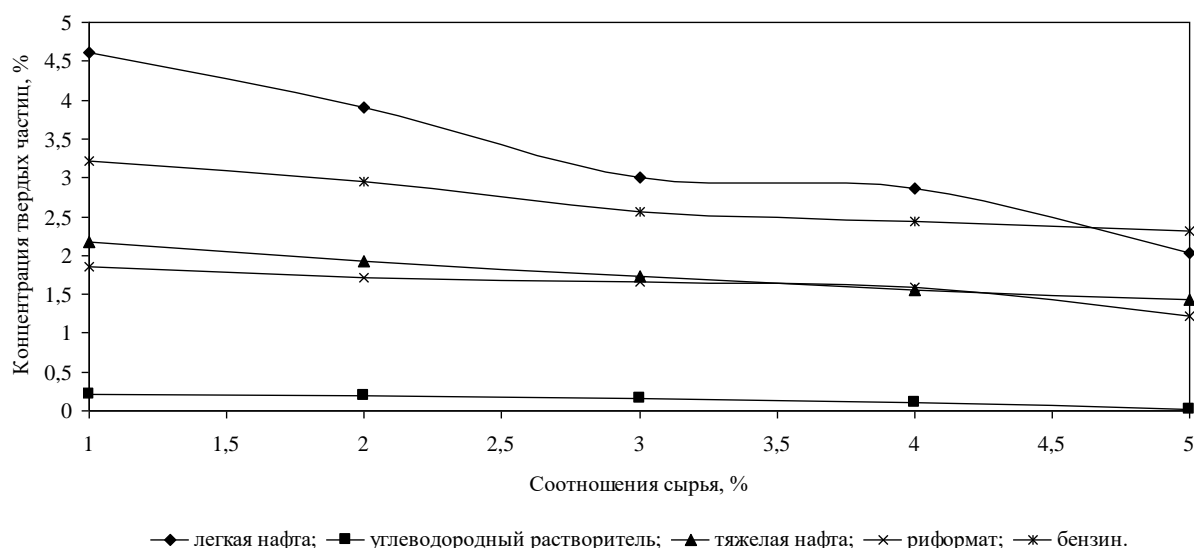
It can be seen from Fig. 2 that at a speed of 10 m / s of a diluted liquid flow with light naphtha, the residual concentration of solid particles of mechanical impurities in the composition of the diluted mixture is 7.18%, and at 11 m / s this figure was 7.01 %, with a further increase in flow velocity to 20 m / s, the concentration of solid particles was 2.04%. At a speed of 10 m / s diluted with heavy naphtha, the concentration of solid particles was 4.03%, at 15 m / s diluted with this solvent, the residual concentration was 2.93%, and at 20 m / s, the concentration of solid particles was 1, 43% In the course of experiments on the purification of oil sludge from mechanical impurities, it was revealed that a hydrocarbon solvent was chosen to dilute the oil sludge in order to clean it from mechanical impurities, i.e. at a speed of 10 m / s of the liquid stream of the diluted hydrocarbon solvent, the residual concentration of solid particles was 1.91%, and with an increase in the flow rate of 11 m / s, the concentration of solid particles was 1.84%, and with a further increase in the flow rate to 20 m / s, the residual concentration of solid particles in the composition of the diluted mixture was 0.02%. This is because for the dilution of oil sludge in order to easily separate solid particles of mechanical impurities from the composition of the oil sludge, a hydrocarbon solvent is selected.

Further experiments on the purification of oil sludge from mechanical impurities with different diluent ratios of oil sludge were carried out in a centrifugal field at a liquid flow rate of 20 m / s, the concentration of solid particles of mechanical impurities in the initial and purified oil sludge were determined in a Soxhlet flask under laboratory conditions. The results of the experiments are shown in table.2.

**TABLE 2 RESULTS OF CLEANING OIL SLUDGE FROM SOLIDS WITH VARIOUS SOLVENTS (INITIAL CONCENTRATION OF SOLIDS 25%)**

№	Ratitions of raw materials,% (solvent / oil lodge)	Light naphtha	Hydrocarbon solvent	Heavy naphtha	Reformat	Petrol
1.	30/70	4,62	0,21	2,18	1,86	3,21
2.	40/60	3,91	0,19	1,92	1,72	2,95
3.	50/50	3,01	0,16	1,74	1,66	2,57
4.	60/40	2,87	0,11	1,56	1,59	2,44
5.	70/30	2,04	0,02	1,43	1,22	2,31

From Table 2 it can be seen that with a change in the type of solvent, the concentration of solid particles of mechanical impurities in the composition of the dilute mixture also changes, i.e. When diluting a light naphtha at a ratio of 30/70, the residual concentration of solid particles is 4.62%, and at 40/60, the concentration of solid particles was 3.91%, with a 50/50 ratio, residual concentration With a change in the solvent on heavy naphtha at a ratio of 30/70, this indicator was 2.17%, with the ratio of this diluent 70/30, this figure was 1.43%. The experiments on the purification of oilshlam are also illustrated below.



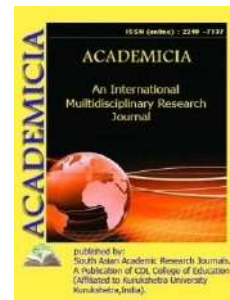
**Figure 3. Changing the concentration of solid particles in the composition of the oil sludge, depending on the ratio of the solvent**

With a change in the diluent for diluting the oil sludge on a hydrocarbon solvent (Fig. 3) with a ratio of 30/70, the residual concentration of solid particles of mechanical impurities in the dilute mixture was 0.21%. With a further change in the ratio of the diluent to 70/30, the residual concentration of solid particles of mechanical impurities in the structure of the dilute oil sludge is also reduced to 0.02%. This is due to the fact that with an increase in the diluent ratio with the oil sludge, the concentration of solid fine particles of mechanical impurities is also reduced, as well as for the purpose of light separation of solid mechanical impurities from the composition. Thus, for cleaning the dilute oil sludge in the centrifugal field, the optimal liquid flow rate of 20 m / s is selected. The experiments on the preparation of the oil sludge to process indicate that a hydrocarbon solvent is chosen to dilute the oil sludge, while the residual concentration of solid particles in the composition of the dilute mixture was

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## THE FORMATION OF NATIONAL-IDEOLOGICAL CONSCIOUSNESS OF YOUNG STUDENTS AT THE STAGE OF DEVELOPMENT OF UZBEKISTAN

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### ABSTRACT

*The article deals with the protection of the young generation of bliss-tive effect of different ideas and ideologies, analyzed the psychological problems of security of the person in the process of globalization and the ideological influence processes on a national idea.*

**KEYWORDS:** *Globalization, Idea, Spirituality, National Idea, The Ideological Processes, Information, Internet, Modern Technology, The Moral Threat, Mass Culture.*

### INTRODUCTION

The modern stage of human history is characterized by the intensity and integration of international relations in all areas of social, political, economic, spiritual, cultural life. In particular, due to the development of a means of communication and improvement of technical and technological means of the space and television radio systems of communication, computer, e-mail and the Internet, ideological processes have become global and the possibilities for ideological influence have expanded. The ideologies that have arisen in a certain territory or in a certain country are spreading rapidly around the world.

According to experts, today mankind is experiencing a new information revolution, and this is not the first revolution in the history of human society. If the formation of speech expanded the possibilities of transmitting information, the emergence of writing opened the way for its preservation for a long time and the transmission of information over great distances, even after a time, separately from its creator. The publication of newspapers and magazines has further strengthened the responsiveness and scale of the transmission of written information. And radio

and television, providing the transmission of information through sound and image, raised it to a new qualitative level. The level of media coverage, in other words, the implementation of activities on a local, national, regional or international (global) scale has further expanded its range of impact. The Internet has become an important link in today's information abode.

In the development of human society, serious changes have occurred in the national and spiritual life of man and society in a new quality. The pace of the cultural development of mankind is also increasing. Namely, the rapid growth of scientific inventions, the amount of information and people employed in the field of science, is clearly shown in doubling the volume of scientific activity every 10-15 years. Despite this, it is impossible to imagine the development of spirituality and culture of mankind as an even process.

But there are still peoples and regions lagging behind today's gains of humanity. No nationality, region could exist absolutely separately from its spirituality, culture. In the process of mutual influence between cultures, elements of another culture enter each national culture. Such a process of mutual influence and enrichment grows with the strengthening of the development of society, corresponding to it. Especially, the great changes that took place in the 20th century in industry, transport, and progress in the means of communication accelerated this process even more and covered almost all spheres of culture. However, time has also shown the inconsistency of these processes. A very complicated and contradictory historical path, rich in ups and downs, has entered a new millennium.

The future of mankind, its face in the new millennium, is also largely determined by modern features of development. From this point of view, speaking about the peculiarities of the progress of today's national idea, it is necessary to note the occurrence of negative phenomena, such as the widespread dissemination of elements of culturelessness, the manifestation of aggression in culture in a new form. Including, the cases leading to the destruction of the values that have been formed over the centuries of traditional societies, relying on ideological pressure, organizational foundations and material and financial resources, are trying to inculcate under the guise of universalism and globalism, a model and a standard. At the same time, it should be noted that under the influence of the general strengthening of the national spirit, which takes place in different parts of the world, there is an increase in the desire to restore national values and preserve the identity of the national culture. In the globalization of ideological processes, two completely different directions and trends are outlined:

- 1) Internationalization and universalization of universal values that arose in a certain place, spiritual and enlightening benefits, going beyond the historical framework.
- 2) The absolutization of ethnic, cultural, religious, class, racial, territorial, regional identities at the level of social, economic, political, spiritual and educational development leads to the ideological globalization of negative events that seriously threaten humanity.

“The mutual struggle of various old and new ideologies takes on a swift hue as never before. Frictions between different, sometimes conflicting worldviews, political, national, religious movements, sects become the causes of bloody clashes, mass extermination”[1]. In the same way, ideological globalization paves the way for the widespread dissemination of “works of art,” propagating baseness, villainy, and immorality. Young people show high communicative activity due to their desire for new and the availability of free time. Such features of them can lead to negative consequences, it is natural. This is determined by the existing danger of them falling

into the influence of aggressive ideologies in various forms and “beautiful” forms, combining “from easy erotica” to “open pornography”, from violence to open cruelty, which have a strong effect on human consciousness. Of course, such cases can lead to serious negative consequences in the upbringing of comprehensively developed highly spiritual personalities, which are the basis of the progress of the national idea. “If we successively consider the history of mankind, the development of its thinking, we will see the long-standing and still ongoing struggle between good ideologies and teachings that call a person to high goals, perfection and cruel and harmful ideologies” [2].

The globalization of ideological processes gives rise to the danger of weakening the identity of the national idea and the penetration of the “mass culture” that is forming in the community of highly developed countries. Globalization, being the fruit of the intellectual potential and selfless labor of mankind, cannot prevent it from spiritual impoverishment and national spiritual decay. Humanity, not wanting it, becomes the cause of the negative consequences [3]. In the process of globalization, such concepts as “my nation”, “my people”, “my country” disappear, and concepts appear, in the words of A. Toynbee, “common home”, “common destiny” and “common concerns” and as a result any nation can turn any nation into a mass herd, destroying its identity. And as a result, people may lose their national idea and history.

The civilization of the 21st century has turned the tendency to conquer the world with reason into a peculiar tendency of modern progress, a priority feature of mastering geopolitical statuses. And therefore, the power of the state, the potential of the country, today is measured not by nuclear test sites, but by the potential of ideological, ideological training grounds. It is well known that political forces striving to expand the scope of their influence carry out their ideological violent activities that threaten the security of citizens and society, aimed at weakening and destroying the constitutional and political system, against the stability and tranquility of a particular state, society, nation through various ideological means. To achieve their goals, they first seek to subordinate the consciousness of the population of the countries they want to conquer, to take control. In general, the main goal of ideological propaganda and agitation, distributed through various means in the process of ideological globalization, is the struggle for mastering the human consciousness. Because any idea, after being accepted by a person, will have the status of a practical life program that will set in motion a specific goal. Therefore, today the main goal of ideological warfare is the mastery of the consciousness, soul of the individual. The biggest danger now is the endless ideological struggle for the mastery of the human mind and soul. Evil forces, making every effort to master, will try to skillfully use telecommunications, modern technology, as well as religious, national feelings, social and economic difficulties in life to achieve their vile goals. “We should not forget that paying special attention to this issue, it would seem that small insignificant information directed against human enlightenment, intensified due to globalization in the information world, can cause invisible but irreparable enormous damage [4].”

Known for his propaganda of immoral ideas, the French writer Marquis de Sade wrote about the conquest of countries with the help of ideology:

“For us to conquer the whole world, it is not at all necessary to participate in major battles, to fight, spilling the blood of French soldiers in distant lands, it is not at all necessary to rot them and their boots. If we can spread our morality (that is, immorality) by my and similar books and



in other ways in other countries, in particular in the East, to make this a way of life of this people, the whole world will be at our feet, we will be able to master the souls of all mankind. ...”The above thought of the French writer, famous for his books promoting immorality, found its proof in history. When we read the work of Uzbek writer Pirimkul Kadyrov “Humoyun and Akbar”, we become witnesses of clashes of ideologies. At the time of Akbarshah, during the fierce struggle between the philanthropic, universal ideology, free religion and the destructive ideology of national incitement, religious friction, the French intelligence officer Albert Preiro, under the guise of allegedly teaching the son of Akbar Salim the French language, maritime affairs and navigation, began to impose hiding his immoral ideology, hiding from his father immoral photographs of women, slowly undermining father’s relations with his son, as a result, ruined their relationship and hit the root of this dynasty with an ax. As a result of this, many difficulties arose in Akbar’s policy, in the development of the country, in reaching agreement between different nationalities and religions. In the emergence of these difficulties, a great role was played by the son of Akbar - Salim, whose mind was poisoned by a destructive ideology. This shows that for the subjugation of human souls and thinking, it is not necessary to fight with weapons, ideological influence can be used for this.

Today, ideological processes in the world have their positive and negative effects, so they can be divided into the following groups:

Group I covers creative ideologies: peace, stability and progress, national harmony, religious tolerance, human freedom and personal excellence, the priority of universal values.

Group II embraces reactionary ideologies: war, weapons, terrorism and extremism, racial intransigence and nationalism, religious fanaticism, totalitarianism, selfishness, the priority of narrow interests

Complex processes arising on a global scale, an increase in racial intolerance in one country or another, fanatical crimes, young people who use drugs, inattention to spiritual and educational issues show the possibility of danger and as a result lead to a crisis of society. It should be noted that globalization is characterized by the ideologization of a new form of sociopolitical life; there is an inoculation in all spheres of a new way of life, a “new teaching”. And the role of the “new teaching” is played by Western liberalism.

Ideologies that continue the ideas of communism, with the same intensity and consistency, are trying to implement new models and solutions. So, the liberal “international forces” are under the interests of a certain state, as before the interests of a certain state were behind communism.

The globalization of ideological processes, accelerating the increase in people’s material and moral needs, has changed their traditional mentality. In view of the fact that changes in the national mentality of people today are taking place under the influence of the emerging “mass culture”, they do not develop positive qualities, but negative features such as individualism, desire for fame, accumulation of wealth by any means, neglect of others greed, cruelty, estrangement from each other. The direction of the globalization process in the formation of universal spirituality, which plays a large role in preventing negative qualities in people, has become the most important task for today’s civilization.

The construction of a legal democratic state, civil society in Uzbekistan, based on a market economy, is associated with participation in universal processes taking place in the world today.

Therefore, the analysis of the content and meaning of globalization of ideological processes in the world and the features of their influence on the life and development of our people is very important. Today, the globalization of ideological processes, covering all countries and regions on earth, shows the following features:

Firstly, integration on a global scale, covering all areas of socio-economic, political and spiritual life, makes national boundaries conditional.

Secondly, being an objective process, a feature of globalization of socio-political relations now is characterized by the influence on all spheres of society, without exception.

Thirdly, the general laws of the development of society, expressing the processes of differentiation in models of national development, specify at the national level the general laws in the development of mankind.

Fourth, it is characterized by the intensity of ideological relations as a result of the development of communications, technical and technological, intellectual foundations, international social, economic, political, spiritual and cultural relations.

In the implementation of the priority ideologies of national development, the socio-political situation within the country and beyond is important. Each ideology expresses desires, public opinion, a certain political benefit of a social group, as the embodiment of political consciousness and serves as a guarantor, the basis of socio-political sustainable development.

Each ideology as a political mind, combining certain political interests of a social group in society, expressing the wishes and thoughts of the public, corresponds to the spirit of the people, and also serves as the moral basis, the guarantor of social and political sustainable development in society.

Each society and state has independent development models, although they differ from each other in form, content, do not exclude the general laws of development. That is, on the one hand, it protects the interests of the unification of mankind for good purposes. On the other hand, the identity in national development is formed under the influence of the ideological environment, cultural life, social life, political system of a particular state. [5] "Simply put, each stage of development of a particular society and state requires taking into account the requirements and conditions provided by life itself. We can say that each stage of development is new problems and new tasks on the way to their elimination. This is the law of life, we cannot ignore it, and we have no right to ignore it."

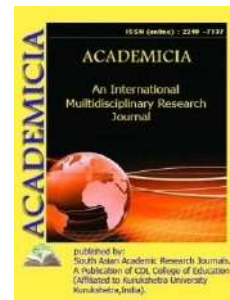
So, times are passing and changing. Only the worldview of the people, the spiritual person, the meaning and content of the nation, passing from generation to generation, continue in new colors. This eternal and continuous process as a national phenomenon expresses in itself feelings, worldviews and attitudes, the spiritual world of a citizen.

If the idea of national independence during the globalization of ideological processes takes into account the spirituality of the people, this duration, continuity and inalienability in the cultural development of the nation, is based on it, combines the national spirit and national mood, will be tenacious and influential. When national state issues, the intended goals of society turn into the dreams of ordinary people, the socio-political processes will become irreversible. And this trend

calls on members of society to build a life based on healthy thinking, live their own minds, and stand on their own.

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## INFORMATION TECHNOLOGY MODEL IN EDUCATION

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### ABSTRACT

*The article talks about the urgent need for the transition of the education system from the traditional teaching model, which is based on the classroom lesson scheme for the organization of the educational process, to the information technology model. The proposed new training model is based on the systematic use of information and communication technologies in solving didactic tasks and educational process management tasks. The model provides a combination of the compulsory assimilation by all students of the established minimum of educational information on the discipline, on the one hand, and the achievement of maximum individual learning outcomes, on the other.*

**KEYWORDS:** *Education In The Information Society, Training Model, Information And Technology Training Model.*

### INTRODUCTION

The global task of the education system at all its levels is to prepare a person for life in society. At the present stage (as, indeed, during the periods of the existence of previous social formations), it should possess qualities that allow, on the one hand, to ensure the progress of society, and on the other hand, to feel comfortable (without conflict) as a member of this society, sharing its basic ideals and established hostel rules. An analysis of the demands of the labor market, directions and rates of social development shows that at present, the following set of qualities should be formed for a graduate of any state educational institution:

- Criticality and independence of thinking;
- High qualification, horizons in their field of activity;
- Fluency in technologies for searching, processing and using the necessary information;
- Discipline, accuracy and accuracy in the work;

- Willingness to bear responsibility for the result of their activities;
- Ability to self-education and the presence of internal motivation for this.

As you can see, this list has much in common with the solution of those pressing problems that are a consequence of the spread of information and communication technologies. A logical question arises: to what extent is the Russian education system adequate to the needs of society and can it ensure the formation of the listed qualities?

In one of his recent articles, academician V.I. Zagvyazinsky, reflecting on the features of the functioning of the domestic educational system, identified a number of factors that determine its shortcomings and difficulties: the lack of strategic development guidelines, the formalism of assessing learning outcomes through the USE, the principle of per capita financing, low pay the work of teachers, the aging of teaching staff, the attitude to education as a service sector, etc. [1]. One cannot disagree with the author, however, it should be noted that all this: insufficient public funding, and costs of management schemes, and the lack of mechanisms for the influence of social order on the content of education (as a result, the formation of content occurs in the bowels of the system itself, which, of course, is wrong) - external causes that impede the development of the education system, and not internal factors.

It is known that education is the process of transferring the knowledge accumulated by previous generations, methods of activity, moral values, and behavioral rules to subsequent generations. The statement that this transfer occurs through the exchange of information (in one form or another of its presentation) is trivial enough. In this regard, the search for answers to questions is important:

- Meaningful - what to teach?
- Methodological - how to teach?
- Psycho physiological - to what extent can one focus on the student?
- Evaluative - what are the criteria for the effectiveness of the educational process?

Actually, these issues always faced education, but while the substantive changes concerned mainly ideology, and the teacher (teacher) was the source of educational information and the organizer of the learning process, the procedures and results of graduate training responded to slowly changing technologies and there were no radical changes in the education system. required.

The formation of the information society with new specific requirements for its members has fundamentally changed the situation: since information has become the main value for humanity, and the ability to find, process and use it as basic skills, it is obvious that the content, organization of education and its management should reflect data changes. Another feature of recent times has become the urgent need for a significant number of adults to receive continuing education, regular professional retraining, which, with existing organizational and educational resources (training rooms, the contingent of teachers, educational and methodological support, financing), remains an insoluble task.

Modern information technologies (multimedia, virtual reality, the Internet, cloud technologies, etc.), which graduates of the education system have to deal with, as a rule, were created and

developed not to solve educational problems. However, their didactic abilities quickly revealed, and rapid technological improvement made them quite accessible, including for solving educational problems. Currently, there is a huge number of studies and descriptions of practical experience in the application of information technology as a means of training and educational process management. Indeed, modern information and communication technologies (ICT) can significantly change the presentation of information, its search, delivery, processing, use. There are many works that contain recommendations on the use of ICT in the educational process. Without diminishing their value and practical significance, I would like to draw attention to the following circumstances:

- firstly, in these works the didactic goal of using one or another technological tool is not always clearly described both from the point of view of mastering the discipline, and from the standpoint of forming the student's qualities of the modern person indicated above;
- Secondly, the work is phenomenological in nature without scientific justification at the psychological and physiological level of the appropriateness and admissibility of the proposed techniques;
- thirdly, as a rule, the emphasis is on the technical and technological aspects of training; Significantly less attention is paid to the methodology of organizing training sessions with the use of ICT, to the methods of pedagogical interaction between the teacher and the students.

V. I. Zagvyazinsky also draws attention to the risk of students developing "clip thinking", "button technologies" to search for ready-made solutions and answers that do not ensure the development of creative thinking, imagination, intuition, creativity [1, p. 12].

Our initial position, which determines the logic of subsequent constructions, is that the technology involved should be secondary to the didactic task and the individual cognitive characteristics of the student. The choice of a teaching method involving the use of one or another information technology should be commensurate with its pedagogical justification and personal value for the student; in this case, the method should have some advantages over traditional (non-computer) training, proven experimentally, and not only major statements of the developer (such as "... the use of this technology should allow ..." or "... students like it." )

About what qualities a graduate of a state educational institution should possess, about generalized educational goals that should be achieved, it is said in the Law "On Education", in state educational standards, and in the programs of individual educational disciplines. Unfortunately, these instructions are largely declarative in nature, since

- the content and teaching methods at all levels of education are based on outdated traditions, the list of disciplines to be studied, their volume and methods of learning are not justified and are not associated with the requirements of further professional activity;
- in secondary education there is practically no differentiation according to the level (depth) of mastering the discipline, as a result of which all students work according to the same curriculum without taking into account their cognitive interests and inclinations to one or another type of activity;
- the regulatory documents do not describe the mechanisms for achieving the set generalized goals; the curricula are built on a disciplinary principle, which makes the formation of specific



knowledge (competencies) a priority in the goal of studying the discipline and “erodes” responsibility and control for achieving common goals;

- The criteria for achieving educational goals related to the development of a specific academic discipline are very vague and ambiguous, and meters are not technologically advanced; methods of final control are formal and not focused on the identification and assessment of the above qualities.

Undoubtedly, the need has ripened and the time has come to eliminate these shortcomings. However, one must be aware that such a reform cannot be carried out quickly: even if a decision is made to start it, it will take several decades. Does this mean that when organizing the educational process, educational institutions and individual teachers are doomed to use the traditional teaching model? Such an opinion would be equivalent to postponing indefinitely the use of modern educational models and technologies, the need for which is felt more and more.

A compromise seems to be the case in which the goals and content of education will meet established standards, but the learning model will gradually change so that it maximally uses the capabilities of modern technologies of transportation, processing and presentation of information and takes into account the interests of the student. We will call such a model an information technology and will continue to use the notation IT training model.

The principles of building the educational process in the IT training model

In the IT model, we can distinguish the general and most significant requirements for the learning outcomes of any theoretical discipline:

- complete assimilation of the required minimum by all trainees;
- Development of independence, the intensification of educational and cognitive activities, the development of research and creative abilities of students;
- Maximum individual learning outcomes for given conditions;
- Extremely comfortable from a psychological and physiological point of view training conditions.

These requirements determine the principles for the implementation of the educational process based on the IT model.

1. Complete assimilation of basic educational information (the cognitive component of the state educational standard (GOS)), which means:

- Introduction of the concept of basic educational information (basic minimum - BM) in the discipline, which must be mastered completely by all students in a time not exceeding the established curriculum;
- The volume and content of BM is determined by the teacher or (which is preferable) by an assessment of the student's real workload according to the scheme of the European credit transfer and accumulation system (ECTA) 1;
- BM development is recorded according to the dichotomous scale “acquired” - “not acquired”, without gradations of success (degree) of assimilation;

- complete mastery by each student of the basic minimum, which is a condition for his further education on an individual trajectory.

## 2. Individualization of training

- Variability of the forms of presentation of information in order to take into account the psycho physiological characteristics and capabilities of the student

1 This article will be devoted to the next article of the author in the journal Education and Science.

- Individual development time of the base part;
- Individual learning paths after mastering the basic part (individual content);
- Use of blended learning organizational schemes;
- ensuring the educational activity of each student.

## 3. The temporary effectiveness of training:

- Minimization of BM assimilation time;
- The use of generalized techniques for working with information in the presentation and training;
- Completeness of educational and methodological support for the development of BM;
- Priority of visual presentation of educational information in relation to verbal.

## 4. Persistence of learning management:

- Continuity of measuring the success of the development of educational information for each student (continuous monitoring);
- prompt feedback of the teacher and students in the process of classroom and independent work;
- Completeness of management methods (distance, full-time);
- A priori developed management methods appropriate to the pedagogical situation.

The initial principles on which the educational process is built in the IT model are valid for any level, form or type of education. However, at various educational levels, taking into account their specifics, their priorities should be indicated and a more detailed content of certain provisions should be formulated. Distinctive features of secondary and higher education, essential for the implementation of the IT model, are presented in the table.

A comparison of the specifics of different levels of education allows us to determine priorities in the selection of content and preference for organizational forms of the educational process based on the IT model:

- in high school - individualization of instruction, increasing motivation and cognitive interest, mastering self-education methods;
- in higher education - providing access to a variety of information resources and efficient communication of subjects of the educational process, development of independence and creativity of future specialists, the formation of professional qualities.

Comparison of the specifics of secondary and higher education in the implementation of the IT model

Category High School High School

Learning objectives Learning the basics of science and practice, professional orientation, personal development Professional training of a specialist who is competent in a certain field of knowledge (activity)

Skills of independent work with information (search, processing, assimilation) Initially absent, formed in the learning process Formed at a level sufficient to study at a higher school

Motivation for learning. Mostly external (teachers, parents); internal is possible to separate disciplines Internal - is connected with the student's desire to get a certain profession at a good level

Conditions for the implementation and management of the educational process Significant regulation of organizational forms (mainly in the framework of the classroom lesson scheme), content, methods of activity of the teacher and students, management of the learning process Relative freedom of the teacher and student in choosing the form and teaching methods; lack of restrictions on subject matter outside educational standards, significant freedom in the choice of methods for managing the educational process by the teacher

Adaptation of the learning process to the individual characteristics of the student. External - the teacher identifies the level of training and especially the development of the discipline for students, selects and recommends educational tasks, exercises control and takes corrective measures. To a large extent, internal - the student can independently choose the most convenient content and form for the presentation of educational information

To the above, it is necessary to make a number of clarifications:

- firstly, the model involves the integrated use of information technologies in the process of training and learning management, that is, situations of fragmented use of ICTs for solving individual (private) didactic tasks (training, simulator, control, etc.) remain outside the scope of the review;
- secondly, the model covers only the technological and organizational aspects of the educational process - this shows its certain limitations, since the most important factors in increasing the effectiveness and quality of education are the optimization of its goals and content; the model does not provide an assessment of the appropriateness of including a particular discipline in the curriculum, its content and volume - it is for this reason that the basic minimum of mastering the discipline is associated with the requirements of the state educational standard or curriculum programs, however, when any other approaches to the formation of goals appear and content of education, the principle of allocation of basic content remains unchanged;
- thirdly, without affecting the content, the model, at the same time, provides for significant changes in teaching methods and educational process management (compared with those adopted in the traditional scheme), in particular, their use should be evaluated in terms of compliance with the requirements of cognitive psychology and results learning;

- fourthly, due to the difference in learning priorities and the cognitive abilities of trainees, teaching methods in secondary and higher education should be different;
- Fifth, ensuring that all students achieve the basic minimum level in mastering the discipline means that only those that provide the technological level for solving didactic tasks are acceptable schemes for organizing the educational process;
- Sixth, the disciplinary orientation of the IT model allows it to be used in teaching a particular discipline (cycle of disciplines), regardless of how others are taught;
- Seventh, based, in essence, on the full assimilation of knowledge, the IT model does not provide for rigid administration by the teacher of the student's educational work (as is done in "computer-free" implementations - dividing the material into modules, mandatory input control and monitoring of module development etc.), training tasks are issued in the formulation adopted in this discipline, and control is carried out, first of all, according to reports on the completion of tasks.

Next, we will consider the option of building an IT model of training at a university, since the presence of much greater academic freedom than in the system of secondary general education makes it possible to more fully and effectively implement the proposed model even though the content and set of subjects studied are poorly defined (from a scientific point of view and labor market needs) by state educational standards.

#### Organization of training in the framework of a university IT model

Since, as has been repeatedly pointed out, the curriculum for training a specialist at a university is drawn up on a disciplinary basis, it seems more correct to talk about an IT model of training for a particular discipline. In this case, the objectives of its application are:

- Full assimilation by all students of the basic content of the discipline;
- Individualization of training:
  - In terms of the volume and content of an individual educational trajectory after mastering the basic content;
  - choosing a blended learning model;
  - The desired level of discipline;
- The formation and development of professional qualities;
- Development of self-education abilities.

The educational process is built in accordance with the following provisions.

1. The basic content of the discipline, which all students are required to master, is determined by the teacher on the basis of the requirements of the CRP for the disciplines of the federal component; for other disciplines - the curriculum. Criteria are established for a student to achieve a basic minimum (BM), as well as methods and means of control that allow him to unambiguously verify his compliance with the criteria.

2. Joint (synchronous) training related to the development of BM takes only part of the semester's study time (50-60%). The form of training - full-time (classroom), distance, mixed - is

chosen by the student, and the volume of BM and the criteria for its development do not depend on the form of training.

3. For the development of BM, the student is provided with educational materials (in electronic formats with quick access to them), covering all types of educational activities and invariant with respect to the chosen form of training.

4. In the process of mastering BM, regular monitoring and self-monitoring of the success of the current training tasks are carried out; the number of “points” of the current control should be large enough (8-15 per semester) so that statistical patterns of the work of each student can be identified.

5. Assessment of educational activities is carried out according to the additive scheme; compulsory points associated with the assimilation of BM and points for mastering individual content are allocated from the maximum number of evaluation points.

6. The final control measure provided by the curriculum (test, exam) is carried out within the framework of BM.

7. If the student’s total amount of points is equal to or exceeds the level of BM, the student receives a minimum positive rating of “satisfactory”, regardless of how much the actual amount is higher than the level of BM.

8. After reaching the level of BM, the student, if desired, can continue to master the discipline along an individual trajectory; individual content is determined in conjunction with the teacher and involves the satisfaction of the student’s cognitive interests regarding the subject under study. Grades “good” and “excellent” are given by the teacher for the quality of mastering the individual content; at the same time, assessment criteria should be established and communicated to students in advance. The student finds the information materials for carrying out an individual task mainly on his own (teacher's recommendations are possible).

9. Students who have not mastered the BM continue to independently carry out current and additional training tasks, repeat the final control event — the cycle continues until the BM is mastered. The number of student attempts to deliver BM is limited only by the deadline for the semester.

10. Actions of the teacher: at the stage of mastering BM - conducting interactive training sessions, managing the development process; after completion of the joint training phase and the final control event, individual consultations on BM (for those who did not pass) and on the implementation of individual tasks for those who have overcome the BM level.

So, the full realization of ideas and the productive use of computer didactics are impossible in the conditions of classical classroom instruction. A logical question arises: what conditions are needed so that the educational process could be organized as an information technology?

Based on the learning objectives in the IT model, the above principles, as well as foreign and domestic experience in the use of ICT tools in the learning process, several groups of such conditions can be distinguished.

Technological:

- Availability of information educational environment (IOS);

- Free access for students and teachers to information resources and communication services of IOS, resources and Internet services;
- Automation of control, training;
- Students' access to specialized software environments necessary for studying the discipline.

**Didactic:**

- The availability of complete information support for all types of educational activities in the discipline in the volume of BM for any form of training chosen by the student;
- The possibility of adapting training materials in the form of their presentation to the individual characteristics of the student; visual form priority;
- Availability of information resources with records of interactive training sessions (lectures, seminars);
- the availability of resources (means) of assistance - guides, samples of solutions (tasks), answers to frequently asked questions, etc.

**Methodical:**

- Technological level of achievement of learning goals;
- focus on teaching methods that activate independent and research educational activities;
- The use of current performance assessment schemes that stimulate learning activities.

**Organizational:**

- Availability of a learning process management system (LMS - Learning Management System);
- A strict and unambiguous description of the content of the mandatory minimum and the conditions for its achievement;
- Freedom of choice for the learner at the level of mastering the discipline (in addition to BM) and the optimal form of training for him;
- The ability to build an individual learning path after reaching a set minimum;
- The presence of a clear schedule of the educational process indicating the time and form of control points;
- The freedom of the teacher in the choice of teaching methods (while ensuring the convenience of the learner and effectiveness in accordance with the criteria for full mastery);
- The teacher's willingness to implement the IT model in teaching his subject.

It is important that these conditions are fulfilled comprehensively: partial or selective compliance with them will not provide the possibility of implementing the described IT model.

In conclusion, we emphasize the most important features of the IT learning model:

- it affects only the organization and teaching methods, as well as methods of managing the educational process; the goals and content of the training are external to the model;

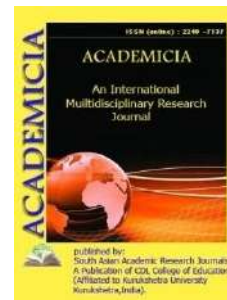


- It is called upon to ensure a combination of general and individual learning: mastering by all trainees the established minimum of educational information and at the same time satisfying their personal cognitive interests;
- has a disciplinary basis, and, therefore, its application is possible in the study of individual training courses, regardless of the methods used in the development of other disciplines;
- can be realized only if there is an information educational environment, full content on the discipline, the availability of means of operational communication of the subjects of the educational process; however, generally speaking, specialized training and methodological support is not required - electronic textbooks, computer simulators, etc .; only the requirements for the completeness and accessibility of training materials are mandatory (these may be, for example, electronic copies of ordinary textbooks and manuals).

Undoubtedly, the proposed scheme for organizing the educational process does not comply with some of the provisions and standards adopted in higher education.

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## DEVELOPMENT OF READING CULTURE IN STUDENTS AND ITS IMPACT ON ACADEMIC LEARNING

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### ABSTRACT

*This article deals with the development of reading culture in students and its impact on academic mastery, the development of intercultural, self-development and communicative competencies of students in reading books. Also, it has been suggested that regular reading can be a powerful tool for students to reach great heights in their future lives.*

**KEYWORDS:** *Reading Culture, Academic Mastery, Book Reading, General Cultural Competencies, Self-Development Competence, Communicative Competencies, Academic Mastery, Collaboration, New Technology, Reading technique, Audiobook, Worldview.*

### INTRODUCTION

Every nation in the world has contributed to the priceless treasure of world culture. In particular, the contribution of the peoples of Central Asia in this regard is unique. "... the land of ancient Uzbekistan has been a center of science and enlightenment, one of the centers of world civilization for many centuries, and the pursuit of science and enlightenment has become an integral part of the mentality of our people. Muhammad Kharezmi, Abu Rayhan Beruni, Abu Ali ibn Sino, Mirza Ulughbek and many other great ancestors, known in the West as Avicenna, became famous all over the world for their unparalleled discoveries in mathematics, astronomy, geodesy, mineralogy, pharmacology and medicine "[1; 10-p.] In fact, our ancestors from ancient times were interested not only in folklore, but also in the study of natural and astronomical sciences. In this regard, we can cite as a vivid example of the fact that they studied the flooding or lowering of rivers, the change of seasons at certain times, and the discovery of natural minerals underground.

Written literature has emerged that people are spending more time reading and reading. In particular, they were not satisfied with just one field, but studied perfectly many aspects of science and made unprecedented discoveries in this regard, which became their real goal. Only

Farabi (873-950) could speak more than 70 languages, which allowed him to use written literature in as many languages. According to sources, the encyclopedic scholar Abu RayhanBeruni was also saved from the wrath of Mahmud Ghaznavi by his knowledge. It is clear that reading a book is a prelude to the success that people have achieved. Therefore, we also need to make our children interested in reading from an early age, realizing that our first task is to form a perfect person with a bright future, because thinking and consciousness are formed and nurtured at an early age. It is no coincidence that our people say, "Knowledge given in youth is like a pattern carved in stone".

Getting used to reading is a regular reading of a topic according to a pre-determined plan. The habit of reading has a great influence on the academic development of the student. Reading and academic success are closely intertwined. All students have different growing conditions and living quarters, so it is natural that their level of education will also vary. Some students engage in regular reading, while others do not. Academic success shows how much knowledge everyone has acquired during school. Of particular importance in this regard is the Decree of the President of the Republic of Uzbekistan dated January 12, 2017 № PF-4789 "On improving the system of printing and distribution of books, the establishment of a commission to promote and promote the culture of reading and reading".

To be creative and pragmatic, everyone needs to be explored independently. A person engaged in independent research must be able to think and analyze. In order to learn, everyone needs to be able to read independently, at their own discretion, and turn it into a skill. In the process of learning through reading, the information is better understood, and in this case the student learns from his own experience, his worldview expands.

According to a study by foreign scholars, "it is good that the habit of reading begins in the primary grades of school, when the child has a high level of acceptance. Then reading becomes a lifelong habit".[4; 32-p.]

To achieve reading and academic achievement, researchers and educators need to know that every child, regardless of his or her social background, ability to learn and master, should be educated according to their level of acceptance. If this student has a well-developed reading habit, his academic development will always have a better performance. The knowledge that students want or need to learn can only be acquired through reading. Regular reading serves as a powerful tool in conquering high peaks in a student's future life.

According to Palani, a foreign scholar, the habit of reading is a necessary factor in building an enlightened society. The habit of reading shapes a person's personality and creates in them a right way of thinking; new ideas emerge from it. The media can also influence a person's interest (newspapers, magazines, and other printed products). Reading is also important for effective mastery of lessons, and reading is directly related to the learning process in school. For this reason, reading skills must be formed in order to achieve good results in school. Reading is about recognizing these symbols and understanding the meaning of these symbols. Readers should have the skills to identify and understand. By understanding, the reader is able to correctly understand the meaning of words and the content of the text. Before the invention of television,

young and old always set aside time to read. In addition to teachers, other professionals spent their free time reading literature. In schools, materials for additional reading to students have always been given as a task. But all this, unfortunately, has remained in the past. [5; 91-p.] Palani also points out that the habit of reading has lost its value nowadays as it is stuck in the big and small TVs. In educational institutions, they are limited to reading only the materials required for exams. [5; 91-p.]

Many researchers, including Bhanva Gupta, have conducted research on reading, especially among students, on the effect of reading on academic outcomes. [6; 1-9-p.] However, much of this work has been done by the international community. Some scientific work has been done in Canada, but they have been limited to a certain extent. [7]

Scientific research on these issues has also been conducted in Uzbekistan: A.A.Umarov "The role of reading in ensuring socio-cultural development and the formation of a full-fledged personality" [8], A.H.Abdulazizova, a sociological analysis of the process of forming a culture of reading in academic lyceums and professional colleges. [9]

The low level of academic performance among many students can be explained by the fact that they do not have a sufficiently formed reading culture. In order to achieve excellent results, it is necessary to form a culture of reading in the student. [10; 1-5-p.]

Nowadays, under the influence of the media, people have very little interest in reading, such as art books, magazines and other educational materials. The poor performance of academic exams can also be explained by the low level of students' attention to reading. In addition, the popularity of new technology products is leading to a decline in interest in reading among students.

At the same time, students watch movies, listen to music, and participate in online shows using a variety of technical means. Many parents and teachers are concerned that the culture of reading has not developed in today's younger generation. As a result, students' exam scores are declining. The reason why young people do not develop reading skills is not because students do not know how to read, but because of a lack of interest in reading.

Teaching students to read books is one of the important tasks of educators today. In this area, the teacher should first establish a partnership with the school library and parents. Teachers need to introduce students to the book, acquaint them with the world of books, and give them the opportunity to enjoy reading in order to develop reading culture skills in them. It is important to accustom students to search for the necessary information in the book.

At the same time, teachers and parents should regularly study students' interests, needs, and aspirations for books. Students are encouraged to read the book as the content of the learning process changes each year. In the first year of primary education, students develop reading technique skills. Students first begin reading the textbooks. They understand the texts read by the teacher better than they read. Because they do not have enough reading skills, they do not fully understand the content of the text. The illustrations in the books make them more appealing.

Even if they don't realize their connection to the text, they watch the pictures with great interest. That is why teachers need to encourage students to read aloud more in the primary grades.

Book discussion is an important pedagogical tool that encourages students to read carefully and think deeply. This will be the basis for the increased interest of students in reading books. They gradually become accustomed to expressing their opinions. At the same time, in the process of reading a book, students develop general cultural, self-development and communicative competencies. Group conversations lead students into debating situations, resulting in them becoming more prone to exploration. Teachers, on the other hand, should be able to organize heuristic lessons using such situations effectively. In such classes, students carry out research to determine the true nature of the work of art, the views, goals, thoughts of the protagonists. Adolescent students in particular are prone to such research.

We offer the following to solve the problem:

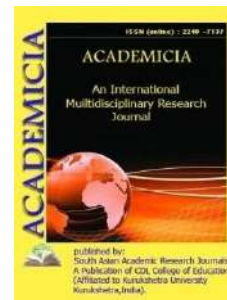
- 1) Re-read the read text within the specified time. In this case, the reader reads the given text aloud again and again. As a result of such an exercise, the student acquires words, pronunciation and intonation correctly and completely. A student who is able to read a text completely and correctly within a given time will then move on to reading a more complex text.
- 2) The child reads a book he likes. Parents and teachers should have books that children enjoy. This can require the child to read this book from time to time. The reader's propensity to read such a text will be high and inspiring for the child. The result will be positive and the child will enjoy reading the text.
- 3) Teaching simple phonetics. Regardless of age, every child should be taught phonetics carefully and with special attention. The child is taught to spell and pronounce each word correctly. Through this exercise, the child learns words better and reads and understands them correctly as he reads.
- 4) Deal with each child individually. Teachers should assign a portion of the text to each child at the beginning of the school year. Each child learns a text that is assigned to him or her and through this can identify children who are well mastered and struggling. As a result, the teacher can engage more with children who are struggling.
- 5) Reading books to children. Parents should read stories and eras to their children aloud and pronounce the words clearly and correctly. If you do not have time to sit down and read a book, you can listen to audio CDs. In doing so, children should not only listen, but also follow the text verbatim at the same time.
- 6) Staging the read text. With the help of poetry, speech and manuscripts, a child can become interested in reading. Teach the child a specific part of the work and act out the text being read. In this case, the child plays the role of the protagonist of the work, through which the child better understands the text and may be interested in it.
- 7) Tell the child the level of learning. Students want to know what their level of knowledge is. To demonstrate this, give the child to read a specific text and determine the number of words in the text. The reader reads aloud. Each time the text is read, mark the time spent on it and show it to the child through a graph. After reading it a few times, the child can see through this chart that his or her speed is increasing, which inspires him or her and inspires him or her to read more.

In conclusion, if we accompany our children to books from the earliest years, the quality of their reading will increase, their scientific outlook will be formed, and their artistic taste will increase. In this regard, various electronic and audio libraries on the Internet, which are gaining popularity today, can also serve as a valuable help. Let's give our kids good age-appropriate books that will raise their level, not different district toys. Only then will it be clear that our children will achieve the results we expect in the future.

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## **PEDAGOGICAL MECHANISMS OF STABILIZATION OF A HEALTHY SPIRITUAL ENVIRONMENT IN AN UZBEK FAMILY**

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### **ABSTRACT**

*In this article we are talking about family education as the main factor in social development and the education of a perfect developed generation. The pedagogical opportunities of the family are highlighted.*

**KEYWORDS:** *Family, Family Upbringing, Socio Cultural Phenomenon, Purpose And Tasks Of Family Upbringing, Principles And Methods Of Family Upbringing, Civilization.*

### **INTRODUCTION**

One of the main factors in the development of a child is his environment, and therefore his family, the atmosphere in it. The role of the family, the duty of parents consists, first of all, in combining their requirements with the requirements of society in the development and education of children. Today, a variety of factors and phenomena pose a spiritual threat: intensive social processes, uncritical borrowing from the outside and the forcible introduction of economic and political models, the destruction of the basic values accumulated by society.

At the heart of the new philosophy of interaction between the family and the educational institution is the idea that parents are responsible for the upbringing of young people, and all other social institutions are designed to help, support, guide, complement their educational activities.

The most difficult thing in introducing the principle of anticipatory impact in the field of moral education in the family is to teach parents to analyze changes in the child, stimulate their development, and not restrain, as is often the case with adolescents. It is necessary to instill in parents the skills of a humane attitude to their children, respectful and trustful dialogue (rather

than edification, shouting) in communication, to overcome the inertia of past views ("this was what my parents did, and I bring them up with life-tested methods") unconditionally, difficulties in solving this problem are many. Indifference of parents to children makes them feel lonely, and children begin to look for attachment on the side, in a variety of activities, in the company.

However, both parents and teachers experience the greatest difficulties precisely when solving ethical issues. It is especially difficult to engage in moral education in conditions when the country is in an economic, political spiritual crisis. In this regard, the process of moral education of children in the family and school institutions has become much more complicated.

The family is a small social group based on marriage, consanguinity, whose members are connected by common life, mutual moral and material responsibility. In sociology, the family is considered as: a) the primary social group in which the person's social life practically begins and flows and which is one of the main factors of socialization; b) a social institution that regulates and controls various aspects of life on the basis of principles, norms, rules and attitudes adopted in society; c) a social system in which all its members have certain statuses and roles [1].

The family is the most important source of social and economic development of a society. It produces the main social wealth - man. Not a single nation, not a single civilized society could do without a family. For each person, the family is the beginning of the beginning.

Scientists of our republic also attached great importance to the problems of family and education. Scientists Yusupov E., Shaikhova H., Kholmatova M., Nazarov K., Saydalieva N., Tillaeva G., - investigated the philosophical aspects of the family; Otakhajev F., - investigated the legal aspects of the family, etc.

Thinkers of the East paid particular attention to the issue of family, education, and training.

Yusuf Khos Khojib, a prominent poet and thinker of the 11th century, gives a large place to family and marriage issues, the upbringing of the younger generation, and parent-child relationships. The poet says that high moral values are inculcated by a good upbringing. "If a child grows inept, capricious, pampered, then his parents are to blame. Children are the joy of the family, without them there is no happiness," the thinker believes [2]. They must be brought up from an early age, taught craft, the acquisition of skills of exemplary behavior, the ability to respect elders and cherish the honor of family and parents.

The scholar - encyclopedist Ahmad Donish in his works gives advice to his sons about family and marriage. He claims that everyone should learn some knowledge and learn some kind of craft. In his opinion, the guy, first of all, should choose a smart, well-mannered and healthy girl if he thinks about his future. Secondly, he must have a permanent job, and thirdly, he must have a permanent certain place for further residence. And the girl, in turn, must be well-brought up, must respect her husband and be able to hide family secrets.

The upbringing of the young generation depends on the family, since upbringing begins there. According to Ahmad Donish, a healthy lifestyle depends on family members, on their upbringing. If a person knows his measure in everything, then he can live long and long. A measure determines a person's place in society, as it manifests itself in food, in leisure, in work, and in human terms. He discusses marriages between close relatives. In his opinion, such marriages prevented the birth of a healthy generation.

The great scientist - the encyclopedist of the medieval East, Abu Ali Ibn Sino, conducted an interesting experiment. He placed two lambs in absolutely identical cages, fed them and looked after them in exactly the same way. And now the first lamb grew frail, timid, depressed, and the second developed quite healthy, had a great appetite. What's the matter? And the thing is that the first lamb from his cage was always visible to the wolf sitting in the next cage, and the other lamb did not see this.

Fear has never been an assistant in the good family education of the younger generation.

Family education can be considered as social and cultural continuity, transmitted from generation to generation of parents, educators, teachers. Succession is broadcast in the form of traditions, customs, rites, the cult of ancestors, sacred covenants, commandments.

We consider it necessary to consider family education as a pedagogical, sociocultural, folk, religious phenomenon. Traditions as a phenomenon of being reveal the essential characteristics of family education. These include pedagogical, sociocultural, folk, religious traditions of family education.

Family upbringing is a system of upbringing and education, taking shape in a particular family by the efforts of parents and relatives.

The purpose of family education is the formation of personality traits that will help to adequately overcome the difficulties and obstacles encountered in life. The development of intelligence and creative abilities, primary work experience, moral and aesthetic formation, emotional culture and physical health of children, their happiness, all this depends on the family, on parents, and all this is the task of family education. It is the parents, the first educators, who have the strongest influence on the children. Even J. Zh. Rousseau argued that each subsequent teacher has less influence on the child than the previous one.

The success of the family in carrying out the leading function in raising children, their comprehensive development and preparation for socially useful work largely depends on the educational potential of the family. It represents a complex of conditions and means, which together constitute the pedagogical capabilities of the family.

This should include: material and living conditions, the size and structure of the family; its ideological, moral and emotional-psychological climate; level of development of the family team; the nature of the relationship between its members; family work atmosphere; life experience and cultural and educational level of adult family members; the availability of free time and the nature of the organization of family leisure; personal example of parents; the ability to use the media and culture; the system and nature of family communication and family communication with the environment; the level of pedagogical culture of adult family members, the distribution of pedagogical forces in the family; family traditions.

Customs and traditions always consolidate what has been achieved in public and personal life; they are powerful social means of stabilizing established social relations. They also play the role of social mechanisms for transferring accumulated social experience to new generations.

An increase in the role and importance of the family in the further development of the spiritual foundations of society, the preservation and strengthening of primordial national values, the widespread establishment of an atmosphere of high morality in society, and the opposition to

various harmful influences that are intensifying and absolutely foreign to the national mentality. Strengthening the role of the family in the education of a physically healthy, spiritually mature and harmoniously developed generation, and for these purposes, strengthening the mechanism of practical interaction of the family institution with educational and educational institutions, ensuring their close and effective cooperation.

In order to further form a physically healthy, spiritually mature and harmoniously developed younger generation with independent thinking, developed intellectual potential, deep knowledge and a modern worldview, capable of taking responsibility for the fate and future of the country.

Improving the legislative and regulatory framework, developing new provisions and norms aimed at creating favorable organizational and legal conditions for the formation of a healthy, harmoniously developed generation.

Increasing the role and responsibility of the healthcare system and medical workers in the formation of a healthy child, giving birth to children without pathologies, further strengthening the material and technical base and human resources of the healthcare system, and regularly conducting large-scale outreach to improve the medical culture of the population.

Strengthening the role of the education and sports system in shaping a healthy child, expanding the network of pre-school educational institutions with staffing with highly qualified, experienced teachers, dramatically improving the level of preparation of children for school, ensuring high quality primary education, widespread introduction of advanced pedagogical and information and communication technologies, implementation of specific measures to widely promote a healthy lifestyle, instilling in children, especially girls, a love of physical education and sports.

Strengthening assistance and support from the state and society in the formation of a healthy and harmoniously developed generation, creating conditions that meet modern requirements in healthcare, education, culture and social welfare institutions responsible for these processes, increasing the efficiency of the use of funds allocated for their development, wide study and the introduction of international best practices in raising a healthy child.

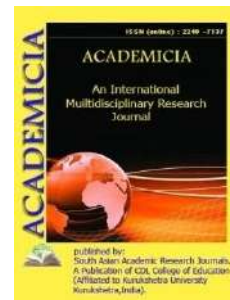
Increasing the role, empowerment of the mahalla and other social structures in raising a healthy child, especially girls, assisting them in mastering modern knowledge and professions, getting involved in various circles, developing entrepreneurship, strengthening the responsibility of the mahalla and other public structures for strengthening families and a society of mutual understanding, peace and tranquility, timely and targeted provision of material and moral assistance to low-income families;

Today in our country, the role of the family in shaping the spiritual image of youth on the basis of the idea of national independence, universal values and centuries-old traditions is priceless.

It should be noted that the noble idea “A healthy mother and child is the foundation of a happy family, a happy family is the foundation of a prosperous society” has deeply established itself in our lives and its implementation has become a sacred duty for each of us.

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## **TOLERANT SCHOOLCHILDREN - THE FUTURE OF PROMISING UZBEKISTAN**

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### **ABSTRACT**

*The article is devoted to the issues of formation and development of tolerance among pupils of general education schools. It touches upon the problems of introducing innovations in the education system. The policy of the republic of Uzbekistan actively integrating into the world community is aimed at the formation of a purposeful and responsible person able to successfully fulfill various life roles in a pluralistic changing world.*

**KEYWORDS:** *Pupil, General Education School, Tolerance, Mutual Understanding, Cooperation, Purposefulness, Ability.*

### **INTRODUCTION**

In the twenty-first century, the century of the intellectual generation, education is the key to solving global problems. It is the educational sphere that turns into a leading factor in the economic growth of states, forms their investment attractiveness and provides a technological breakthrough into the future. The introduction of innovations ensures high-quality growth in the field of lifelong education, in the steady progress of the country, the competitiveness of the republic in the world, increases the intellectual contribution to the economy due to the widespread introduction of technologies and scientific achievements [1]. That is why the policy of the Republic of Uzbekistan, which is actively integrating into the world community, is aimed at the formation of a purposeful and responsible person, capable of successfully fulfilling various life roles in society. For this, a flexible and accurate adaptation of the system of general secondary education to the current and future needs of the labor market is carried out, which is carried out through the formation of students' abilities for productive and creative activity and social interaction. The national tradition of a general secondary school reflects the result of the enormous changes that have occurred in the educational system in recent years, which helps to



draw the attention of students to active educational activities. But today, in order to improve the education system, modernize textbooks and update the content of the educational process, measures have been taken to increase the availability of educational services. To this end, modern teaching methods based on innovative approaches are being introduced and an effective mechanism for improving the quality of education has been developed. They are clearly indicated in the Decree of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev "On measures to radically improve the system of general secondary, secondary specialized and vocational education" dated January 26, 2018 [2].

The gradation of problems and the solution of the tasks set by the state to the system of general secondary education are aimed at implementing a set of measures to take systemic measures to provide targeted support to talented students, strengthen modernization and update the content of the educational process. In order to improve the current state of secondary education, fundamental reforms have been carried out in the republic. First of all, this is the introduction of 10 classes into the system of a comprehensive school since 2017, and secondly, the opportunity for students to study once a week in their future or close specialty in educational complexes and at the end of a general secondary educational institution together with certificate of maturity to receive a certificate of qualification.

But there are issues that need to be addressed immediately. This applies to the existing practice of forming the material and technical base of professional colleges, where 10th grade students study once a week in vocational education, which led to the creation of training workshops that do not meet the areas of study, as well as the lack of components for the implementation of full-fledged education [2]. This means that the priority today is to improve the condition of training workshops equipped with modern spare parts and necessary equipment. Since only with practice-oriented learning can students improve their knowledge. Student youth should develop their understanding of the world, the structure of the universe, seek information on a matter of interest to them. Find and study everything that is possible in the area in which they want to become professionals and this will help the younger generation become leading specialists in their future professional activities. Similarly, it is necessary to act in every area of life in which they want to become better: in health, career, hobbies, etc. To do this, one should begin to adopt the experience of other people, become personalities and then they will be able to qualitatively change their life. It is necessary to read, develop and remember that one can change one's life for the better only by changing one's inner state. That is why in secondary schools, teachers today focus on the individual characteristics and abilities of students so that their profession chosen in the future would be interesting and loved. This means that today it is necessary to educate a person who would be trained throughout his life, had ample opportunities for realizing his creative potential, and had confidence in himself and his knowledge. To achieve this goal, teachers need to work in collaboration. Let us recall the words of the famous American industrialist G. Ford that "teamwork consists in the ability to work together on a common vision, in the ability to direct individual achievements towards the goals of the organization. This is a stimulant that allows ordinary people to achieve unusual results. " They aim both teachers and students to work in a team, respecting each other, and this is a tolerant relationship that is very important today, because based on mutual understanding and mutual respect, you can achieve the desired results.

For this, it is also important to unleash the potential of all participants in the pedagogical process, provide them with opportunities for the manifestation of creative abilities. The solution to these problems is impossible without changing the teacher's attitude to his activities and a look at teaching and how to teach. A great impetus in the education system in recent years has been the ability of teachers to realize their creative potential on the platform of ideas. In the traditional educational system, the main guideline was the transfer of ready-made knowledge, which encouraged the mechanical memorization of theoretical material and did not provide an opportunity for students to fulfill themselves. Now education is more and more focused on the creation of such technologies and ways of influencing the personality, which provide a balance between social and individual needs and which, by launching the mechanism of self-development, self-improvement, self-education, ensure the individual's readiness to realize his own individuality and changes in society. With this approach, a modern student from a socially passive becomes active, independently acquiring knowledge. If a student previously broadcast ready-made knowledge in lessons, now it is a reflecting personality who can evaluate his actions. Time requires a different approach to teaching students.

The attention given by the country's leadership to teachers inspires them to search for non-standard forms of teaching the lesson, and students to conquer new heights and personal development. Therefore, introducing modern innovations in school practice, teachers began to conduct lessons more effectively taking into account the individual characteristics of each student, to pay great attention to educating students in a tolerant worldview, a tolerant attitude towards all people, regardless of national, religious, social and property status.

The essence of personality-oriented pedagogy is to recognize the student as the main acting figure in the entire educational process. The student is an equal partner with the teacher in educational activities. Here, the teacher does not force him to study the compulsory material, but creates the best, optimal conditions for self-development and self-realization of the student. This will allow you to acquire personality traits such as the ability to effectively work with information, have communication skills, and be responsible for your own education, when the student can live a full, eventful life in which he can satisfy his spiritual and intellectual needs and find himself. Therefore, in secondary schools, opportunities are provided for obtaining a full-fledged education, ensuring social activity, developing creative abilities, increasing the intellectual and physical potential of students.

Therefore, the main skills of the student of this century should be: the ability to cooperate, developed critical thinking, communicativeness, initiative, the ability to solve their problems, etc.

From the point of view of the constructivist theory of teaching, the purpose of teaching should be oriented toward the achievement by the student of a more thorough understanding of the subject, ensuring the use and application of knowledge in situations outside the classroom. A student of a new generation should be self-regulatory, able to independently acquire the necessary knowledge. Teachers should be competent not only in the development of their knowledge and skills, but also in their personal development, taking into account the importance of individualization of education and the formation of their meta-consciousness, i.e. learning skills on how to learn. Humanitarian subjects form in the minds of the younger generation such unshakable concepts as the national idea, patriotism, respect for the traditions and culture of the

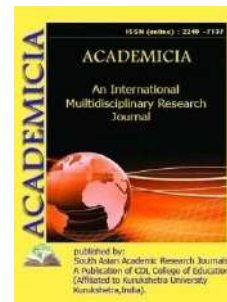
Uzbek people, which have developed over many years. They teach a careful attitude to material and spiritual values accumulated by ancestors, contribute to the growth of legal literacy and consciousness. Much in his future life depends on the discipline of the student, his well-read. Since the great teacher Abdullah Avloni was right when he said: "Man is like a gem. If he received a good upbringing, avoids evil deeds, has excellent manners, then everyone who is next to him experiences happiness. " That is why it should be remembered that our great ancestors bequeathed to us the creation of life, the love of knowledge, tolerance, respect for elders and the observance of moral and ethical standards, the ability to look to the future and take care of our future.

Improving the work on the formation of tolerance among schoolchildren is possible by studying the history, culture and traditions of the people of Uzbekistan, their knowledge of their rights, freedoms and duties. This is especially important in modern conditions, when, along with other global problems of mankind, extremism and terrorism have acquired an international character.

The large-scale reforms carried out in the republic laid a solid foundation for national statehood and sovereignty, ensuring security and the rule of law, inviolability of state borders, the rule of law, human rights and freedoms, interethnic harmony, religious tolerance in society, and also created decent living conditions for the population and the realization of creative potential citizens, especially the younger generation.

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## COMEDY IN UZBEK CHILDREN'S LITERATURE IN INDEPENDENCE PERIOD

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### ABSTRACT

*The article discusses the role of comedy in Uzbek children's literature during the independence period, the study and teaching of satirical and humorous works created during this period. It analyzes the poems of poets of this period and reveals poetic images. The extent to which the humorous poems written during the independence period meet the requirements of today's harsh times and their impact on developing children's thinking and strengthening their memory will be discussed in detail. In particular, Anvar Abidjan and Dilshod Rajab's examples of humorous poems written during the period of independence are studied, and it is important for students to read their deep meaning and understand their meaning. The role of this article in the development of a mature, well-rounded specialist today is invaluable. In this sense, it is necessary to move the science of Uzbek children's literature to systematic periods, to ensure its structure and continuity.*

**KEYWORDS:** Comedy, Satire, Humor, Contemplation, Comic, Image, Subject, Event, Figurative, Symbolic, Character, Idea, Cheerful.

### INTRODUCTION

In both satire and humor, laughter has vital roots. Comic things can be expressed in a work of art in a humorous way or in a satirical way with the help of laughter, depending on their character, content and essence. Appearances and forms of comedy in life determine the nature and variety of satire and humor. In both satire and humor, the trigger for laughter is born of the contradiction between form and content. Because at the heart of something funny there is always inconsistency, contradiction, between idea and form or form and idea [1, 238].<sup>1</sup> But when each of them is considered separately, it does not cause laughter in its own right. The poems analyzed in the last chapter are, of course, a shining proof of this idea.

Particular attention was paid to the creation of a figurative image in children's poetry during the independence period. Poets used all sorts of metaphors and poetic devices to create a humorous image, as well as a satirical image. However, in the creation of satirical images, as can be seen, the creators use the image of such animals as wolves, foxes, rats, crows, sparrows, birds and beasts, which have risen to the level of satirical symbols in the stories. In their metaphorical humorous imagery, great emphasis is placed on poetic movement, figurative and symbolic imagery.

### THE MAIN PART

In particular, U. Shukurov's research of such poets as Anvar Obidjon, Dilshod Rajab, Abdurahmon Akbar, Rustam Nazar, in this regard, deserve appreciation. Anvar Obidjon's collection of poems "A very interesting story" consists of humorous poems of this type from beginning to end. The poet himself admits in the preface of the book: "From the author": "... I tried to speak as cheerfully as possible about the world of children, the breath of mother nature, the mysterious world of various objects and creatures." You can feel it when you read the poem "News Seller" in the collection. This poem is written in the style of folklore, in

particular, in the style of folk songs, the songs of actors who travel around the city and sell a variety of goods, and it is rich in cheerful humor.

Yangi gaplar sotaman,

Eski gaplar ham.

Bolajonlar kep qoling,

Qoldi juda kam.

Surishtirmang narxini,

Shardan ham arzon.

Xo'rozqandga – rost xabar,

Pishloqqa yolg'on. [2, 45]

I	sell	new	words,
Old		sayings,	too.
Stay		tuned	guys
Very		little	left.
Do	not	ask	the price,
Cheaper	than	a	balloon.

True news to Khorozkand,

For Cheese -lies. [2, 3]

Thus, in the poem, which begins with joy, "old-new" stories about various animals - birds, beasts - are sold in "cheap prices" in vivid scenes. From "exchanging" the

"new story" for him without the bran, to "exchanging" the old for the barren nut

soap, to eating the eagle in the pigeon's dream, to the fox holding a rooster to the wolf, to the wolf eating the rooster and then the fox himself until a donkey that has been in the same class for

three years insults a bear as “illiterate,” so we see imaGES of many figurative characters running with a variety of humorous spirits. In short lines, the poet was able to create the unique character of each figurative image through cheerful laughter. In particular, while creating the image of the Rabbit, he depicts his image as a coward among the people in a form consistent with folk tones.

Quyong Yo‘lbars terisin

Yopinib yurib.

Xushdan ketdi, ko‘zguda

O‘z aksin ko‘rib.

(“Juda qiziq voqea”)

Putting on the tiger’s skin  
 Rabbit was walking around.  
 He fainted, in the mirror  
 Seeing the opposite in terror.  
 (“Very interesting story”)

This collection of poems includes several series. The first series, entitled "From the fields to children", consists of humorous poems about the plant world. The category includes poems about many melons and fruits such as wheat, cotton, carrots, watermelon, grapes, apricots, turnips, figs, onions, peppers, handalak (a kind of melon).

It is known that in the history of Uzbek children's poetry a number of verses were created in this form. For instance, a vivid example of this kind of poems is "Alphabet of Nature" by Quddus Muhammadi which belongs to the series such as about trees, plants, fruits, and natural phenomena. In his poems of this type, the poet conveys a great artistic-aesthetic and enlightenment meaning through the description of the peculiarities of each plant or fruit, giant tree, that is, its color, taste, structure and shape.

M. Qo‘shjonov writes: "The leading poet of children, is faithful to his general traditions when describing natural phenomena. He also seeks meaning from objects and animals in nature that are appropriate to the level of consciousness of children. Not only that, it finds a way to express the mystery of natural phenomena in accordance with the consciousness and level of children. Here, too, the tone and criteria of the folklore of Quddus Muhammadi come in handy" [3, 23-24] Anvar Obidjon, who successfully continued the creative traditions of Quddus Muhammadi, is also unique in that he draws the nature of children from the image of the world around us, and, most importantly, creates poetic content in the style of folk melodies which are very close to the hearts of children.

Anvar Obidjon's poetic skill is that as he recreates every image created by Quddus Muhammadi, he can elevate his new image, rich in new, original, cheerful humor, to the level of a short, concise, poetic metaphorical figure. For example, in the poem "Carrot" his poetic image is as follows.



Yupqagina

Po'stim bor,  
Dalada ko'p  
Do'stim bor.  
Maqolda ham  
Yoziqman.  
O'sha

“Oltin qoziq”man.

Yotsam

Erga qapishib,  
Dumginamdan

Tortishib,

Tashladilar o'raga...  
Salom  
Palov to'raga!

(“Juda qiziq voqea”) (Lotinga aylantiring)

	Athin	skin	I	have,
	Lots	of	friendsI	have
	In		the	field
	I am written			
Also	in	the		proverb
	I'm that gold pile			
	That's			it
When I lie	I	am	a	"golden pile".
	Stuck	in	the	ground,
	From		my	tale
	Arguably	they	pulled	off...
	and put in tasty palow			
	Like	Rice		pudding!
	All			know!
	("Very interesting story")			

The poet effectively uses unique imagery and rhyming art to bring the image of carrots to life in the imagination of readers. When children remember its appearance by recalling a folk proverb, they achieve the expressiveness and cheerfulness of the artistic tone through rhymes such as "my skin", "my friend", "summer", "peg". Especially at the end of the poem, when he causes humorous laughter like "I'm lying on the ground, pulling me off by my tail", "Hello, Palov toraga!" his poems bring him closer to real life, bringing a peculiar warmth to child's spirit.

In the poetic series, the poet animated various animals, creatures, clothes, objects and created their figurative image. The mastery of the poet is reflected in the fact that each image is created by means of artistic details, questions and answers, dialogic speech, which are cleverly found in its specificity, character, color, taste structure or other aspects. This allows children to quickly imagine by comparing the images of objects written in the poem.

For example, in the poem "Boshma-bosh" the children see the scene "Shara bar-a" through the figurative image of a goat. The goat's neck-stretching, "Shara bar-a" scream is a masterly poetic image. The animation created a humorous image of a goat and increased the artistic and aesthetic value of the poem. After all, Anvar Abidjan's uniqueness is reflected in the fact that he portrays a very serious situation in a funny and at the same time, realistic and original way. That is why Anvar Abidjan's social poems are multi-layered. They are read with interest by both children and adults, and the spiritual meanings are imprinted on the heart through their own observations. In his poems, such as "Sigir qo'shig'i", "Parvarda", and "Yirtqich", the poet reflects the process of children's desire to understand the world. For example, children's collisions with adults, parents and children sometimes misunderstand each other, and the dramatic situations that result from various misunderstandings are ridiculous" [4].

Dilshod Rajab is a humorous poet by nature. He reveals the essence of things with unexpected, extraordinary ingenuity in short lines. His humorous poems, such as "Poezdning bolasi", "To'yda", "Childirma", "Uchqunbekning savollari", "Hirmon", testify to the poet's ingenuity.

It should be noted that in Dilshod Rajab's poems, not only laughter is created from word play, but also each poem is rich in poetic content.

Masalan, "To'yda" she'rida:

Qo'sh kaltakka chiday olmay,  
Dod-voy solar Nog'ora.  
Parvo qilmas odamlar,  
O'yin bilan ovora

**Meaning:** For example, in the poem "At the wedding":

Can't stand double beat,  
Screaming the drum.  
People who do not care,  
Concerned neo-hippies

("Endi zerikmayman" (I'm not bored anymore), 41) [5]

“Childirma” she’rida:

Qichqirib aytar gapi  
 Faqat: “bak-bak-umbang”.  
 Suni ham aytmas, uni  
 Tarsakilab turmasang.

**Meaning:** In the poem "Childirma":

He would shout  
 Just: "bak-bak-umbang."  
 Not to mention, him  
 If you don't clap.

(“Endi zerikmayman”, (I'm not bored anymore) 44)

As can be seen from the examples, the poet is able to pay attention not only to the external signs of objects, but also to the deep artistic content associated with human behavior in the essence of the description of these signs.

## CONCLUSION

The following conclusions can be drawn from the above observations:  
 - In the creation of humorous images in children's poetry during the independence period, there are two main directions. The first direction consists of poems that directly create a humorous image of children. In the poems of this type, the poets expose to joyful laughter some and cause the merriment and playfulness, laziness, and tumultuous habits, which are found in the nature of children.

The second direction consists of figurative poems. It is possible to observe the creation of figurative humorous images of various trees, objects, animals, beasts, birds and mammals.

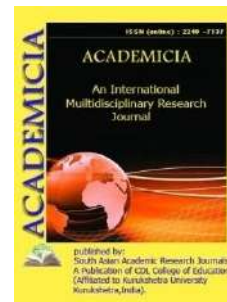
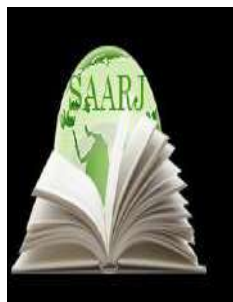
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## OPPORTUNITIES AND TASKS OF DEVELOPING THE NOOSPHERE CONCEPT

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### ABSTRACT

*This article covers views on the opportunities and tasks of developing the doctrine of the Noosphere. The scientific and theoretical approaches to the concept and role of the cogitation of the noosphere as a theory and abstraction in the development of scientific knowledge have been analysed from a philosophical and methodological point of view.*

**KEYWORDS:** *Noosphere, Biosphere, Concept, Paradigm, Philosophy, Science, Development.*

### INTRODUCTION

Modern integration, transformation processes, the development of scientific technologies in the world have contributed a special field of study, which is 'Noosphereology', studying the features and capabilities of the human mind. The tasks of philosophy and science in the development of the doctrine of the noosphere make it necessary, first of all, to study in detail the important methodological role of the concept of the noosphere as a theory and concept in the development of scientific knowledge.

Consequently, the harmony of the co-evolution of nature and society as a rational view of the universe has the character of a scientific and philosophical worldview in revealing the laws and content of the universe.

Concept (from Latin word 'conceptio' – 'complex', 'system') is a set of views, systems of principles, a specific way of understanding, comprehending and interpreting facts and events, a basic point of view [1, 23]. Within the framework of the concepts of interactions and relations between mankind and nature, the main features of the concept of noosphere as a separate branch of science must be paid special attention: 1) noosphere is the science of the field of mind; 2) noosphere is the limit of the human mind's influence on environment; 3) noosphere is a philosophical approach to the integrity of the development of nature, society and space.

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## RESULTS AND DISCUSSION

According to Professor *S. Mamashokirov*, 'the noosphere is not limited to the scope of human conscious activity, but also includes nature, which means socialisation of biosphere and the universe.' [2, 58] Actually, the rational nature of the noosphere is closely linked not only to the social conditioning of man, but also to the essence of his creativity and ingenuity. Indeed, the possibilities and means of developing the concept of noosphere are determined by the important methodological function and importance of the concept of noosphere, the level and possibilities of organising active noosphere-environmental activities.

The dynamics of the development of science, the categorical apparatus of science triggers to the systematisation of conceptual schemes, the expansion of heuristic-epistemological functions of science. In turn, that actualises the role and status of science as a social institution. Science, as a special form of human activity, seeks to reconnect with the direct subject of this activity that is human. This is an important issue facing the scientific community. Science, in contrast to social alienation, must be linked to 'human-measurable', that is, human qualities, needs, and interests [3, 5]. Science also has a functional connection with the fact that it is socially based on the demands and needs of society and serves to enrich human spirituality. Science based on human thinking, human interest, can lead society to be demolished.

That is why, the objective and subjective factors of biosphere development are important. The laws of nature play an important role in this. Indeed, law means the relationship between different things and events, processes and events in the material world [4, 103]. In this regard, the common law that applies in different systems in our perception of natural phenomena is characterised as a necessary stage in the development of the universe.

The common laws of nature include universality in nature, integrity, systematicity, the law of evolutionary development, stability and variability, the laws of conservation of matter and energy, and the transfer of energy from one species to another, and so on [5, 17]. As a result, the future of mankind as a whole social-ecosystem in which 'nature-society' is connected, the necessary stage of development of the biosphere is the need for the noosphere. According to researcher *M.Yu. Shishin*, the noosphere as a synthetic concept embodies the results of human activity, including material and spiritual achievements. Furthermore, this concept also represents the system of human-environmental relations not only at the planetary level but also at the cosmic one. Therefore, in our view, it is expedient that the idea of noosphere must be at the centre of the emerging new scientific-philosophical paradigm [6, 3].

It is both theoretical and practical important that the analysis of the content and definition of the structure of noosphere-ecological activity, expressed in the framework of the concept of noosphere.

Initially, the noosphere as a theory is the most advanced form of scientific knowledge, reflecting in a holistic way the legitimate and important connection of the facets of existence. The noosphere as a concept represents the direction and purpose of the development of noosphere knowledge. In the theoretical and methodological analysis of the concept of the noosphere, the theoretical and fundamental foundations, theoretical concepts and principles, as well as ontological, epistemological and logical aspects of this concept are important.



Noosphere-genesis in philosophy and science encompasses the objective and subjective ontology of the concept of the noosphere. In this sense, the basis of non-spherical objective reality also includes the scope of ecology and related approaches. For instance, the understanding of the essence of such concepts as tolerance, correlation, transformation, noosphere, rationality enriches knowledge in the field of ecology. Philosophical analysis of biodiversity helps to understand and solve environmental matters [7].

The balance of sociogenic and technogeneous functions in the socio-historical development of human society depends in many respects on environmental factors. The pessimistic view that the computer revolution and the transition of human society to the stage of information civilization, the sociogenic function of technology deepens environmental problems, has a negative impact on social development was widespread in the 80s and 90s of the last century. In this regard, the deepening of the environmental crisis inevitably shows that the world community must radically change the principles of interaction with the natural environment by strengthening all efforts and taking practical measures to ensure global, sustainable eco-development [8, 5]. An anti-scientific view of the social consequences of the scientific and technological revolution is an example of this. The following formula is based on the conditions of sustainable development of the UN [9, 5-6]. An example is the idea of 'social development + economic growth + environmental security = sustainable development.' However, we believe that this formula does not fully cover the full socio-natural reality. That is, social development, economic growth, environmental security could not be the literal basis of sustainable development. There can be no talk of sustainable development unless the criterion of noosphere-spiritual growth in society is decided. Therefore, in our research, we introduce the idea 'social development + economic growth + environmental security + noosphere-spiritual growth = sustainable development'.

The essence of the anthropocentric paradigm of noosphere-ecological education is that man is recognised as the highest value, and nature is his personal property, man and nature are opposed, and man's influence on nature is only pragmatic.

The study of the concept of the noosphere, its formation plays an important role among the main directions of modern science and culture. The gradual implementation of the biosphere into the Noosphere, with its advent, the development of science and technology in society is of paramount importance. Comprehending the laws of the state, the functioning and development of the noosphere, its place in the dynamics is one of the conditions of human existence and living conditions today, thereby gaining a strong worldview [10, 3].

In the analysis of the tasks of philosophy and science in the development of the doctrine of the noosphere 'man – mental activity – innovation – sustainable development', the internal mechanisms of the model of the noosphere: needs, goals, activities, infrastructure are important. In this sense, the need that was the basis for the formation of the noosphere created human thinking as a cultural force. Noosphere can be approached bilaterally based on the analysis in terms of social need. *Firstly*, the noosphere is a product of mental activity. Through this form of activity, ecological harmony in the system of nature and society is formed. *Secondly*, the noosphere encompasses the logic of activities as a result. In this respect, the logic of the activities of the noosphere shows that the noosphere is based on ecological laws.

The current situation has raised the issue of philosophical analysis of the theoretical foundations of the harmonization of socio-natural interactions, including the importance of the doctrine of the noosphere as an ideal project of harmonization of these interactions.

Academician *V.I. Vernadsky* predicted the coming of a new geological era in human history. According to him, 'the surface of our planet – the biosphere – is undergoing drastic chemical changes by man, consciously and mostly unconsciously. Man is changing the physical and chemical air crust of the land, all its natural waters. ... Now we are experiencing new geological evolutionary changes in the biosphere.' [11, 186-187] The new phase of the biosphere is the noosphere phase, which is associated with the geological power of the human mind of a planetary nature.

As the French philosopher *Pierre Teilhard de Chardin* points out in his 'The Human Phenomenon', the formation of the Noosphere was first introduced by *Homo sapiens* (Conscious Man), that is, from the time of their first socialization. Thus, it is reasonable to assume that the Noosphere (Greek 'noos' – 'mind', and 'sphaira' – 'sphere', – 'Sphere of Mind') is a socialised stage of biosphere development. This is not, of course, to put the Noosphere above the biosphere or to separate it as a holistic phenomenon [12, 30]. However, there is now talk of no doubt about the dominance of the mind. Connecting the noosphere with terms such as 'socio-sphere', 'anthroposphere', 'techno-sphere' means its real content and breadth.

As we find the noosphere (the sphere of mind) out, we can approach it from two different aspects.

According to the first view, showing its positive aspects, the noosphere stage in the development of society can be interpreted as an absolutely positive (progressive phenomenon). As a result of the accumulation of potential knowledge of the millennium, the will of the people, the formation of a social structure, the structure of traditional society was completely renewed, and a new cultural life has been created [13, 136]. The invention of the writing machine, the invention of the printing press, the Great Geographical Discoveries, the Scientific and Technological Development and the Scientific and Technological Revolution, radio and television, mobile communications, spacecraft, the creation of the Satellite and the International Internet have set up a new age. Now the Mind has fully demonstrated its potential at the time frame. Mankind has achieved a comfortable environment such as micro and mega cities. At the same time, a person's real work rate (access to food, education, work, leisure, television, radio and other means of communication) is not limited. So conveniently, the power of the Noosphere has been able to create a new world image at a small point in the Universe called the Earth.

According to the second view, the negative (regressive) phenomenon of the Noosphere can also be seen as having a sharp and dangerous impact on the life of nature and human society.

A significant issue facing humanity at the current stage of development of society includes interrelated issues such as maintaining the natural environment in a normal state, laying the foundations of the economy, changing people's lifestyles, creating appropriate living conditions for them. Other types of global problems are related to these problems in one way or another.

In this sense, the experience of post-industrial and environmentally sustainable developed countries in the world shows that it is expedient to transfer the function of organizing, managing

and controlling the activities of nature protection institutions at the national, regional and global levels to state and international organizations [14, 13].

Nowadays, one of the most important problems facing humanity is to change people, that is, to bring up people who have a new way of thinking, worldview, activity. As an internal component of the development of the noosphere system, man forms a new dialogue with the biosphere and universe.

Modern post-classical science recognises the paradigm of the integrity of the universe, in which the universe, biosphere, noosphere, society, people form a single integrated whole system. In the manifestation of this wholeness lies the appearance of man as part of the whole, not outside the object of study, and as a result of such an approach we see the convergence of the natural and social sciences, in which the ideas and principles of modern natural science are widely applied to the mankind [15, 55].

Actually, in support of the above-mentioned ideas, the concept of the noosphere, formed as a new scientific paradigm in modern science, is manifested as the mutual integration of scientific knowledge, the convergence between the natural and social sciences. The integrative function of the concept of the noosphere in the epistemological sense is primarily associated with the active dialogue of the convergence between the social, natural and technical sciences, as well as the creation of an interconnected common language.

The concept of the Noosphere is therefore an absolute manifestation of the universal mind, in which interdisciplinary knowledge and experience are studied on a general basis and applied as theory and practice.

## CONCLUSION

To sum up, the concept of the noosphere implies the establishment and regulation of certain prohibitions on human activity. In this regard, there is a need for an 'environmental imperative' that sets certain limits on the interaction and behaviour of people. In general, the noosphere as a field of reason implies both a new, rational morality and the reconstruction of the whole being on the basis of the ideals of coevolutionary development without contradictions. In this regard, the concept of the noosphere includes the following tasks:

*Initially*, the study of the fundamental concepts and principles of the concept of the Noosphere is of great methodological importance to philosophy and science;

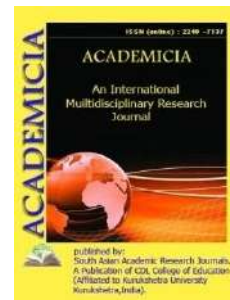
*Secondly*, it is important to define an abstract model of the Noosphere concept as an idealised object (e.g., 'Noosphere Stage', 'Noosphere Development');

*Thirdly*, the fact that the concept of the Noosphere focuses upon the research of the degree of change in human knowledge and the structure of scientific knowledge is at the heart of the matter;

*Finally*, the concept of the noosphere includes the objective and subjective features of natural and social laws and serves to be perfectly aware of the essence of this concept.

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## STATE POLICY IN WORKING WITH TALENTED YOUTH IN UZBEKISTAN

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### ABSTRACT

*In this article, the author analyzes the reforms in the field of education in the Republic of Uzbekistan and tries to draw conclusions. The article examines the legal framework adopted in the field of education in the Republic of Uzbekistan.*

**KEYWORDS:** Education, Reform, State, Standard, Teaching, University.

### INTRODUCTION

Resolution of the President of the Republic of Uzbekistan dated July 20, 2018 "On measures to further increase the salaries of workers in science and higher education, state support for the implementation of the results of scientific and scientific-technical activities" the amount of basic salaries of teaching staff has been increased by an average of 25 percent since September 1, 2018, stratified. (People's Word, July 21, 2018)

### THE MAIN PART

South Korea, Japan, China, Malaysia, the United Kingdom, Russia, and QS (Quasquarelli Symonds), ARWV (Academic Ranking of World Universities), THE (The R&D of the World Universities) in the study of international experience in determining the ranking of educational institutions by the State Inspectorate for Education Quality Control under the Cabinet of Ministers. The style of large rating agencies such as Hihger Education) was compared with the rankings of higher education institutions in Uzbekistan. 10 of the indicators used by international rating agencies (percentage of PhD students in prestigious foreign universities, citations, scientific articles, funds, publications, defenses, exchange programs, foreign teachers and students, surveys, employment) are in our list of national rating indicators. 18 completely new indicators in the rating system of the University of South Korea, 5 indicators related to the level of quality of education, 3 indicators related to research activities, 4 indicators related to students'



contribution to the country's development and achievements, and 6 indicators related to public opinion polls. proposals were developed. In accordance with the "Regulations on the procedure for determining the rating of higher education institutions", approved by the joint decision of the State Inspectorate for Quality Control in Education and the Ministry of Higher and Secondary Special Education on March 7, 2018, 3 rating indicators were introduced. The activities of 57 higher education institutions in 2017 were analyzed by experts [-1.] With the help of these indicators, for the first time, the ranking of higher education institutions in the country was determined

According to the general results, the leading places in the rating are UzMU, TDSH, TIQXMMI, TTESI, SamSU, TDSI, UzSWLU, TTYTMI, TUIT. The last ten were occupied by NMTU, NDPI, QMI, QarSU, JPI, SDAQI, UzDSMI, MRDI, Jizzakh, Kokand state pedagogical institutes.

In general, in the period of reforms of Uzbekistan at the new stage, important aspects of training a competitive national, new generation of personnel; Based on international experience and global indices, the following conclusions can be drawn:

1. Ensuring the convenience of preschool education, improving the quality of general secondary education, secondary special and higher education in the fourth direction of the Action Strategy on 5 priority areas of development of the Republic of Uzbekistan for 2017-2021, identified today by the President of Uzbekistan Shavkat Mirziyoyev. Measures to improve and develop them are being implemented in public life.
2. Nowadays, "the fierce competition is intensifying around the world. In such a complex environment, we must work tirelessly to widely introduce the achievements of modern science and innovation [-2. -24 p].
3. Improving state and society building, ensuring the rule of law, further reforming the judiciary, further development and liberalization of the economy, development of the social sphere, security, interethnic harmony and religious tolerance, competitive foreign policy in a well-thought-out, mutually beneficial and practical spirit The cultivation and training of the next generation is a topical issue.
4. Therefore, "... one of our important tasks is to educate and train professionals who have the potential to effectively perform the tasks assigned to them, as well as high moral and ethical qualities and responsibilities" [-3.-211 p].

At a time when the requirements for the quality of the new generation of personnel are growing due to radical changes in our society, it is natural that the personnel policy inherited from the recent past by the mid-90s of the twentieth century did not meet modern requirements. Therefore, the essence, specificity and uniqueness of the Law "On Education", the "National Training Program" is that, as in previous documents, it is an important participant in the training of a new generation of personnel, their effective use by individuals, state and public institutions, industry, did not neglect areas such as science. Introduced to ensure the implementation of the national model of training, the "National Training Program" is the legal basis for major changes, defining the priorities, goals and objectives, as well as prospects for the development of the education system.



The "National Training Program" is a document protected by law to achieve the dream of our ancestors to organize the education and upbringing of a harmoniously developed generation. In this program, history is combined with modernity, humanity with nationalism. This program has a deep philosophical significance in terms of potential and importance, as evidenced by its international recognition. In particular, the 1998 International Conference on Education in the 21st Century in the Asia-Pacific Region, dedicated to the prospects of youth education in Australia in 1998, noted that only two countries, the United States and Uzbekistan, have a special state program for education development.

The announcement of Tashkent as the "Capital of Islamic Culture" in 2007 by the International Islamic Organization for Education, Science and Culture (ISESCO) is another international recognition of the good deeds aimed at restoring and preserving Islamic culture, spiritual values in our country. President Islam Karimov, in response to a question from a correspondent of the non-governmental news agency Turkiston-Press, described the event as "a high recognition of the invaluable contribution of the Uzbek people to the development of Islamic culture"[-4. -P. -211.-222].

In order to build and develop a system of training a new generation of bachelors and masters in building a democratic, legal state and civil society the principles of creating the necessary conditions serve as the basis.

The national program aimed at implementing the state's personnel policy is aimed at radically reforming the education system and providing for the training of a new generation of modern, highly qualified personnel on the basis of world requirements in the developing democratic process. Today, the fact that personnel policy is a priority of public policy shows that it is a strategic task.

The reason why Uzbekistan attaches great importance to education reform, training of bachelors and masters, as a nationwide work, is not only because of the country's unique labor potential. In this case, the state implies a unique philosophy of the whole society, as well as individual traditions. President Islam Karimov's approach to this problem is bound to inspire respect. Only through the implementation of the national education system, the training of mature modern personnel, it is possible to achieve positive results in "strengthening democratic values in the minds of the people, increasing their political and civic activism, expanding and deepening democratic change in the country" [-5.-182 p]. After all, "education reform is an internal force that boldly leads us on the path of democratic change, building a new society, moving us all ... Without changing the system of education and upbringing, it is impossible to radically change people's consciousness and, consequently, their way of life"[-6.-161 p].

Scientific analysis shows that the emergence of President Islam Karimov's political and enlightenment teachings in the field of training a new generation of personnel in the process of building a democratic society, the theoretical and practical development of which is reflected in the following stages.

The first stage is related to the Law on Education, adopted in 1992 at the initiative and under the leadership of President Islam Karimov, and its implementation. The law defines a new, political, legal, spiritual and educational path of independent Uzbekistan. This law is logically the beginning of a radical change in the system of public education, education is aimed at the

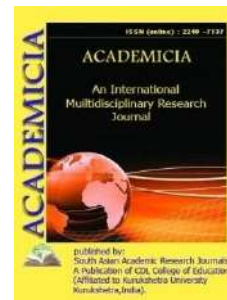
application of completely new national, ideological values, ideological foundations in the practical process.

## CONCLUSION

The head of our state foresaw that the education system inherited from the former totalitarian world could not fully serve the interests and prospects of independence. As a result, it was recommended to develop a new national training program. In preparing the program, it was emphasized that, **first of all**, it is necessary to bring up not a school graduate, but a free, perfect person who has mastered the rich material and spiritual values accumulated by mankind, able to think independently and make independent decisions.

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## COVERAGE OF POLITICAL, JUDICIAL AND LEGAL PROCESSES IN THE TURKESTAN ASSR IN SOVIET-ERA RESEARCH

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### ABSTRACT

*The political processes that took place in the Turkestan ASSR are widely studied in the Soviet literature. It is also shown that the published works, defended dissertations, scientific articles reflect the political reforms in the Turkestan ASSR in 1918-1924, the activities of the judiciary and law enforcement agencies.*

**KEYWORDS:** *Turkestan ASSR, Soviet Union, Judicial And Legal Processes*

### INTRODUCTION

On April 20, 1918, the V Congress of Soviets of Turkestan region was opened. One of the peculiarities of this congress was that about half of the delegates, that is, the representatives of the indigenous people, numbered 120 people. The main task of the Congress was to declare Turkestan Soviet autonomy. The political and legal processes that took place in Turkestan during 1918-1924 left a special mark on the history of Uzbekistan in the Soviet period. With the establishment of Bolshevik rule, a great deal of scientific research was carried out on the basis of the theories of Lenin and Stalin. Nevertheless, significant work has been done to study the problem. Various periods in the history of Uzbekistan, including the history of the Turkestan ASSR, have been reflected in many monographs, dissertations, pamphlets and articles. Given their large number, it is expedient to analyze the literature on the judiciary and law, political life in the Turkestan ASSR in chronological terms (1925-1990) and in problematic terms.

### MAIN RESULTS AND FINDINGS

The Soviet government pursued a policy of "socialist construction" in the country through power structures and a single party. The literature published [1] in the second half of the 1920s provided an overview of the activities of the Soviet government and the governing bodies

established in the country. In particular, T. Risqulov called the Turkestan Bureau (TurkBureau), established in 1920, "... not an organ of internal party struggle, but one of the powerful apparatuses of communist propaganda. Musbyuro was also known as such an apparatus in Turkestan and neighboring countries. Although MusBureau operated within the party, all of this was the nature of internal party life [2. 5.] writes.

According to Adhamov and S. Muravevsky, NN Popov, who carried out the Soviet government's first "measures" in the interests of the workers, described the center's policy in the country as follows: "The Soviet government has been purged in Turkestan. The Communists began their policy of renewal among the local people." [3]

The literature of the 1930s consisted of books [4] on the Communist Party of Turkestan, under Lenin's leadership, with brief views and conclusions on the governance of the country in the construction of the "proletarian state." Manjara's pamphlets published in recent years provide an overview of Lenin's role in the creation of the "dictatorship of the proletariat" of the Turkestan ASSR, and of the governing bodies. The collection of programs and regulations of the Communist Party published in 1934 states: "The involvement of specialists from the old school, the involvement of the most educated class of city workers in the military led to a partial cessation of bureaucracy in the formation of the Proletarian Revolutionary State" [5. 23.]. Туркистонда Совет ҳокимиятини ўрнатишнинг "асосий вазифалари" ни К.Житов, In a book written by V. Nepomnins in 1939, it was stated: "The main conditions for the strengthening of Soviet power in Turkestan: colonialism, the struggle against local nationalism, ... was to build this autonomy on the basis of local soviets. ... The realization of the Soviet autonomy of Turkestan united the local working people with the Soviet authorities" [6. 52-57.].

Publications [7] published since the mid-1940s are mainly translated from Russian into Uzbek. They also contain general considerations typical of the literature of the 20's and 30's in the description of the subject. For example, A.Ya. Vishinsky in the country: "One of the factors that contributed to the success of the creation and development of the Soviet state was the Bolshevik policy" [8. 34.]. Kalishnikov writes: "The Soviet people, the Bolshevik Party, under the leadership of the great Stalin, built socialism in the country" [9. 4.].

One of the distinctive features of Soviet historiography in the 1950's was the emergence of works by legal scholars directly related to the subject of research [10]. The first doctoral dissertation defended by H.S. Sulaymonova was especially important. In the case of the ban, the author put into scientific circulation historical facts in the coverage of the history of the formation of the judicial system in the country. Also, H.S. Sulaymonova Turkestan ASSR "Soviet court as a body of Soviet government served the interests of the formation of a completely new socialist system. ... the struggle against old views and habits" [11. 136.].

It should be noted that during these years, the candidacy of historians and also emerged [12]. In these studies, the political process led to the emergence of a single party and constitution in the country, the policies of the Turkestan Central Executive Committee (CEC), the Council of People's Commissars (CCC), the Turkic Commission, MusBureau "against oppression and foreign intervention" and their "national state delimitation". was related to their work. Also, in the literature, the phrase "the population of the region gained a number of political rights only through the Soviets and bodies formed after the October Revolution and the establishment of" Soviet autonomy "was widely used as the main content of political processes. Z. Inomjanov,

H.T.Tursunov, A.A.Gordienko connect the activity of the Soviet power in Turkestan with the first 3 important political events: 1. Declaration of autonomy in Turkestan and approval of the Regulations on creation of the Turkestan Soviet Autonomous Republic; 2. Holding a conference of the Communist Party of Turkestan; 3. Turkestan was defined by the promulgation of the first Constitution of the ASSR [13].

The Turkestan ASSR was declared a legislative and executive body in 1918, and in October the first constitution was drafted. This is stated in almost all Soviet literature. In particular, Z.Inomjanov, H.T.Tursunov in their research work, according to the Regulations adopted at the V Congress in April 1918, "... the supreme legislative body - the Central Executive Committee was established in the country. It consisted of six sections. ... The executive function and management of the country were entrusted to the Council of People's Commissars. The Council of People's Commissars was formed consisting of 14 commissariats. ... The adoption of the Constitution is at the height of the war against the White Guards and the British intervention, the first significant political victory "[14. 19-21.]. In his research, Gordienko states that the Constitution proclaimed in the Turkestan ASSR in 1918 was "... the first stage of the policy pursued by the Soviet government in Turkestan." He also noted that Turkestan was one of the attempts to build and shape the Soviet statehood in the ASSR, and it was completed [15. 143.].

In the works of E.Voskoboynikov, A.Zevelev, H.T.Tursunov the structure, tasks, activities of the Turkic Commission and the TurkBureau and the single party, which are the structures of power established by the center in the country, are described [16]. For example, H.T. Tursunov wrote a number of mistakes in the policies of the Turkestan Communist Party: "In March-April 1919, the Muslim Bureau (Musbyuro) was established as an auxiliary body under the Provincial Committee of the Turkestan Communist Party. He was to carry out political work among the workers of the indigenous peoples, assist the party in the organizations, and educate the local communists in the Bolshevik spirit. But under Musbyuro's leadership, separatist, factional tendencies prevailed, and he began to place himself against the Provincial Committee of the Turkestan Communist Party. T. Ryskulov, who was the head of the MusBureau, allowed the Turkestan ASSR to be "nationalist and deviant because it made decisions that were contrary to the project of reorganization of the Turkish Soviet Republic and the decisions of the party" [17. 35-40.]. It should be noted that the second volume of the two-volume book "History of the Uzbek SSR", published in 1958, positively assessed the activities of the Muslim Bureau and its local branches: "has done important work in between. Cultural and educational work has also been launched. The best representatives of the indigenous peoples were involved in the ranks of the Communist Party"[18. 55.]. At the same time, the play states that in the autumn of 1924, the process of national-territorial delimitation in the country took place in two main ways: "... political, mass explanatory and agitational work was carried out. At the same time, the most important organizational and economic measures were taken". (Defining the boundaries of the newly established republics and regions, economic boundaries, etc.). [17. 241]. H.T. Tursunov noted that many difficulties and contradictions arose in Turkestan during the period of national delimitation: "Although A. Rakhimbaev was a supporter of the national delimitation of Turkestan, he opposed the annexation of the Kazakh regions of Turkestan to the Kazakh ASSR, which had existed since the 1920s. To prove his point, he cited the fact that the Ettisuv and Syrdarya regions of Turkestan had been merged with the Kazakh ASSR as evidence that the Kazakhs "would become very large in territory." It was a completely wrong idea. Khojanov,



Paskutsky, and others also said that national borders should not be crossed, but that "Central Asia should be politically united by three Soviet republics." [17. 113].

In the 1960s, the study of the political history of the Turkestan ASSR was carried out intensively. The doctoral and master's dissertations [19] and monographs [20] that emerged on the subject during this period were studied as a separate topic or paragraph of political processes.

The peculiarity of this Soviet-era literature on the problem is that the authors, who cover the history of the current political situation in the country, study the factual material and conclude that the political process was uneven and carried out through propaganda and "cleansing". In particular, M. Vahobov connects the successful implementation of all political measures in the country with the "political activism of local workers" [22. 288]. In addition, the author analyzes through historical facts the emergence of a "nationalist current" within the TKP, the shortcomings in the implementation of "national policy". "At the VIII Regional Congress of Soviets, Risqulov amended the decision to merge the post of chairman of the Central Executive Committee of Turkestan and the Council of People's Commissars and completely abolished the Council of People's Commissars. Its functions were delegated to three councils established under the Central Executive Committee. It was a gross violation of the principle of the Soviet state" [22]. Against this and other "political movements" in the Turkestan ASSR in 1922 a resolution was signed "On the cleansing of public administration in the center and in the field." Researchers point out that the decision was "relied on by local workers and communists" [23].

The researcher Sh.Z.Urazaev, who made a legal analysis of the history of the Turkestan ASSR, describes the Constitution of the region in 1918 from the point of view of Soviet ideology. In particular, he concludes that the Constitution of the Turkestan ASSR is the result of the heroic struggle of the Turkestan people, the establishment and consolidation of Soviet power under the leadership of the Communist Party [24. 274.] However, in his work "V.I. Lenin and the Construction of the Soviet State in Turkestan" one can find the following objective opinion: "... the Constitution did not include the basic rights and obligations of citizens" [25. 433]. In doing so, the author presented conflicting views.

In general, the existing works show that the political life in the Turkestan ASSR was complicated and full of struggles. The authors state in their research that the activities of the Bolsheviks were to strengthen the political position of the working class and to ensure their broad participation in public administration.

In the 1970s, research in the Turkestan ASSR intensified. They were dissertations based on Marxist-Leninist theories up to the volume of scientific articles [26] and monographs [27]. In these years, the participation of lawyers in the reference to the historical processes of the region is observed [28]. The research, written by lawyers, legally describes the legislation, the activities of judges, the formation of the Turkestan Prosecutor's Office, and others. For example, I.Abidova writes that the activity of judges in the country has stopped spontaneously, and the Soviet courts, acting in the interests of workers, have justified the trust of the local people. The reason for this is: "The formation of socialist relations in the Turkestan ASSR" [29. 39-40]. The author also points out that the activity of judges in the Turkestan ASSR consists of two stages: "The first stage is the abolition of kadijudges without taking into account the legal consciousness of the broad masses of the Uzbek people; The second stage was the legalization of kadijudges' courts in 1922, while retaining the right of waqf" [29. 162.].



In their articles on the 70th anniversary of the Soviet Prosecutor's Office and Advocacy, V.A. Zotov and G.P. Sargsyan described the work done in Turkestan on the implementation of the Law "On the Prosecutor's Office" adopted in 1922. The article states that "the Soviet prosecutor's office and the bar played an important role in defending the interests of socialism" [30].

In this regard, the works of historians contain recurring facts in the literature created in the 50-60s [31]. For example, H.Sh.Inoyatov noted that the activity of the Turkbureau was dominated by "nationalism", "nationalist", and that Lenin's "national policy" was correct in the construction of the Soviet state [32. 55, 59]. Published in 1974, "Essays on the History of the Communist Party of Uzbekistan. The monograph "Tashkent: Uzbekistan" describes the activities of "anti-party" groups [33. 76-77].

## CONCLUSION

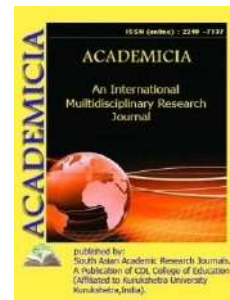
The measures taken by the center in the political-judicial and legal system of the Turkestan ASSR in 1918-1924 are reflected in the scientific research of the Soviet period, the October Revolution, the class struggle and the struggle against the great state chauvinism. In this direction, not only the research of historians but also the research of lawyers can be seen. Their research covers the history of political processes in Turkestan mainly on a political basis.

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## THE RESULTS OF LABORATORY STUDIES OF A DISK DEVICE MOUNTED ON THE FRONT OF THE BASE LEVELER

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### ABSTRACT

*The article presents the results of laboratory experiments to determine the productivity and some other parameters of the disk working body, working with the scheduler bucket in order to improve the process of leveling fields that meet the agrotechnical requirements of pre-sowing background.*

**KEYWORDS:** *Productivity, Disk, Bucket Filling Coefficient, Disk Diameter, Drawing Prism.*

### INTRODUCTION

The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated February 24 , 2014 No. 39 “On additional measures to ensure the unconditional implementation of the State Program for the improvement of the ameliorative state of irrigated land and rational use of water resources for 2013-2017” was adopted [1]. One of the technologies used to enforce this solution, i.e. crop irrigation, efficient use of water resources, is a smooth surface. It can be concluded that the area of machine-tractor units is even, if the landing area is above the plane of the surface.

Accurate and reliable aggregate performance will improve their business efficiency and quality of work. In order to increase the leveling efficiency of the land based on its underwire buckets,

spherical disks are installed in order to analyze optimal size models and laboratory experiments. We have developed disk drives of the following diameters: 150 mm, 120 mm, for experiments in a soil channel with a workstation from a recycled disk. The experiments were performed in triplicate and at three speeds (0.25 m / s, 0.58 m / s, 0.80 m / s).

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In order to identify the optimal variant of the disk disassembly scheme, vertical and horizontal slots (grooves) were made on the sides of the pile.

According to the results of the experiment, the dependence of the soft disk device model on the diameter and speed of the disk was investigated. Laboratory studies also show that increasing the layout increases with increasing diameter, distance and speed of the disks in the model. Studies have shown that the process of forming a ground coating on a dirt channel occurs several times slower than in field conditions. There was no destruction of the disk between the disks by increasing the speed of movement of the base device to the base station of the ground channel by 0.80 m / s, on the contrary, the level of crushing increased. In addition, if the height of the ground cellar exceeds 5 cm, the smooth movement of the hard disk to the ground leveling plane will deteriorate. At the same time, part of the soil inside the puddle falls from the side and rear walls, which reduces the quality of the drift plane in the soil channel. Analysis of the research results showed that several effective disk characteristics were found with a diameter of  $D_d = 150$  mm.

Laboratory results also show that the efficient operation of model workstations of a disk device, which softens the base plate, is associated with the optimum displacement of disks. We changed the disk space by tilting it. Optimized disks in disks are the displacement of disks with soil, minimization of the walls of the side and rear sides, as well as the smooth displacement of the soil in the heap. studying the soil coagulation process based on the speed of the drive model and analyzing photos taken with a fast merging photo demonstrated that the discriminating organization works more efficiently ... When the distance is 20%, the distance between the disks should be  $L \leq (2 \dots 3) D_d$

The angle of inclination of the disk space is of great importance for the horizontal plane. This is due to the fact that the inclination of the disk on which the disk was rolled should be flattened and crushed. According to the literature, the natural angle of soil inclination [4] should be from 40 to 50, based on the physical and mechanical properties of the soil. However, observations have shown that the length of the slope of mountaineering in motion is less than the length of the slope of the stop line. Thus, the slope of the leveling of the soil is much greater than when driving. Given the above analysis, we assume that the slope of the motion of the soil is 55.... 65 . The corner of the slope depends on the physical and mechanical properties of the soil and the moisture content. This corresponds to the results of experiments conducted on the soil channel. As can be seen, the inclination of the disk surface should correspond to the straight line of the soil coil and should be not less than 50 ... 100 mm below the center of the soil. These indicators depend on the speed and humidity of the pile (speed  $y = 0.25 \dots 0.80$  m / s, humidity  $W = 14 \dots 20\%$ ). If this speed and humidity exceed working quality, the soil will not even soften between the discs.





**Picture-1. A mockup of a data table model that simplifies alignment on land.**

Soil moisture, its hardness, weight and composition of soil aggregate were determined by three layers at a depth of 10 cm before and after crossing the groundwater channel of the disk device, which softens to the ground plane. The following tables show the measurement results . (Tables 1, 2 ,3)

**THE CHANGE IN THE HARDNESS OF THE SOIL DEPENDING ON THE SPEED OF MOVEMENT OF THEWORKING BODY ON THE DISK OF THE DEVICE SOFTENS TO THE BASE OF THE PLATEAU.**

**TABLE-1**

Horizontes,sm	Soil moisture, percentage calculation	hardness of the soil, kg/cm <sup>2</sup>			
		Until the passage of aggregate	Speed moving of aggregate after the passing m/s.		
			0.25	0.58	0.80
Getting cut the height of soil					
0...5	16,48	3,35	6,40	6,42	6,0
5...10	17,62	5,05	8,30	8,50	6,3
Feeling the depth					
0...5	16,48	3,5	3.0	2,5	3,2
5...10	17,62	5,6	4.5	3,3	3,9

**DEPENDING ON THE VELOCITY OF THE MOVING BODY OF THE WORKING BODY, THE DISK DEVICETHAT SOFTENS THE BASE PLATE TO CHANGE THE WEIGHT OF THE SOIL. TABLE -2**

Horizons, sm	The weight of the soil, g / cm <sup>3</sup>			
	Until the passage of aggregate	Speed moving of aggregate after the passing m/s.		
		0.25	0.58	0.80
0...5	1,41	1,42	1,41	1,40
5...10	1,43	1,43	1.42	1.41



**THE CHANGE OF THE COMPOSITION OF THE SOIL AGGREGATE, DEPENDING ON THE SPEED OF MOVEMENT OF THE WORKING ORGAN ON THE DISK DEVICE SOFTENING TO THE BASE PLATEAU.**

TABLE-3

Movement speed, m / s	Amount of Fractions,%		
	$\varnothing$ 10...5mm	$\varnothing$ 5... 0,25mm	$\varnothing$ < 0,25mm
Untill the passing of aggregate			
	59,1	28,89	11,19
After the passing og aggregate			
0,25	57,8	29,72	12,06
0,58	56,91	33,26	9,72
0,80	54,23	36,67	8,71

**CHANGE OF LEVELING PROFILE OF THE LONGITUDINAL PROFILE, DEPENDING ON THE VELOCITY OF MOVEMENT OF THE WORKING BODY BY THE DISK DEVICE SOFTENING TO THE BASE PLATEAU.**

TABLE-4

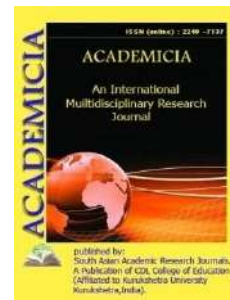
Tendency Indicator	Movement speed, m / s		
	0,25	0,58	0,80
$\sigma_{\partial}$	9,91	11,05	10,80
$\sigma_{\Pi}$	8,6	9,37	9,02
K (%)	13,21	15,2	16,48

As can be seen from the table, soil hardness, volume and aggregate content will vary at a rate of 0.25 ... 0.80 m / s and a relatively small amount of moisture content. This change corresponds to the agrotechnical requirements before planting. Table 4 shows that aggregate velocity increased from 0.25 m / s to 0.80 m / s, whereas the level of longitudinal profile of the ground canal increased by 19.84%. This change confirms the theoretical results. A smooth disc leveling device based on the slope, the slope of the soil heap from the soil surface should be parallel to the line and the middle of the pile should be placed at least 50 ... 100 mm. These indicators depend on the speed and humidity of the pile (speed  $y = 0.25 \dots 0.80$  m / s, humidity  $W = 14 \dots 20\%$ ). This speed is reduced, and the humidity improves the quality of work, and the soil is blocked on the surface of the disks. In summary, we can say that the above points and analyzes show that the qualitative leveling of land in improving land reclamation is of utmost importance.

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## SCIENTIFIC SIGNIFICANCE OF CATALYSTS USED IN PETROCHEMICAL INDUSTRY

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### ABSTRACT

*This article provides information about catalysts and classification of catalysts, using catalysts in petrochemical industry. This article also discusses the scientific significance of using of catalysts in petrochemical industry.*

**KEYWORDS:** *Catalysts, Petrochemicals, Oil, Gas, Biochemical, Scientific Significance.*

### INTRODUCTION

The level of development of the world, oil, gas, chemical, oil refining, petrochemical and biochemical industries is increasing annually so that the incredible variety of production of all kinds of synthetic materials surrounding modern man is lost to ability to surprise. Increasing the coefficient of selection of oil from oil reservoirs using catalysts, production of various compounds from natural gas are new directions in the development of new catalysts and processes based on them. In the refining industry, new catalysts and processes are also continuously applied, for example, the introduction of microsecond cracking, fluidized bed reforming, and others appear on the basis of creating new types of catalysts and catalytic reactors. In the petrochemistry of heavy-duty plastics, anti-reflective coatings, water-repellent

surfaces are also based on the use of new catalysts in the form of nanosystems, which have a significant effect on the daily life and development of society. The basis of the majority of chemical-technological processes are catalytic conversions of organic and inorganic compounds. The volumes of production of the target product, the process conditions, its hardware design and technology features as a whole directly depend on the catalysts. Rarely even the economy of production is determined, namely, by the cost of the catalyst and the cost of its maintenance. In this situation, one of the priority directions in the development of applied chemistry is the development of the scientific foundations of the search for the most optimal catalysts for existing industrial reactions, or, conversely, the selection of a reaction catalyst that has already been developed. As a result of which this or that target product of the oil refining and petrochemical industry is formed with a significant yield and selectivity. Obviously, a researcher who sets himself a similar task in one of its variants will be forced to look at the mechanisms of elementary stages of catalytic (chemical) processes, as well as the properties and structure of such a complex system, that is, catalysts and reagents. Successful work in this direction may be assisted not only by empirical studies, and theories of catalysis and catalysts, but also by the methods of formal kinetics and thermodynamics and other methods, including the apparatus of quantum chemistry, constantly improved by the leading world scientists since the 30s XX century. Of particular importance is the involvement of theoretical foundations of catalysis for solving theoretical and practical problems, especially the theory of catalysis by polyhedra. Modern information technologies, which have undergone even more rapid development recently, are widely used for the oil, gas, chemical, petrochemical, oil refining and biochemical industries and open up wide horizons for specialists in the field of modeling of physical and chemical (catalytic) processes. In the market of software products for studying catalytic systems by quantum chemical methods, there are already various applied software packages (for example, CambridgeSoftChemOffice, MORAS and others) that allow performing the necessary thermodynamic calculations of catalysts and reagents, to carry out calculations of the composition and energy of transition states, the geometry of molecules and clusters, and calculations of other parameters of molecules and complex catalytic complexes based on methods of molecular mechanics and quantum chemistry. These methods are based on the solution of the Schrödinger equation and, when solving applied problems with their help, they have rather high accuracy and require relatively insignificant hardware resources (computers) and time required to obtain the parameters by the calculation method molecular and catalytic systems under study. The interested reader with calculation methods for studying molecular catalytic systems will find information for them in the books of V.A. Lyubimenko et al. The classification of catalysts and catalytic processes is one of the most important directions in understanding the features of the structure, state, and chemical composition of catalysts, the relationship of composition and structure with the activity and selectivity of the catalyst and with operating conditions (time their work without reducing activity and selectivity, productivity, resistance to high temperatures and etc) catalysts, mathematical description of catalysts and catalytic processes. Catalytic processes are distinguished by their mechanisms of occurrence, state of aggregation, methods of redistribution of electrons and bonds in molecules, and they, in turn, are taken into account in the mechanism of catalytic processes and, based on them, create mathematical modes. Based on the classification of catalysts according to different signs, conditions for their synthesis are more reasonably selected, the mechanisms of action of catalysts on reagent molecules and a sequence of elementary stages of catalytic processes are

formulated. Classification is also important in the creation of new types of catalysts and the selection of catalysts for chemical processes, as well as the optimization of the chemical composition of catalysts and the polyhedral structure of a crystalline or amorphous lattice bodies and the selection of other parameters for the catalyst and catalytic processes. Classification of catalysts and catalysis phenomena can be done when the main features of the catalysts themselves are distinguished, as well as catalytic processes. We can distinguish the following main features for catalysts and catalytic processes:

- Aggregate states of catalysts and reagents (classification of systems by phase state),
- General and acid-base catalysis,
- A method for separating electrons between catalysts and reagents (homolytic and heterolytic catalysis ),
- nanocatalysis,
- pico- and femtocatalysis,
- the chemical nature of the catalysts and the crystal chemical structure,
- catalyst supports
- the texture of solid catalysts
- biocatalysts (catalysis by enzymes),
- microheterogeneous catalysis (catalysis in colloidal systems),
- catalysis by metals and insulators,
- interphase catalysis,
- autocatalysis,
- coordination catalysis (catalysis by complex compounds),
- catalysis by polyhedrons,
- catalysis by ionic liquids,
- astrocatalysis,
- photocatalysis,
- cooperative catalysis.

Classification of catalysts by their state of aggregation. Catalytic processes are divided according to the mechanisms of their occurrence and their influence on the mechanism of the process of the nature of the catalyst and reagent molecules, as well as the state of the catalytic system (homogeneous or heterogeneous system). The classification of catalytic systems can be carried out first by the state of aggregation of the catalysts and reacting substances. By the aggregate type, the catalysts and reagents can be in a gaseous, liquid, and solid state. If the catalysts and reagents are in the same aggregate state (gas mixtures, true solutions of liquids and solids), then such systems are homogeneous and catalysis belong to a homogeneous type. If the catalyst and reagents are in different aggregate states, then such systems are called heterogeneous

and catalysis is called heterogeneous. In heterogeneous catalytic systems, at least 8 systems with different aggregate combinations can be distinguished. For heterogeneous catalytic systems, when a pair of aggregate states of the catalyst and a reagent are combined in three phases (g, g, and t), we obtain  $2^3 = 8$  systems.

All in all to conclude, Catalysis is a change in the rate of a chemical reaction by a substance called a catalyst. Unlike the reagents involved in the reaction, the catalyst does not react. Catalysts that accelerate the reaction are called positive catalysts, while those that slow down are called inhibitors. Catalyst enhancers are called promoters, and reducing agents are called catalytic poisons.

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## **THEORETICAL RESEARCH OF FIXING A SPHERICAL DISC IN ANGULAR VELOCITY OF IMPROVEMENT OF IRRIGATED LANDS**

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### **ABSTRACT**

*The article presents the results of laboratory experiments to determine the productivity and some other parameters of the disk working body, working with the scheduler bucket in order to improve the process of leveling fields that meet the agrotechnical requirements of pre-sowing background.*

**KEYWORDS:** *Productivity, Disk, Bucket Filling Coefficient, Disk Diameter, Drawing Prism, Water Saving, Furrow Irrigation, Disk Space, Innovative Technologies, The Mechanic, Long-Base Scheduler.*

## INTRODUCTION

Gradual transition to market relations, achievement of sustainable development of agriculture and water resources of the Republic of Uzbekistan in the period of development through interconnection with the world community on the basis of common economic policy, improvement of rational use of water resources, working out of modern technological processes as well as automated working equipment and at the expense of introduction into production by using water and land which is directly related to perspective ways of transition to new forms for agricultural production.

Today, the issue of rational use of water resources is one of the most important issues for specialists in agriculture and water resources. The demand for agricultural crops of irrigation water in vegetation period is not always provided. In addition, the achievement of high-quality and high-yield irrigation technology depends on the reclamation of cultivated lands. To do this, agro technical treatment of irrigated land will need to be implemented by using modern technologies.

All kinds of measures are taken to prevent inefficient water supply to agricultural crops. Enterprises specializing in amelioration and water management work to expand and improve the capacity of water supply facilities. Legal norms and privileges established by the Government play an important role in this work. Decree of the President of the Republic of Uzbekistan Sh.Mirziyoev, dated November 27, 2017, PQ-3405 "On the State Program for the Development of Irrigation and Improvement of Irrigated Lands for 2018-2019", which will be an important factor in improving the efficiency of such works.

As a result of implementation of these decrees, ground water levels on more than 260,000 hectares of irrigated land have been reduced, average and severe salinization has been reduced on almost 32,000 hectares, and land-reclamation status of 182,000 hectares has been improved [1]. One of the technologies used to enforce this solution, i.e. crop irrigation, efficient use of water resources, is a smooth surface. It can be concluded that the area of machine-tractor units is even, if the landing area is above the plane of the surface. This is article based on importance of something the land and done it in the given time according to agro techniques demands the number of grader in something irrigated lands of Bukhara province is also based on given formulas. There are also given advice in using efficiently something aggregates. Something irrigated land makes condition of increasing fruit fullness of agriculture crops, not much work during irrigating the land and saving water, polishing quality row spaces and gathering crop quality with machines. Polishing soil several time make land uneven when irrigate the land, in other word while tilling long furrow and after irrigating high – lowland and last year uneven will be formed. There are also observed some part of the field after irrigating several time. It may also achieved in good or quality something by long grader machines two or three times but it can't be smoothed by hanging grader machines. Smoothing the land in agro techniques time ameliorate the land.

Smoothing aggregate should be provided enough for usefully and smoothed the land in agro technique time on conclusion of several scientist general smoothing land consist of 35 .. 40%

in our republic According to the observation in Vobkent , and G'ijduvon , region of Bukhara irrigating furrow cotton land in not smoothing fields moisture consists of in deep part of the land 8.....12% in high part 10...15% that's why we can't achieve moisture in all part of crop it increased salt. This make a result of decreasing crop [2,3].

## II. THEORETICAL RESEARCH

Spherical discs have found wide application in various agricultural tools for surface treatment. For example, there are disc ploughs, harrows, cucumbers, where a spherical disc serves as a working device. In disc ploughs and harrows, a spherical disc is the main working device that affects the soil. The decisive requirement for discs is a reduction in traction resistance, if the main purpose of cultivation is fulfilled satisfactorily [10,12].

In our researches the spherical disk worked as a plough-hole in the soil prepared for sowing, which was in loose condition, was sunk to the depth of 5-7 centimeters. Traction resistance is not of main importance due to under loading of tilled tractor type TTZ-80.10 during sowing. It is important to know the trajectory of flight of particles, thrown by disc, the distance of their throwing. In the theoretical determination of the trajectory of particles on the spherical surface, a significant role in determining the moment of particle velocity failure is played by the angular velocity of the spherical surface of the disk. In order to determine the influence, causes affecting the angular velocity, we have conducted research [14,11]. The spherical disk, buried in loose soil, comes into interaction with it and moves with certain angular velocity  $W$ . The soil particles enter the inner cavity of the sphere, then come off the disc and fall down at a certain distance.

The angular velocity of  $W$  is influenced:

1. The ratio of disc inertia moments to soil
2. Bearing friction
3. Resistance to cutting into the front edge of the sphere and release of the rear edge from the soil
4. Angle of attack.

The moment of inertia of the disk relative to the axis of rotation  $Z$  (Fig.1) is:

$$J_z = \frac{MR}{2}, \quad (1)$$

Where:

$M$  is disk weight ;

$R$  is radius of disk ;

To determine the angular velocity  $W$ , we apply the theorem of change relative to the rotation axis  $Z$  of the kinetic moment of the system consisting of soil and disc. For this purpose, we depict the system "disk-soil" and the external forces acting on the system (Fig. 1) [16].

This system is affected by only one external force applied to the spherical disc from the moving soil.

Let's make an equation of moments:

$$L_z - L_{oz} = \sum M_z [S^e] \quad (2)$$

Where:

$L_{oz}$ -kinetic torque relative to the axis of rotation of the disc of the soil-disc system until it touches. For simplicity of solving the problem, let's assume the disk standing in place at an angle and the soil layer moving progressively.

Then

$$L_{oz} = m g \rho \cdot \cos \alpha, \quad (3)$$

where m second - the mass of the formation is determined by the equation

$$m = \frac{s \cdot g \cdot \gamma}{g},$$

S-area in cross-section, normal to trajectory, dm<sup>2</sup>

$g$  -progressive movement speed .m/sec:

$g$  -acceleration, m/sec<sup>2</sup>;

$\cos \alpha$ , is a coefficient that takes into account the amount of movement per disc rotation;

- Distance between the axis of rotation of the disc and the center of gravity of a segment of disc buried in the soil;

$L_{oz}$  - the kinetic moment in relation to the rotational axis after contact.

After touching the disc will have angular speed  $W$  and the soil layer will move together with the disc because of soil looseness.

Consequently,

$$L_1 = L_{1z} + L_{2z} \quad (4)$$

But  $L_{1z} = L_{1z} \cdot W$  - disc kinetic moment,  $L_{2z} = L_{2z} \cdot W$  - the kinetic moment of the formation,

Where

$W$ -angle disc speed, l/s.

Considering expression (I), we shall result the equation

$$L_{1z} = \frac{MR^2}{2} \cdot W, \quad (5)$$

$a \sum M|S^e| = 0$  – the sum of external force moments relative to the z-axis because the system's kinematic torque is maintained.

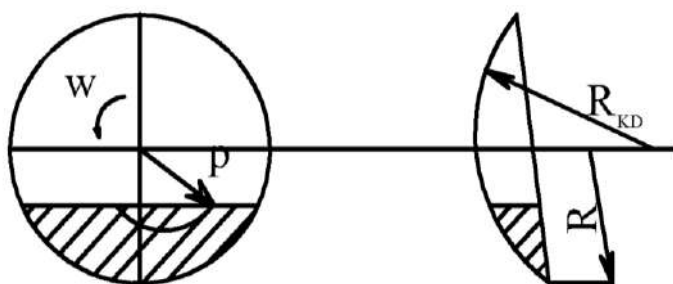
The moment of inertia of the moving part of the layer with respect to the z-axis will be:

$$J_{2z} = m\rho^2 \quad (6)$$

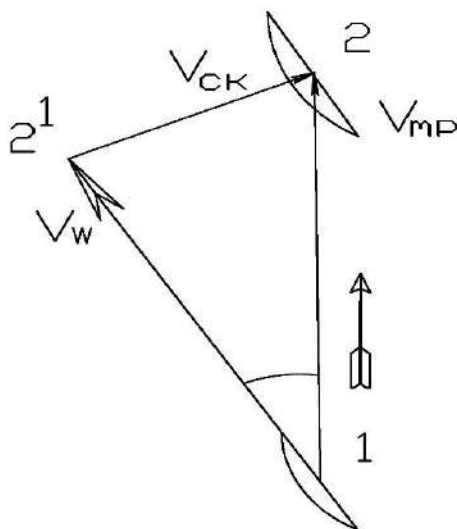
That way;

$$L_z = \left[ \frac{MR^2}{2} + m\rho^2 \right] W \quad (7)$$

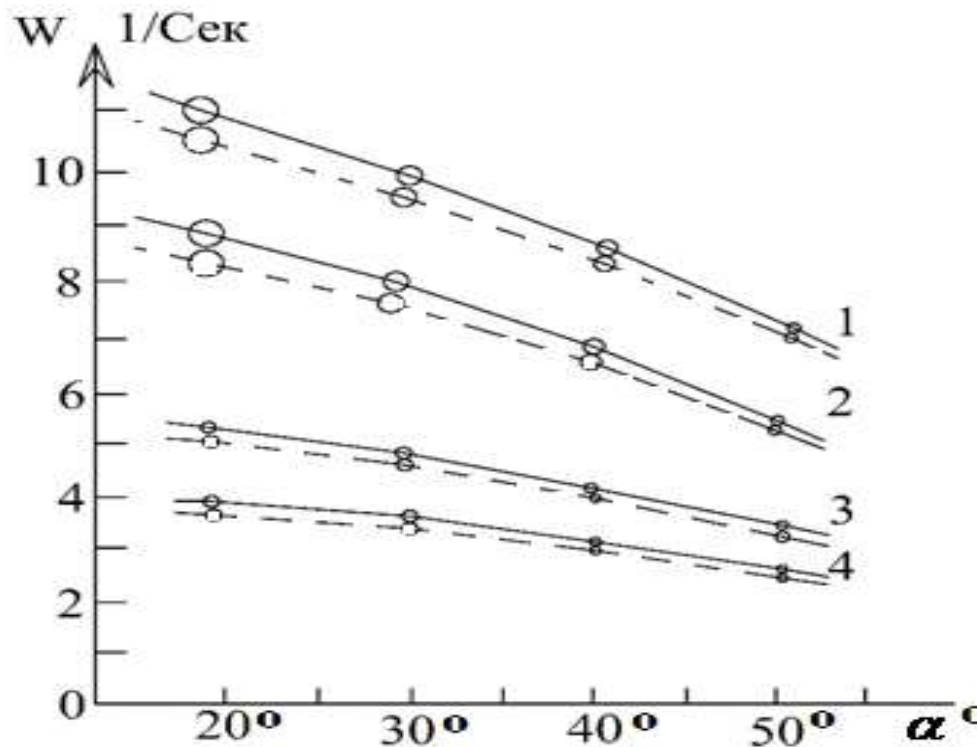
After substitution of the found values in the equation [2] we obtain.



**Figure. 1.** Spherical disc, sunk into the soil.



**Figure. 2.** To determine the angular speed of the disc standing at an angle  $\alpha$  to the trajectory



**Figure. 3.** Experimental angular (solid line) and calculated (dashed line) by

$$\text{formula } w = \frac{g \cdot \cos \alpha}{R}$$

Disk Speed  $W_{cp}$  : I-in  $V_1=613,8$  m/s,  $2-V_2=808,3$ , 3-  $V_2=1330,5$  and  $4=V_4=1672,2$  m/s.

$$\left[ \frac{MR^2}{2} + MP^2 \right] W - m \cdot g \cdot p \cdot \cos \alpha = 0.$$

Or

$$W = \frac{m \cdot v \cdot p \cdot \cos \alpha}{\frac{MR^2}{2} + mp^2}. \quad (8)$$

After dividing the numerator and denominator by mp we will finally get:

$$W = \frac{v \cdot \cos \alpha}{P + \frac{MR^2}{2mp}}. \quad (8a)$$



Besides, there's a dependency

$$\mathcal{G} = WR_{nep} \quad (9)$$

In which,

$R_{nep}$  - rolling radius.

Comparing formulas (8a) and (9), we can see that:

$$P + \frac{MR^2}{2mp} = R_{ntp} \quad (10)$$

But we do not take into account the friction torque in the bearing, the cutting resistance of the front of the disc, or the bulging of the rear [15,16]. Obviously, in reality, these factors increase rolling radius by a value oscillating within small limits which depends on bearing design, curvature of sphere, coefficient of soil friction against disk.

$$R_{nep} = R_{nep} + \Delta R \quad (11)$$

Now let us determine the change of angular speed depending on the angle of disk installation - angle of attack (Fig. 2).

Spherical disc, moving together with the tractor and having the forward speed of the tractor when moving in a straight line makes a complex movement. It simultaneously participates in movement of pure rolling and pure sliding at moving on a straight line from position 1 to position II. The speed of this movement can be expressed in equality

$$\mathcal{G}_{mp} = \mathcal{G}_{ck} + \mathcal{G}_{\omega} \quad (12)$$

Where:

$\mathcal{G}_{ck}$  - tractor speed:

$\mathcal{G}_{\omega}$  - pure sliding speed :

$\mathcal{G}_{mp}$  - pure rolling speed:

From a triangle I II II ' we have :

$$\mathcal{G}_{\omega} = \mathcal{G}_{mp} \cdot \cos \alpha \quad (13)$$

Considering the expression we will write down:

$$W = \frac{v_{mp} \cdot \cos \alpha}{R_{nep}} \quad (14)$$

By substituting from equations (10) and (11) into expression (14) the value  $R_{nep}$ , we obtain :

$$W = \frac{g_{mp} \cdot \cos \alpha}{\left( \rho + \frac{MR^2}{2mp} + \Delta R \right)} \quad (15)$$

For definition of actual rolling radius  $R_{nep}$  and also angular speed of a spherical disk, we have made spherical disks with various radiuses of curvature  $R_{крив}$  at various thickness  $t$  ( $\phi=300$  mm).

$R_{крив}$ ,	500	700	900	Flat	mm
$t$ ,mm	3	3	3	5	8 12

The rolling radius of the spherical disk is calculated as follows . On an optional device, which was manufactured at SAIME, the number of revolutions of the spherical disc, as well as parts of the revolutions up to  $I^0$ , is determined, the stopwatch time is counted to 0.01 . The device was strengthened on the running trolley of the soil channel that allowed fixing the spherical disk on the required angle of attack to the trajectory of movement in the range from 20 to 700 in 100 steps.

The trolley of the soil channel moved with four different speeds .

During the experiment, the number of disk revolutions  $N$  and time of movement  $t$  were calculated, and the number of revolutions  $N$  consisted of the whole number of revolutions  $n$  and the honor of revolutions.

Thatis

$$N = n + \Delta n$$

Experiments were conducted in the calculated area  $Z$ , the rolling radius is defined as

$$R_{nep}^1 = \frac{Z}{2\pi N}$$

The experiments were carried out in 4-fold repetition in each version.

Spherical discs with different moments of inertia and curvature radiuses were deepened to a depth of 30 : 60 : 90 : 120 mm and moved at different speeds [6,7].

After processing of experimental data it was found out that curvature of spherical surface, moment of inertia as well as burial of disk in soil practically does not influence on angular speed. Approximately the same data was obtained at other angles of attack.

The main factor influencing the rolling radius and accordingly the angular velocity was the angle of attack.

Calculation of rolling radius according to the above formula showed that rolling radius  $R_{nep}$  in all cases is close to  $R$  value (Fig. 1) .

Experiments have shown that the formula (15) can be simplified to the form :

$$W = \frac{g_{mp} \cdot \cos \alpha}{R} \quad (16)$$

In fig. 3 given the dependencies of angular velocity  $W$  on the angle of installation. a. Here is shown the value of angular velocity of the spherical disk, calculated by the formula (16) and experimental data[3]. The angular velocity depends only on the setting angle of the disc to the trajectory, the velocity of movement and can be calculated using formula (16).

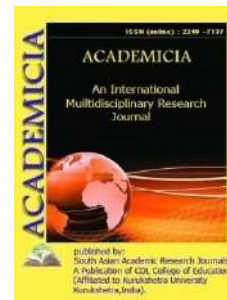
### III. CONCLUSIONS

The angular speed of the spherical disc that moves in the soil prepared for sowing is independent of the disc curvature, the size of the burial, and the moment of inertia of the disc.

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## CURRENT ISSUES OF YOUTH COVERAGE IN THE THEATER

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### ABSTRACT

*The article discusses the importance of the study of youth in the field of theater. Issues related to the expression of the theme of youth in Uzbek drama and theater are analyzed. It describes in detail the specifics of staging the topic of youth in the modern process, the problems that arise in this process. There were also comments and suggestions on how to increase the role of theater in educating young people.*

**KEYWORDS:** Theater, Youth Theme, Performance, Artistic Form, Artistic Image, Solution, Playwright, Director, Acting Skills, Moral-Educational Function.

### INTRODUCTION

The focus on young people is an important step for the future. At the same time, young people are the most vulnerable group in society. When Uzbekistan gained independence, the basics of state youth policy were developed and the first adopted law was the Law on Youth in 1991.

It is no secret that the problems of young people today are gaining globalization and are considered a very serious issue. The study of youth abroad in various fields of science has long been established. "The special study of young people in the socio-political sciences as an independent stratum began in the 1920s and 1930s. Youth issues and various destructive moods among young people have been scientifically studied, primarily in the field of pedagogy and critical pedagogy.

The study of state policy and problems concerning youth has led to its inclusion in the classification of modern new sciences in the last century. The first complex works on youth were studied in G. Stanley Hall's book "Youth" and "Problems of Education", S. Buhler's "Spiritual Life of Youth", E. Spranger's "Psychology of Youth" and others. However, a narrow range of specialized research was introduced in the 1970s after the student uprisings of the 1960s,

resulting in the science and theory of juvenile science. The science of studying youth began to be called "juvenile" or "juventology" (Latin: Juvenilis - youth, logos - study). The topic of youth was first studied extensively in the fields of pedagogy and psychology, but later began to be studied in other social sciences and humanities. The topic of youth in the field of theater abroad is one of the current topics that requires in-depth study[1].

In particular, Peter Martin Gydborg's dissertation "Proud theater: A Queer performance model" is one of the major studies on this topic. The issue is being considered as a theatrical model by the US Proud Theater. It analyzes the main factors of the model of performances for young people, along with the role of theater in the art economy.

V.V. Pavlovsky is one of the scientists who conducted extensive research on youth in Russia. The book "Juventology: the formation of science and youth" provides a comprehensive analysis of the origin and study of this topic.

Kokhanaya Olga's doctoral dissertation "Sociocultural functions of children's and youth theater" also reveals the socio-political role of children's and youth theaters in the lives of young people. The author argues that children's and youth theaters should be studied as a special socio-cultural institution. The researcher focuses on the project "On the way to the audience: partnership program", launched in 2008 in Russia by the Experimental Center for Audience Work of the Russian Academic Youth Theater.

The project is implemented under the auspices of the President of Russia in support of children's and youth theaters for 2008-2010. In the article by AV Eterskova "Features of the interaction of the theater with the youth auditorium (at the first Legendary Alexandrinsky Theater)" it can be said that the above issues have found their logical continuation. Among the plans for future creative work in this theater is the creation of performances for young people, for which a plan (program) "Cultural life of the theater and the formation of an audience of young audiences" has been developed.

Veronica Kozel's dissertation "Young problems in the theatrical art of Belarus in the 70-80s" focuses on the theme of youth in the theaters of Belarus in the 70s and 80s, the relationship of the policy of that period to the theme of theater and youth. During his research, the dissertation said, "Active study of the problem of youth in theaters can greatly contribute to its development. It gives theaters the opportunity to interact with the audience, to experiment, to use the synthesis of art[2]". In the territory of Uzbekistan during the period of independence, the subject of youth has been studied in various fields of social sciences, including history, psychology, sociology, philosophy and political science.

The special study of the subject of youth in the field of art and theater is a scientific novelty. To date, there are two research studies on youth theaters in Uzbekistan, which provide only a partial analysis of youth-themed performances. However, the object of analysis of scientific works is not the subject of youth, but opinions are given on a general basis.

In particular, H. Ikramov's dissertation "Uzbek State Republican Theater of Young Viewers named after Yuldasha Akhunbabaeva" covers the stages of formation and development of the



theater until the 80s, and deeply analyzed the theater's repertoire and performances. Among the performances analyzed were youth-themed performances. However, in the period taken for the dissertation, mainly performances for children were staged. In all of the performances analyzed as works for young people, we cannot say that the theme of youth is the main theme. It was also found that these performances were not analyzed in terms of their impact on young people.

M.Akhmetjanova's dissertation for the degree of Candidate of Arts in "Youth Theaters of Uzbekistan in the period of independence (new era and its stage solution)" The repertoire of the Youth Theater of Uzbekistan, the Republican Theater of Young Spectators, Andijan Youth and Children's Theater named after Abbos Bakirov in 1991-2007 The dissertation is devoted to the analysis of performances for children. In this regard, it is difficult to say that this research work was prepared on the topic of youth. However, in the concluding part of the dissertation, the researcher focused on the issue of "Youth Theater" and a special theater for young people. raises the problem that it is gradually changing its direction and becoming an academic theater[3]. For example, the Young Guard Theater, which was opened specifically for young people in 1968, changed its direction in the 1980s after the resignation of its director E. Masafaev. As a solution to the problem, it is suggested that "theaters with the status of youth theaters should be equal, and all of them should be a place of sophistication and enlightenment that will serve young audiences, teenagers and young people alike."

From the above research, it can be concluded that in the modern Uzbek theater, the topic of youth as a whole, a special study is relevant. In the Uzbek theater of the twentieth century and the period of independence, the approaches to the theme of youth, their levels of interpretation varied. This promotes a comprehensive study of the interpretation of the theme of youth in the repertoire of modern Uzbek theater on the basis of its historical and theoretical features.

The birth, formation and development of the new Uzbek theatrical art took place over a century under three different social systems - the oppression of Russian tsarism, Soviet rule and, finally, independence. This in itself led to the development of theatrical art under the influence of various ideological currents - Jadidism, Bolshevism and the ideology of national independence.

In the history of Uzbek theater, the theme of youth has played an important role in the development of the theater and its growth in the aesthetic taste, culture, consciousness and upbringing of the people, especially the young audience[4].

In the last century, Uzbek theaters have successfully staged many performances on the theme of youth. At the Uzbek National Academic Drama Theater, the process of mastering the theme has begun with the play "Padarkush" ("The condition of an uneducated child"). He continued with such works as "Wedding", "Unhappy Groom", "Advocacy is easy", "Poisonous life", "Servant with the rich", "Halima", "Lion", "Mushtumzor". Later, the topics were "Chimildiq", "Qalliq uyin", "Dadajon demayman", "Bir kanotlilar", "Tortadurman jabrini", "Senga bir gap aytaman" found its place in the repertoire. The Uzbek State Musical Drama Theater named after Muqimi has repeatedly addressed the theme of youth: "Gulsara", "Tahir and Zuhra", "Nurkhan", "Fatima and Zuhra", "Jaydari kelin", "Olifita", "Tashkent's beautiful queen" issues related to youth in the performances resonated in musical tones. The Uzbek State Drama Theater began its

work as the first state theater to represent the life of young people - the Young Guard Theater. "Victims of Love", "Thirty Years Old", "Secrets of the Paranj", "Diydor", "My Eighteen Years", "Spring Will Not Return", "Father's Daughter", "Youthlessness". In particular, the work "The first kiss" caused a great stir.

The focus on youth in the Uzbek theater of the new era is connected with the launch of the 2005 Debut Festival. Aimed at discovering young talents (theater directors, playwrights, actors, artists), providing them with material and spiritual support, as well as providing theaters with young staff, the festival has a wide range of contemporary themes, especially youth. Raising moral issues related to young people, such as "Poisonous drops" staged by director B. Pozilov on the stage of the Republican Theater of Young Spectators, "Tortadurman jabrini" (Dilbar and Tilab Mahmudovs) of the Uzbek National Academic Drama Theater, "They are lost" (T. Muhiddin) of the Republican Satire Theater outgoing performances were staged.

In order to fulfill the tasks set by the head of government at the opening of the new building of the Bukhara Musical Drama Theater to create the image of a "modern hero" the 2011 festival "We sing you contemporary" began its work. This is a new step in increasing the number and quality of youth-themed performances

The fact that the performances on the theme of youth presented at the festival have been successfully staged in the theaters of the republic for many years shows the artistic and ideological significance of the plays. Performances can be divided into two types in terms of the theme and idea put forward, the problem raised:

1. Spiritual and moral problems among young people (including parental upbringing caused by internal influences, family conditions, feelings and aspirations of adolescents and young people, performances that embody the direct and indirect impact of ethnic customs on young people;
2. Performances that reflect the problems of young people that have arisen as a result of socio-political problems (on the basis of external influences, ie the situation of Uzbek youth in the throes of globalization).

A separate review of the works on dramaturgy and directing, the correct identification of the current situation and the problem, will help to develop clear conclusions and proposals on them.

These two types have generalizing and specific features, and the analysis clearly shows the problem in relation to the general to the specific.

The common feature of the works is that they are dominated by the drama genre. In terms of themes, they are complementary. In particular, "Disco" (Sh. Rizaev), "Hedgehogs without thorns" (Sh. Boshbekov), "Poisonous drops" (T. Malik), "Children of the state" (R. Muhammadjanov), "Autumn letters" (O. Umarbekov), "Formula of Life" (A. Yuldashev), "The Beware of People", "Courage" (U. Azim), while the educational shortcomings of young people due to the carelessness and negligence of their parents have found their artistic solution. In such performances as "Aydin" (R. Muhammadjanov), "Gumroh" (S. Hamroev), "Toda" (N. Kobilov,

B.Lutfullaev) the problems related to youth in the process of globalization, such as human trafficking, drug addiction, crime are almost the same. found its solution in an artistic form. The fact that the moral and educational function of the theater plays a key role in them proves the power of the theater's influence on the young audience.

However, from the point of view of the impact of the most artistically recognized performances on the youth theme listed above on the audience, there are aspects that require attention. In general, given that the images in a play may be involuntarily imitated by a young audience, the psychological states in the young audience's mind must be taken into account before staging. Discipline does not always work. After all, the spiritual needs of modern youth are not fully satisfied by didactic works, but it is likely to distance them from the theater. Most of the works dedicated to the lives of young people, especially those that raise issues of global significance, are of a didactic nature.

For example, in the play "Poison Drops" based on Tahir Malik's "Goodbye Childhood", the spirit of a teacher who died as a result of youth bullying is visible to children, admonishing them and guiding them to the right path. Young people understand their mistakes and will be punished according to their actions. It is known that the image of the soul in world drama played an important role in the sharpening and development of events. Shakespeare in particular made extensive use of this path. In Hamlet, for example, all the events were connected with the appearance of the soul to Hamlet and the evidence he told him. However, the conditions in the play are placed so correctly that they motivate the protagonist to move forward towards truth and justice.

That's why the "trap" scene served. The necessary action and character traits in Tahir Malik's "Goodbye Childhood" are not included in the staging of "Poison Drops". As a result, the work lost its artistic impact. This shortcoming can be found in the play "Autumn Letters" based on the works of Olmas Umarbekov "Letters to my daughter" and "The first day of autumn." The soul of the author is introduced in the reworked pesa. Olmas Umarbekov's advice to his daughter in "Letters to My Daughter" is addressed to the audience as if the author's comments on the upbringing of young people.

But did this "news" justify itself? The role of the immortal Umarbekov in the work, does he have a clear mission? In a dramatic play, each character and his actions must be positioned in such a way that the removal of a single character or a related event has a direct effect on the subject and idea of the work. The removal of the author's image in The Fall Letters has no effect on the chain of events.

Sh. Rizaev's poem "Disco" reflects the ideological struggle between the two worldviews, based on the views and debates of adults and young people. "While the media focuses on what makes young people think, what their goals are and what can hinder them from achieving this, it is important to show how today's youth are different from yesterday's peers." The protagonist, Oybek, wants to go to another region and open a disco club during the conversation. However, his father is against it. Oybek struggles to achieve his goal and gets his father's approval. However, the author's purpose in this regard is unclear. Young people could meet not in a disco,

but in a library, on the street, in the park, or even in a cafe. The protagonist could also aim to set up a library, a training course, or some other production facility, which would be much more useful not only for the disco but also for himself and others. Maybe the author meant that all the young people who go to the disco are not misbehaving? Based on the principles of vitality and honesty, the characteristics of the national mentality, the disco works very late, and the child of an educated Uzbek family, of course, does not go to such places, and parents who follow the rules of ethics do not allow teenagers to go to the disco. The play depicts the young hero's dream of opening a disco "to keep young people in the village."

The director (O. Salimov) tried to use new art forms in staging the disco. In order to make the poem short, succinct, and staged, the necessary events related to the young protagonist are highlighted. As a result, the author's idea of the work is the events and dialogues that serve to reveal the character of the characters (opinions of other characters about Oybek, superstitions in modern life, ideas about traditions, the conflict of European and Eastern views between parents and youth, the shortcomings of the market economy, reading a book, a drastic change in the generational exchange of ideas about the modern hero). Such dramatic and directing shortcomings can be found in U.Azim's poem "Kurshov".

In the play, the author tries to justify each action from a logical point of view, as a result of which the process of events slows down a bit. However, it takes the collaboration of a director and a playwright to skillfully bring it to the stage. Not every author can write a poem based on the rules of the scene. He imagines himself. The director, on the other hand, will have to be able to choose the right words and scenes and make it sound logical on stage.

The director of the play (M.Rajabov) dropped some scenes and characters in the play. Due to the director's abbreviations and additions, U.Azim's drama "Kurshov" will become a publicist play about traditional patriotism "Matonat". According to the director's approach, all the emphasis is placed on the protagonist Ravshan, the most necessary events and actions related to the secondary hero - an ordinary soldier Karim are removed, and the plot events that reveal Ravshan's heroism are shortened. The same is true of the realities of the other side of the conflict - the terrorists. As a result, no character is fully revealed. After all, "Any break in the chain of dramatic action can not but negatively affect the direction of the flow of events, the activities of the protagonists. Because each chain is inextricably linked with the components of the plot.

While the figurative-expressive analysis of works on the theme of modern youth, in recent directing approaches, the main focus is on external artistic forms, and the problem is that internal artistic criteria remain in the background. "Aydin" (R.Muhammadjanov), "Beware people" (U.Azim) (directed by V.Umarov); In performances such as "Gumroh", this issue is clearly visible. In their directing and acting work, the decoration, external effects, plastic actions, excessive pathos hindered the discovery of the inner character of the characters, weakened the idea, lost the integrity, completeness, perfect image, lost the natural atmosphere.

The lack of dramatic spirit in the works of the drama genre is due to the fact that the authors do not "live" the idea and theme, the movement of the characters, but try to subdue each reality and express their attitude to the plot. The "classical method" that Shakespeare used in his time is

being forgotten in modern Uzbek drama. What made Shakespeare a genius was when he was able to turn social problems into universal, living issues. The opposite is observed in modern Uzbek theater. In other words, universal ideas are becoming everyday, outdated, works of the same stamp. All of the works listed above face this problem. From the analysis, it is clear that the common problems of performances that raise youth issues are equally relevant to the playwright, director and actor.

After all, "a theater built on the process of action is a theater of living, experience." Today's audience is well aware of what is happening around them. He sees the changes, news, problems and threats in the world and in our country every day, every hour, through social networks. Young people in particular are among those details. So we can't treat them like young children. In addition to these events, dramaturgy must be an artistic expression of aspects of life that others ignore. This requires the playwright, along with his writing skills, to have a better understanding of the philosophy of life than others and to be able to express it in a true artistic way. After all, our modern young heroes "... move less, think less, our perception of his worldview is very limited: he does not live as a big life person in the eyes of the auditorium."

So, in general, today in the creation of performances related to young people, it is important to create a perfect artistic work, a stage atmosphere based on ideas and themes, the effective use of acting skills, to focus on issues of artistic integrity. The predominance of subjectivity in directing and acting is evident in the performances. The events are very vivid, the purpose and the idea are reflected in a simple way, the essence of the issue, the reasons why young people choose this path remain unclear. In particular, "The director is a person responsible for the ideological, artistic and aesthetic aspects of the play, the relevance, modernity and ideology of the subject. Therefore, a creative director is required to have a well-developed artistic taste, a well-formed worldview, a familiarity with domestic and foreign policy, and a deep understanding of life. "

Directors are divided into three categories: a director who can convey the author's idea by understanding the purpose and function of the work, a director who promotes an idea in the work that the author may not have imagined, and a director who stage the play at his own level without understanding the poem. . In order for a director not to remain at the level of an amateur and craftsman like an actor, it is necessary to have the ability to choose a work, to cooperate with the playwright in staging a play.

It would be useful to take into account the following suggestions when bringing issues related to youth to the stage:

- to pay attention to the correct choice of external and internal artistic form in dramaturgy, to stage works with a complex plot, sharp twists and conflicts;
- adherence to the principles of vitality and authenticity in dramatic works;
- Development of a director's plan for the staging of the play;
- Bringing up the most sensitive issues of social life, such as expanding the scope of the problem (for example, unemployment, the fate of young people raised in orphanages, alcoholism, drug trafficking, hooliganism, crime, important steps in the realization of youth aspirations);
- to set up the process of the actor's work on himself;
- creation of aesthetic ideals for young people on the basis of universal values and views;



- Cooperation of the director with the author in staging the work.

Taking into account the above suggestions, ensuring that performances on the theme of youth are viewed in a youth audience can help them find solutions to some of the problems and issues they face.

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## THE NOTION OF FEMINISM IN THE WORKS OF CHARLOTTE BRONTE

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### ABSTRACT

*It aims at casting light on Charlotte Bronte as one of the most prominent female novelist in the nineteenth century. It also traces Charlotte Bronte as a subjective novelist is concerned to convey a subjective impression. The study provides a historical and critical background of her age in which she matured and originated the main literary tendencies which affected and swayed her and decided the expression and manner of her writings. The study concludes, Charlotte Bronte sets up moral, spiritual and social problems such as the position of women, but evades a solution to the complications by dropping the problem and substituting the conventional solution of love and marriage.*

**KEYWORDS:** *Prominent, Revolutionary, Substituting, Originated*

### INTRODUCTION

Feminism also emerged as an important aspect of this age. A number of women including Tennyson's wife started writing for the rights of women in the male-dominated society. However, their battle was not successful as society preferred male-written works and women and their works were disregarded male-written works and women and their works were disregarded by society. As a result, many female writers published their works with male pseudonym in order to achieve fame. Charlotte Bronte was one of the founders of feminism in the Victorian Age. She was the revolutionary icon of the age. She broke a number of conventions that prevailed before and during her time.

She wrote eponymous novels (the title of which is the name of the protagonist) like Jane Eyre. Being well aware of the status of women in the society she published her first novel assuming male pseudonym "Currer Bell".

**MAIN PART**

Charlotte Bronte is perhaps one of the most prominent female novelist in the nineteenth century. But she is in some ways even more typical. Of course, she is not so great a novelist as Dickens; apart from anything else she had a narrower range. Her range is confined to the inner life, the private passion. Indeed, Charlotte has stood the test of time and her works are still fascinating enough to attract readers and scholars of our time despite of her narrower range. Her imagination is stimulated to create by certain aspects of man's inner life as that of Dickens or Thackeray by certain aspects of his external life. As Thackeray was the first English writer to make the novel the vehicle of a conscious criticism of life, so she is the first to make it the vehicle of personal revelation. She is the first subjective novelist, the ancestor of Proust and Mr. James Joyce and all the rest of the historians of the private consciousness. And like them her range is limited to those aspect of experience which stimulate to significance and activity the private consciousness of their various heroes and heroines.

**According to Gaskell:**

*The life of Charlotte Bronte is very substance of her novels; three times she summarized what she had imagined, seen or felt. In Jane Eyre she depicted her imaginative life; in Villette, her true moral life; in Shirley, coming out of herself a little- though very little in fact- and standing as it were at the window of her soul, she depicted the corner of Yorkshire where she lived and what little she had seen of human society.[1]*

Each of her books has therefore a very marked character in the first, Jane Eyre, Villette, the best parts of Shirley, are not exercises of the mind, but cries of the heart; not a deliberate self-diagnosis, but an involuntary self-revelation. Fundamentally, her principal characters are all the same person; and that is Charlotte Bronte. Her range is confined, not only to a direct expression of an individuals' emotions and impression, but to a direct expression of Charlotte Bronte's emotions and impressions. In this, her final limitations, we come indeed to the distinguishing fact of her character as a novelist. The world she creates is the world of her own inner life; she is her own subject. This does not mean, of course, that she never writes about anything about her own character. She is a story-teller, and a story shows character in action, character, that is, as it appears in contact with the world of external event and personality. Only the relation of Charlotte Bronte's imagination to this world is different from that of most novelist.. In this context Gaskell points out that;

*Charlotte Bronte has struck only one cord of the human heart, the most powerful it is true. In Shirley, the imagination alone speaks and when imagination is sole master one can be sure that it will run to strange, fiery passions, difficult of interpretations.[1]*

Theirs, inspired as it is by some aspect of human life outside their own, works, as it were objectively. Charlotte Bronte as a subjective novelist is concerned to convey a subjective impression. Her picture of the external world is a picture of her own reaction to the external world. But she did not write novels in order to illustrate a particular moral precept. such an obvious procedure is deliberately rejected at the end of Shirley:

*I think I now see then judicious reader putting on his spectacles to look for the moral. It would be an insult to his sagacity to offer direction. I only say God speed him in the quest.*

Every page of Charlotte Bronte's novels burns and breathes with vitality. Out of her improbabilities and her absurdities, she constructed an original vision of life; from the scattered, distorted fragments of experience which managed to penetrate her huge self-absorption, she created a world. The present study aims at exploring the portrayal of women in Charlotte Bronte's Shirley. It also tries to give a historical and critical background of her age in which she matured and originated the main literary tendencies which affected and swayed her and decided the expression and manner of her writings which are necessary at the outset.

Charlotte Bronte admits the restrictions imposed upon women writers yet denies her suffering from them, or at least their hindering influence on her. At the same time, she denies the masculine gender of the pen name with which she signed her works and insists on its general neutrality. She can debate the gender of the name, but fails to offer an explanation why she, if she is such a daring woman, dares not write under her original name. Charlotte Bronte was more introvert by her nature and in her writing because of the partly voluntary seclusion of her family and also of the romantic era, which affected the cultural atmosphere of the time by emphasizing the exploration of nature and emotion.

Charlotte was much more in the world than her other contemporary writers, and her increasing contact with it on a variety of planets is revealed in her interest such as charity schools and their abuses, and the position of governess and teachers, is the work still of an individual not aware of herself or of these issues as part of a wider society. Hence it is the individual and isolated passion of Jane that is central; her anger at injustice, her temptation to forget the world and religion for individual happiness, her seeking for a fit and independent mode of existence. The Universe of Jane Eyre approaches that of Wuthering Height in the exploring of an individual's reaction to its own moral ambience and emotional universe. But this was not solely Charlotte's sphere for she was not the isolated spirit family was. The position of women, the fear of being an old maid, the struggle for independence on the world's terms, not by retreat to the spiritual, make Shirley and Villette novels based more firmly in a recognized society. They deal with problems of the individual seen more and more in relation to society, while still revealing an individual vision. Charlotte Bronte's writing is a powerful agent in her effect. The scenes in her novels, indeed, are the peak of Charlotte Bronte's achievements; for in them, as in no others, her imagination finds the perfect fields for its expression. Her pictures of love and character, though they reveal her powers, and it offers equal scope to her intensity and more on her she cannot satisfy. No power of psychological penetration or accurate observation is needed to communicate the impression of the senses in an abnormal nervous state; while to be dreamlike and unrestrained is characteristic of such impressions. For once Charlotte Bronte is true not only to imagination, but to fact.

Charlotte Bronte was a genius. She had, that is, that creative imagination which is the distinguishing quality of the artist, in the very highest intensity. In spite of the frustration that the women probably felt as surplus women, Charlotte had very realistic attitudes towards marriage for herself and she decided that mere respect without affection was not enough, although marriage would have made them independent from the charity of others. In Charlotte's work she relied on the same principle and married their heroines to men they loved but also sure that happy couples were well off. However, Charlotte, in later life gave up her principle by marrying Mr. Nicholls, a man she respected but was not sure if she would love. Naturally Charlotte was too much of a Victorian and too much of a Puritan to do more than hint at its animal side. But her hints are quite enough to prevent the emotion seeming disembodied and unreal. Even Caroline

Helstone, that blameless dummy, comes to life when alone in her room she abandons herself to her yearning for Robert Moore. Here is a frustrated love. And writing as she does of the emotion of her own unsatisfied heart, Charlotte Bronte is most characteristically concerned to describe a frustrated love: Jane Eyre's love for Rochester, so hopelessly, as it would seem, out of her reach; Lucy Snowe's for Dr. John, absorbed already in Ginevra Fanshawe. But the fact that it is frustrated does not make the love of Charlotte Bronte's heroines less intense. Indeed it makes it more of an obsession. Moreover, Charlotte Bronte can describe happy love equally well, if her story gives her a chance, As a matter of fact love is the occasion of her few successful flights of humor. Jane Eyre teasing Rochseter, Lucy Snowe sparring with Paul Emanuel, in these she achieves real comedy. It is a little stiff shy; it is also enchantingly demure and delicate; a sort of Puritan comedy of the sexes, unlike anything else in English literature. In addition to love' gaieties she can describe love's ecstasy.

Like most of the other novelist of her school, Charlotte Bronte is a poet; and her poetry is the pure lyrical poetry of passion. It connects itself with her sensibility to landscape. The special emotion of her love-scenes swells to assimilate to itself the emotional quality of the scenery amid which they take place. In language of stilted compliment Mr. Rochester converse with Jae Eyre in his garden, and then he says "listen to the nightingales,". And the four simple words, like the note of a violin, quicken the scene to a lyric rhapsody, in which the scent of the jasmine flowers, the chestnut in the distant sky, join to convey and symbolize the passion that animate the two beings who move among them. In this sort of effect she has no predecessor in English, and no successors till Meredith.

The plot is a complicate one, since it consists of a number of parallel stories. Although the novel takes its title from one of the characters, that character cannot be said to be the sole protagonist. The novel begins with a not very flattering picture of the curates of the area, and an attack on the new machinery for the mill. It ends in the Victorian welter of marriages and reconciliations. Caroline Helstone's parents separated soon after her birth and she lives with her uncle, the Reverend Helstone, rector of Briar -field. She is in love with Robert Moore, who is of Flemish and English extraction, and whose father was distantly related to Caroline's mother. Robert's whole concern in life is the success of Hollow's –mill and he is determined to install machinery there to ensure this success. Early in the story an argument between Helstone and Moore results in Caroline being forbidden to visit Hollow's cottage, though even before this she has come to doubt Robert's love for her. Miss Shirley Keeledar, heiress, landowner in the district and landlord of the mill, arrive with her governess, Mrs. Pryor, to stay for a while at her house, Fieldhead, since she has come of age. A strong friendship springs up between the two girls. Together they witness the attempt by the workers on Hollow's mill, together they take walks, together they take part in the annual Sunday-school walk and tea-drinking. Caroline falls into a decline, and is nursed to health by Mrs. Pryor, who turns out to be her long-lost mother. Shirley is visited by her uncle, Mr. Sympton, his family and his son' tutor. Moore who wants to marry her for her fortune, Shirley at length confess to her love for the tutor, Louis Moore, brother of Robert, whom she has loved since she lived with the Sympton family as a girl . Robert Moore, shot by a leader of the workman, is nursed to health by his friends, The Yorkers, repents his general harshness, and marries Caroline.

Charlotte Bronte ends the story with the following;

*The story is told. I think I now see the judicious reader putting on his spectacles to look for the moral. It would be an insult to his sagacity to offer directions. I only say, God speed him in the quest.*

Despite the obvious irony of the above-mentioned passage- in its reference to a male reader in particular, really, there is a 'moral' in Charlotte Bronte's Shirley, especially for the woman reader. The 'moral' that comes to the fore in my reading of Shirley would seem to be the contemporary society depicted in the novel does not yet allow women to be fully liberated and the social equals of men. Shirley is corrected by her 'mirror image', and shown the proper behavioral patterns for young women in the early nineteenth century.

Through the novel, Charlotte Bronte shows how the patterns of women's lives (and those of the workers) are shaped by social attitudes and forces over which they have no control. That the woman question is one of the main themes of the novel is recognized by both readers and the critics of the time. Although a concern with the position of women in society and the kinds of lives they lead is implicit in her other novel, it is only in Shirley that it becomes a predominant theme centering on the lives of the two heroines Caroline and Shirley. On this context we can quote Bellringer:

*In Shirley, Charlotte Bronte is also concerned with the opposition between the more general behavior of both protagonists, and she links this with the contrast between the opposite traits of passionate feeling and excitement, of individual freedom and fulfillment, and those of self-transcending or self-denying duty and moral responsibility. Rather than presenting this kind of divided approach in one character, as she does in Jane Eyre, she splits the behavior into two parts, assigning that the timid and dutiful young girl to Caroline, and that of the tougher and more independent women to Shirley.[2]*

Caroline's lack of character, her long, brooding inactivity in the novel, her seriousness, are as much the result of the weariness of life without purpose of an unmarried woman as of the sorrowing and decline of the girl crossed in love. Shirley is, of course, shown to have much to occupy her, but even so, a comparison of the occupations. Shirley's pursuits are quite as trivial in some ways as those of Caroline. Fundamentally, it is Shirley's nature which enables her to find such restrictions of activity not irksome.

In the novel also, Shirley is portrayed as an intelligent woman, observes men's treatment of women and recognizes the perception that underlines it. When Robert Moore does not inform her of the attack on the mill, even though he owns it, she marks that men tell women nothing and keep them completely in the dark about subjects which involve danger. She comes to the conclusion that they perceive women to have as much capacity for thought as children, and clearly that she thinks this wrong: In any case, Charlotte Bronte offers no solution to the feminist problem in this novel. Shirley, the landowner, farmer, mill owner and heiress, abdicates wealth, position and power in favor of her husband; Caroline marries Robert Moore and the problems of unmarried life are removed from her. But a third attitude to the feminine dilemma is suggested by the young girl, Rose Yorke, in her determination to use the talents God gave her and bury them in a life of domesticity.



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## CONCLUSION

Love, indeed, is the central theme of Charlotte Bronte's novels: for it was inevitably the main preoccupation of so passionate a temperament. Her power to describe it is of course, conditioned by the nature of her genius. She cannot dissect the workings of passion, nor can she illuminate its effect on character. What she can do is to convey its actual present throb. And this she does as it had never been done before in English fiction. Finding love and getting married seem to be two of the most important themes in Charlotte Bronte's *Shirley*. The novel is filled with unhappy marriages- marriages in which it is the woman who comes off worst- and this is closely related to the feminine theme, both involving a man's view of woman.

*Shirley* gives her opinion as to how one may judge the right mate, by observing his behavior with others, with those weaker and more helpless than himself, by observing his attitude to women. But this a minority view in face of all the opinions raised against marriage in the novel.

Set against the men are the women, seen as old maids, young girls with their sights set on marriage, housewives, either married or single. Of these, the latter are in some ways most content- Mrs. Yorke and Hortense Moore have their household duties to occupy them. Miss Mann and Miss Ainley find their satisfaction in good works of a charitable kind, but under the dominance of male direction Young girls lead idle existences hoping to marry eventually.

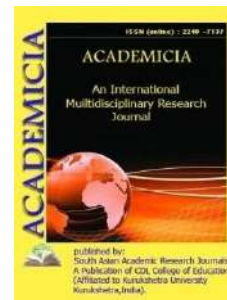
*Shirley* is an attempt on a woman's part to straddle the two groupings. She is a woman who, through birth and position, occupies many of the posts normally filled by men; she refers to herself as Captain Keeldar. But it is noticeable that she is a figure-head in her position as landowner. She has more authority, more intimacy with business concerns than Caroline, but at crucial moments in political events she must retain the passive role of a woman. *Shirley* is intended to have greater insight into what is going on than everyone else, but since she does not reveal her insights until a situation has been revealed to her, she is unconvincing. The attempt to portray the Charlotte- heroine in fortunate circumstances as well as the attempt to analyze the situation of the unmarried woman is unsuccessful because both, by their nature, are dogged by lack of appropriate action.

Finally, Charlotte Bronte's picture of love and marriage reveal her power. But solitary obsession, while it offers equal scope to her intensity and more to her imaginative strangeness, makes no demands on her she cannot satisfy. No power of psychological penetration or accurate observation is needed to communicate the impressions of the senses in an abnormal nervous state; while to be dreamlike and unrestrained is characteristic of such impressions.[3]

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## THERAPEUTIC AND PREVENTIVE MEASURES OF DENTAL DISEASES IN CHILDREN WITH DIABETES

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### ABSTRACT

*The frequency of diabetes mellitus, endocrine disorders, and thyroid disease in children in the Bukhara endocrinological clinic in the children's department in the period 2017-2019 was studied. The Healthy Tooth program was developed according to the following parameters: anamnesis of life, periodontal condition, condition of the oral mucosa, intensity of caries spread, occlusion state, oral hygiene state, and tongue condition.*

**KEYWORDS:** *Endocrine Disorders, Diabetes Mellitus, Disability, Caries, Periodontium, Occlusion, Tooth, Prevention.*

### INTRODUCTION

Prevention of dental diseases is a national task and is carried out as an integral part of a comprehensive program of improving the population. Each dentist should carry out primary prevention in the form of planned activities. Initial measures for the prevention of dental diseases are based on modern ideas about the etiology and causes of this disease.

Common methods of prevention are systemic and local use of fluorides, restriction of sugar in the diet and systematic brushing of teeth with fluoride-containing toothpastes from an early childhood.

Common diseases of the child's body as diseases of the central nervous system, diabetes mellitus and other endocrinological disorders can affect the dental tissue, disrupting the function of the salivary glands, changing the composition of body fluids. Studies of the biochemical composition and physiological characteristics of tooth enamel have shown that some of the properties go beyond the parameters characteristic of biological tissues. The tooth enamel is permeable in the centripetal direction not only for substances that are not part of the tooth, but also for some substances that are not components of saliva.

The high prevalence of childhood disability and its steady growth create great difficulties in the medical care of this contingent. The practical work of the dentist with children with disabilities is associated with the expressed difficulties of conducting medical and preventive procedures. (N.V. Shovkun, A.V. Fomina).

Today, the issue of prevention of various diseases in children with disabilities is especially relevant throughout the world.

Currently, there is practically no information in the literature about large-scale programs of dental prophylaxis for children with disabilities.

Dental morbidity of children, including persons with disabilities, remains one of the most acute and urgent problems in the CIS countries.

V.V. Korchagina, having examined children with defects of the central nervous system and musculoskeletal system, revealed a high prevalence of dental diseases: multiple malformations of the hard tissues of the teeth, various dentoalveolar anomalies, periodontal inflammation due to poor oral hygiene. The author points out the difficulties of diagnosis and treatment of dental pathology in this category of patients.

E.V. Mikhailova evaluated the organization of dental care for children with disabilities 2-18 years old. The prevalence of caries in preschool children was 87.5%, with an average intensity according to the KP-3.2 index; in school-age children 74.4%; maxillofacial anomalies in schoolchildren were diagnosed in 80.1% of cases, the prevalence of periodontal tissue diseases was 100%; with an oral hygiene index of 2.3. The quality of dental care, estimated by the index "level of dental care", was 9% for preschool children, 21% for schoolchildren, which corresponded to a poor and insufficient level of dental care.

A.K. Iordanishvili, L.N. Soldatova, evaluating the dental status of children with diabetes, evaluated somatic pathology for the state of hard tissues of teeth, periodontal and the level of individual hygiene. Children were watched for a year. It has been established that children with type I diabetes mellitus are more likely than healthy children to suffer from periodontal inflammatory pathology, and their dental caries is more intense than in children without somatic diseases.

Diabetes mellitus is one of the progressive diseases worldwide leading to a large number of complications in various systems of the body, including dentofacial. The data of the WHO expert committee indicates an increase in the number of patients with diabetes mellitus worldwide, by 5-10% annually, and in the Russian Federation over the past 5 years there has been an increase in incidence from 10.4 to 13.4 cases per 100,000 children (N.V. Belyaev, T.V. Skochilova, 2006).

Childhood diabetes is a serious problem. In this regard, this disease is among the first priority national health programs of all countries of the world. (I.I.Dedov, 2007).

Periodontal treatment in childhood is one of the most important and complex problems of dentistry. Its relevance is characterized by a high frequency of occurrence of periodontal inflammatory diseases, the occurrence of chronic infections in the body, the incomplete development of the immune system in childhood, and the difficulty in stabilizing the mental state in abdominal pain. (1).

In diabetes mellitus, changes in the oral mucosa occur. The epithelial layer becomes thinner, the size of cellular elements decreases, and elastic fibers thicken. With this disease, salivation is disturbed, the quantity and quality are reduced, which prevents the development of pathology of the mucous membrane.

**Purpose of work:** To study the features of the dental status in children with diabetes mellitus and improve the condition of periodontal tissues. Improving the effectiveness of primary prevention of major dental diseases in children with diabetes who are under clinical supervision in an endocrinological clinic in Bukhara.

**Tasks:** To determine the prevalence and intensity of dental caries, dentofacial anomalies, the prevalence of periodontal tissue diseases. To develop "Healthy Tooth" lessons for children and adolescents with varying degrees of endocrinological diseases and introduce them into the educational process.

**Materials and methods:** Clinical studies were conducted in the regional endocrinological clinic, in the children's department. Observations were conducted for children aged 6 to 18 years. In 2017, the number of general patients was 420, of which 121, disabled children received social benefits from the state.

During the observation among endocrinological diseases, the total number of children with diabetes is 350, of which 21 were newly diagnosed.

In 2018, the number of general patients was 470, of which 173 children received social benefits. Among all endocrinological diseases, diabetes mellitus-368 gives a high rate, of which 23 were first detected.

In 2019 (over 8 months), the number of patients was 296, of which 88 were children receiving social benefits.

The analysis showed that diabetes is often found among children in hospital care.

A comprehensive study of the oral cavity included the identification of complaints of patients, history taking, visual examination, an index assessment of the state of hard tissues of teeth and periodontal tissues.

In the course of the study, we developed the Healthy Tooth program, which included the following parameters:

- Anamnesis of life;
- Bleeding gums - a periodontal condition;
- The condition of the oral mucosa;
- The prevalence of caries;
- bite condition;
- The state of oral hygiene;
- State of the language.

**The number of patients under clinical supervision in the regional endocrinological clinic in the children's department**

№	Disease	Are common	Girls
1	Endocrine disorders	5029	2772
2	Thyroid disease	3000	1892
3	Diffuse goiter	2822	1764
4	Congenital hypothyroidism	14	10
5	Nodular goiter	62	47
6	Thyrotoxicosis	23	22
7	Diabetes	159	111
8	Pituitary Disease	76	28
9	Pituitary hypofunction	76	28
10	Itsenko-Cushing	1	-
11	Reproductive system	291	46
12	Turner Syndrome	11	11

**The number of patients with newly diagnosed diseases in the regional endocrinological clinic in the children's department**

Disease	2017	2018	2019 (до сентября)
Diabetes	21	23	20
Diabetes insipidus	22	18	15
Hypothyroidism	6	2	1
Diffuse goiter	4	2	3
Syndrome Shershevsky Turner	2	4	1
Nodular goiter	4	3	3
Congenital hypothyroidism	11	12	2
Hypovizar dwarfism	8	9	5
Itsenko-Cushing	1	1	1
Obesity	1	1	1

**The number of patients in the regional endocrinological clinic in the children's department for the period 2017-2019**

№	Disease	
1	Endocrine disorders	5036
2	Thyroid disease	4708
3	Endemic goiter	4703
4	Nodular goiter	4
5	Reproductive system	34
6	Cryptorchidism	25
7	Obesity	52

**Results and discussion:** Analyzing the history of the life and illness of children suffering from type I diabetes, we found that in 38% of cases they had a hereditary predisposition to this pathology, in 10% of cases it was provoked by a stressful situation, 11% of patients noted the first symptoms after transferred viral infection. 41% of the observed children and their parents did not associate the onset of the disease with any factor.

According to the parents, it was found that a change in the general condition of the initial period of the disease was noted in 89.2% of children, and only 10.8% of cases the patients did not present characteristic complaints, and the diagnosis was established by additional laboratory tests of blood serum.

88% of children were bothered by gum bleeding when brushing their teeth and eating. At the same time, these changes in periodontal tissues often appeared 1.5-2 years before diagnosis. There was gingival hyperemia, gum bleeding. When examining the appearance of the red border and lips of 57% of children, a change in the oral cavity was observed with type 1 diabetes mellitus, children did not always complain of hyposalivation. When examining the oral cavity, a decrease in the humidity of the oral mucosa was observed. According to the results of the CPU, we noted a high intensity of caries in children with this pathology.

The intensity of caries was determined using the indicator KPU + kpu according to Yu.A. Fedorov, V.V.

During the study, the condition of the tongue of patients with type I diabetes mellitus, we observed a slight pathology of the tongue - slightly overlaid, and the papilla of the tongue tended to change color and size.

We conducted a lesson "Healthy tooth" I once a week in an endocrinology clinic for children with diabetes. Under this program, we have developed the following parameters for the prevention of dental diseases:

- Oral hygiene;
- Teeth cleaning;
- Selection of brushes and pastes;
- Selection of hygiene products;
- Means for rinsing;
- Proper nutrition.

In the course of preventive measures, we closely communicated with the parents of children with diabetes, who were shown an individual approach when choosing hygiene products, the choice of brushes, pastes, therapeutic rinses and gels. Equally important is the role of good nutrition in the prevention of oral diseases. Parents were advised to visit the dentist every three months, diabetes control, compliance with simple hygiene rules, in order to avoid the occurrence of dangerous diseases of the oral cavity caused by the underlying disease of diabetes.

As a result of a serious condition with this pathology, an unsatisfactory hygienic condition of the oral cavity was observed, which prevents full-fledged individual oral hygiene. The low level of oral hygiene has contributed to the development of inflammatory diseases of periodontal tissues such as catarrhal and hypertrophic gingivitis and periodontitis.

**CONCLUSION:** It was found that diabetes in children among endocrinological diseases is more common. The study of the dental status during the examination in children with diabetes mellitus showed that carrying out preventive work with parents to increase the level of knowledge about the care of the teeth and oral cavity of their children gives a significant effect and optimal dental health outcome.

When examining children, the dentist should pay attention to the presence of changes in the oral mucosa and the red border of the lips. When informing parents about the heredity of diabetes, the dentist must collect a thorough history of the child.

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## THE EVOLUTION OF MUSICAL PEDAGOGY OF THE KARAKALPAK PEOPLE OF THE HISTORIAN - THEORETICAL ASPECTS

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### ABSTRACT

*This article is devoted to the problem of studying the evolution of musical pedagogy of the Karakalpak people of the historian - theoretical aspects. The art of human development is measured in a number of periods. And the heyday of ancient civilization refers to ancient Egypt, ancient Rome, ancient China, ancient India, ancient Babylon, ancient Khorezm. Monuments, cities, temples, and material culture as a whole have been preserved from these civilizations. This civilization has a beginning and an end. But there is another civilization that has come down to our days from the depths of centuries. This is a Karakalpak narrative art. This culture of Karakalpaks was highly developed precisely in the Middle Ages, the so-called time of the existence of the Golden Horde Empire. Such outstanding storytellers among Kazakhs, Karakalpaks entered the arena of the 12-14th century. They saved SapyorZhyrau, ShalkizZhyrau, DospambetZhyrau, KaztuganZhyrau. In the narrative art of zhyrau, the main musical instrument was kobyz. The first musical instrument - kobyz, is of Turkic origin. And the first to call this instrument kobyz was the storyteller Korkytata, whose unique guttural voice, thundered throughout the entire universe, was carefully conveyed to our days by the Karakalpakzhyrau.*

**KEYWORDS:** Music, Pedagogy, Karakalpak Folk Music, History.

### INTRODUCTION

Music is a reflection of the soul of the people. It combines its history and traditions. It reflects the characteristics of the ethnos, its characteristic distinguishing features. In the musical culture of the Karakalpaks, the history of the people is most clearly reflected. All Karakalpak epics are imbued with the spirit of patriotism and pride in their country.

It should be noted that Karakalpak music is closely related to folklore. Numerous legends and folk epics were shifted to music. Karakalpak music and folklore carry features of both Turkic peoples and Iranian ones.

Among the Karakalpaks, the singers of Zhyrau and Bakhshi predominate. These are folk singers who, playing national musical instruments, perform their works in a special melodious manner. Bakhshi singers are also found among Khorezmians, which indicates the proximity of two cultures.

The throat singing of zhyrau became widespread at the end of the 18th century, when, in fact, the development of Karakalpak literature and musical art began. Such famous Karakalpak music poets Jien-zhyrau (1730-1784), Kunhodzhi (1799-1880) lived and worked during this period. They were outstanding representatives of the musical and literary art of the Karakalpaks. They told their works to the piercing trills of music, which gave the poems and epics a unique, tragic sound in their own way, since many of these poems narrated about the heavy share of Karakalpaks who were forced to leave their native lands.

The art of human development is measured in a number of periods. And the heyday of ancient civilizations refers to ancient Egypt, ancient Rome, ancient China, ancient India, ancient Babylon, ancient Khorezm. Monuments, cities, temples, and material culture as a whole have been preserved from these civilizations. This civilization has a beginning and an end. But there is another civilization that has come down to our days from the depths of centuries. This is a Karakalpak narrative art. This culture of Karakalpaks was highly developed precisely in the Middle Ages, the so-called during the existence of the Golden Horde Empire. Such outstanding storytellers among Kazakhs, Karakalpaks, Soppasly Sypyr Zhyrau, Shalkiz Zhyrau, Dospambet Zhyrau, Kaztugan Zhyrau entered the arena of the 12th and 14th centuries. In zhyrau narrative art, the main musical instrument was kobyz. The first musical instrument - kobyz, is of Turkic origin. And the first to call this instrument kobyz was the storyteller Korkytata, whose unique guttural voice, thundered throughout the entire universe, was carefully conveyed to our days by the Karakalpak zhyrau.

The time of the appearance of the kobyz, the fact that it is the most ancient musical instrument, is recognized by all. In the oldest written monument of Turkic peoples, the book "Kitabi Dedem Korkut" says that the creator and first performer on the kobyz Korkutata, taking his instrument in his hands, traveled to cities and villages, sang the thoughts and tea of ordinary people, was a seer, the most revered person. He was always among the people of the afflicted, giving them advice, singing the deeds of the batyrs, and bringing peace to the souls of people.

In the book of the XI century scientist Mahmoud Kashgari, "Devon Lugat-it Turk", kobyz is commented on as a musical instrument of Turkic tribes. Information about Kobyz and Zhyrau are found in the works of Rashid-ad-din, Lutfiy (XV century), Navoi (XV century), Khorezmiy (XV century). Kobyz is the first musical instrument invented by man; all other musical instruments appeared on its basis. The kobyz melodies symbolize the time when there were still few people on earth, when Cosmos ruled, when a person proclaimed with all his voice: "I am the master of the Universe!" This symbol was conveyed in a special hoarse, guttural voice. This voice itself is a monument, similar to the monument of ancient Rome. The words "kobyz" ("kob" - many kind words, a long-lasting event, "yz" - a melody) means the transmission through a melody of a story about amazing heroes, historical events. As the most ancient musical

instrument, kobyz influenced musical instruments of other nations. So, the storyteller of the poem “The Word about Igor's Regiment” Boyan (“bayanlaush” - storyteller) in our language also means storyteller. And the Ukrainian word “kobzar” came from the word “kobyz”. Kobyz influenced all peoples having a musical instrument like him. Almost all Turkic-speaking peoples had Kobyz and Zhyrau. Over time, other types of storytellers began to appear in the changing political eras, and other types of musical instruments began to take the place of kobyz. For example, in the 20th century among Kazakhs, zhyrshy-akyns came to the forefront, performing epics accompanied by dombra, and the kobzar remained only a fact of Ukrainian folk history. Only the Karakalpak people conveyed to our days the kobyz in that ancient form in which Korkutata made it, as well as that manner of performance.

Zhyrau among the Karakalpak people enjoys special respect and love. Talent zhyrau is regarded as a magical property, bestowing from above. It is known that in a dream all the famous zhirau were visited and blessed by a dervish sent by Allah. After that, they became true storytellers. Such information is carried out in the biographies of NurabylZhyrau, EsemuratZhyrau, KurbanbaiZhyrau, ErpolatZhyrau. As history testifies, in ancient and Middle Ages, among the Turkic-speaking peoples, the Zhyrau lived in the palaces of the Padishahs, were their confidants. They performed works that have a society - political, national significance.

Altaians, Shors, Khakasses, Dolgans, telewits, telenguts of storytellers are called “kaichi”. The word “kai” comes from the word “kyu” (“kayak”, “kai”) and means a musical instrument, and the word “kaichi” (“kyuchi”) - performers on it. Among Tatars, the storytellers were called “zhyrshy”, Bashkirs - “sesen”, Turks - “asyk”, “dastanchiasyk”, Turkmen - “bakhshi”, Uzbeks - “bakhshi”, “fats”, Yakuts - “olonkhosut”. Thus, all the Turkic-speaking peoples of the storytellers were designated by a word originating from the same root-kyu, zhyr-yr, sasen-sheshen, asyk, bakhshi, olonkho-deer, olonkhosut.

Among different peoples, storytellers played a different social role in society. Altaians, Yakuts, Shors, Dolgans, Teleuit, Telenguts, Gagauz narration was not the main profession. The Karakalpakzhyrau were professionals, they improved their art in the famous storytelling schools, were masters of their craft.

Karakalpakzhyrau performed accompanied by a kobyz heroic dastans about the exploits of the batyrs. The lyrical dastans were performed by bakhs accompanied by the dutar in a completely different manner. The art of zhirau and bakhs was done only by professionals. In the history of Karakalpak folklore, there are no facts when Zhyrau was simultaneously Bakhs or vice versa.

The study of Zhyrau's creativity is the study of amazing folk art, which has conveyed to our days through the centuries the civilization of ancient eras. The study of a living epic tradition, its styles of execution, the field of distribution has always been the focus of world folklore.

It should be noted that the epic storytellers were also agents of the politics of the kings. They were advisers to the kings, along with this, during the battles of hostilities they were ahead of the troops and inspired the soldiers with their poetic words, even led them. For example, SoppaslySypyrzhyrau was an adviser to the padishah, and Kaztuganzhyrau (XVI century) and Dospambetzhyrau (XV century) - generals. One of the European travelers to Central Asia, Marco Polo notes the public role of the narrator in the 13th century. According to him, the storyteller usually sat next to the padishah, poured him various drinks, he ate food along with the lord, was a free man in his actions. The meaning of the word “zhyrau” in some Turkic-speaking peoples is

conveyed as “bakhy, bakhshi, bakhshy”. In Karakalpaks, Bakhs is a performer of lyrical dastans accompanied by a dutar. Among Kazakhs and Kyrgyz, the word “Bakhs” is used to refer to healers, people who drive out evil spirits.

Indeed, one of the most ancient properties of bakhsa is the treatment of people with a word. V.V. Bartold notes that the word “bhisshu” in Sanskrit means a Buddhist monk, a clergyman. Among the Mongols, this word was called a doctor, surgeon, among the Kalmyks, Manchurians - high-ranking servants of religion, enumerators, among the Uighurs - also enumerators, among the Chagatai, Zolotoordynsky, Kazan, Crimean khans - secretaries of military records, among the Turkmens - ancestral elders. Therefore, “bakhsi” (“bakhshi”) is a Turkic-Mongolian word for military accountants, secretaries, courtiers and, along with this, singers, people who sing out evil spirits by song. The word “bakhshi” was used in the meaning of “narrator” among the Turkmens and Uzbeks, and “sorcerer” was used by the Kazakhs and Kyrgyz.

The origin of the word “zhyrau” has been sufficiently studied in science. Zhyrau is a performer of the epic, taking origin from the most ancient historical times. The art of storytelling was especially pronounced among the Turkic-speaking peoples.

The performing traditions of the epic narrator are fully preserved among the Altai, Yakut, Kazakh, Uzbek, Turkmen, Kyrgyz, Karakalpak, Azerbaijan, Turkish, Khakass peoples. An epic storyteller-talent who keeps in memory several epics, several thousand poetic lines and can reproduce them.

The basis of Zhirau’s life is made up of narrative schools, or the science of this art, its methodology and experience. A storytelling school is similar to a university where bachelors and masters are trained. The high intelligence of the performer largely depended on whose pupil he was.

N. Davkaraev [4], K. Aimbetov [1], T. Adambaev [2] classifies the Karakalpakzhyrau into two schools - the storytelling school of SoppaslySypyrzhyrau, or the XIV century - the period of development of storytelling art, as well as the storytelling school of Zhiyenzhyrau, or the eighteenth century is the heyday of storytelling. In the development of the narrative school of SoppaslySypyrzhyrau, Kaztuganzhyrau, Dospambetzhhyrau, Shalkiyizzhyrau played a large role. Their repertoire consisted of dastans to “Edige”, “YerShor”, “Alpamys”, “Maspatsha”, “YerSayyin”, “Sharyar”.

Thus, by the end of the 18th - beginning of the 19th centuries, due to well-known historical events, the storytellers are also divided into the “upper”, concentrated in the vicinity of Bukhara, Zarafshan, Samarkand (the storytellers Shankai, Kazakhbai, Halmurat), and the “lower” Karakalpaks — Aituar, Kabyl, Zhiyemurat, Nurabylla, Yesemurat, etc. The tales of the “upper” KarakalpaksShankai, Kazakhbai, Halmurat, Bekmurat were considered more powerful. The storytellers of the “lower” Karakalpaks often went to their colleagues to hone their performing skills. IN AND. Zhirmunsky classifies Uzbek bakhshis into the Nurata and Bulungur schools, notes FazylYuldash (1873 - 1953) and ErgashZhumanbulbul (1870 - 1938) as their largest representatives. The Karakalpakzhyrau more often came into contact with the zhyrau and bakhshi of the Bulungurschool. If in the Nurataschool more often performed romanicedastans, then in the Bulungur school - heroic dastans.

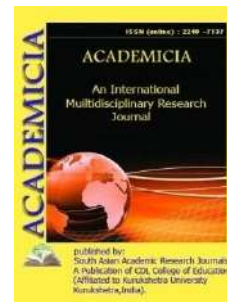
Recent studies have noted the presence among Turkic-speaking peoples. Central Asia Oguz and Kypchak storytelling schools. The Oguz storytelling school prevailed in cities with highly developed trade (Uyghur, Turkmen, Azerbaijani, Turkish, Uzbek) and the Kypchak storytelling school, or the finger (barmak) system, was among the population with a nomadic way of life, mainly livestock breeders. In the Kipchakschool, preference was given to the dostans “Alpamys”, “Koblan”, “Edige”, “YerTargyn”, and in the Oguz school, dastans “Yusuf-Agmed”, “Gorogly”, “Garip-Sanem”, “Tahir-Zuhra”, in which the Persian-Arab book tradition dominated.

From the position of a common Turkic narrative school, Karakalpak storytellers have their roots closer to Kypchak traditions. Along with this, among the Karakalpaks, book dastans built on novel plots, i.e. related to the Oguzschool.

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## **FURTHER TRAINING OF TEACHERS AS A CONDITION FOR IMPROVING THE QUALITY OF EDUCATION**

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### **ABSTRACT**

*The concept of advanced training is considered in the article, and the issue of advanced training of teachers is also considered. The essence of the modernization of the contents of the courses of advanced training and retraining of personnel in the system of higher education is disclosed. The article describes the conditions of a socially-oriented economy of modern policy and strategy of the state in the development of the national education system. As well as the compendium for the development of the higher education system is given.*

**KEYWORDS:** *Advanced Training, Teacher, Advanced Training Course, Advanced Training Of Teachers, Knowledge, Advanced Training Course For Teachers, Professional Level, Professional Skills, Pedagogical Activity, And Advanced Training Course For Educators.*

### **INTRODUCTION**

Creating an effective structure of methodological work in order to improve the quality of education. "The teacher lives as long as he studies. As soon as he stops learning, the teacher dies in him." (KD Ushinsky) The social transformations taking place in our country have created the conditions for the restructuring processes in the field of education - this is the creation of new



types of schools, the active introduction of various pedagogical innovations, copyright programs and textbooks in practice. The changing situation in the general education system forms the new educational needs of teachers. Any teacher wants to become a significant figure. A significant teacher today is both a professional and a personality. In order to become significant, today it is necessary to practically master those types of pedagogical culture for which the teacher is most often prepared only theoretically. The teacher is constantly between practice and theory, building up his experience mainly with practical skills. Any pedagogical work is a practical activity. Graduates of pedagogical universities and experienced teachers know that pedagogical culture is the totality of the teacher's skills to show examples of personal-value attitudes towards students, taught disciplines, and children's creativity. It often happens that a serious gap continues between theoretical knowledge and practical skills. Bridging this gap in modern schools can be through professional retraining, which is commonly called methodological culture. But this becomes possible only when the main reasons that gave rise to the lag of practice from theory are comprehended.

The first reason: the desire to master private methods, honing techniques for teaching certain topics, parts of the lesson, is understood as a methodological culture as a whole. This desire overshadows the need to master the pedagogical culture, where the methodological culture is only part of the pedagogical culture.

The second reason: in the absence of deep knowledge about the modern meanings of education, the information culture, which is one of the goals of the methodological association of teachers, is formed based on the priority of the amount of information about the latest technologies. With the new goals of education, it is necessary to relate to the organization of methodological work in the school.

Traditional methodological work involves increasing the professional level of a teacher by increasing the amount of knowledge about new methods, techniques, technologies and skills by copying them in their activities. It should be noted that this is how the methodological work at school was built and this state of affairs, to some extent, suited us. But, taking into account the new values of education and methodological work in general, we determined new goals, and we came to the conclusion that a new network model of the methodological service was created.

The structure of the forming model:

- Networking with educational institutions of the village on the implementation of educational projects, to address the main problems of educational institutions;
- the work of the district school of a young specialist for the entire district;
- Intra-school methodological work is implemented on the basis of several significant projects (groups formed by interests in these projects) and at the same time coordination of work as subject matter through the leaders of subject associations.

The relevance of our chosen direction of improving the methodological work of the school is explained by the fact that only educators with high professionalism can educate a person with modern thinking, able to successfully fulfill their potential in life. Moreover, the concept of "professionalism" includes not only subject, didactic, methodological, psychological and pedagogical knowledge and skills, but also the personal potential of the teacher, which includes the system of his professional values, his beliefs, and attitudes. In the course of this activity, the

teacher becomes an active subject of the improvement process. This requires an integrated approach to multifaceted methodological work.

Further training helps the teacher to get rid of outdated views, makes him more susceptible to external changes, which ultimately increases his competitiveness. Methodical work stimulates the professional development of the teacher, contributes to his self-realization, 3 solving professional and personal problems, allows you to get more satisfaction from work.

The quality of teaching is critical to the development of the entire education system. Today, a teacher is extremely in demand, whose personal and professional qualities would be at the level of complexity of the tasks facing society. Such requirements should be supported by appropriate conditions, because without high-quality training of a teacher, without his social protection, without providing him with necessary working conditions, without motivation for his success, a high quality education cannot be achieved.

Hypothesis: The network interaction model performs a number of important functions. First of all, the functions of adaptation and socialization. Participating in the work of problem groups and networks, each teacher solves the problems of professional growth, develops the style of his pedagogical thinking, such features as systematic, comprehensive, concrete, flexible, mobile. In the course of this activity, the teacher gets rid of outdated views, becomes more susceptible to external changes. Object of study: improving the methodological level of teachers.

Subject of research: The structure of the methodological service of the school, ensuring the formation of a teacher as a subject of self-improvement. Theme of methodical work: Creating an effective structure of methodological work in order to improve the quality of education.

Purpose: organization of conditions for advanced training and staffing of the pedagogical potential of the school, training of the teacher as a subject of professional activity, social life, a subject of personal self-realization, self-actualization and self-organization.

Tasks:

- Improvement of methodological work, rational use of opportunities for improving the qualifications of teaching staff in the conditions of network interaction of educational institutions of the village;
- Motivation for the success of teachers to ensure strategic influence on the results of work;
- Solving issues of material incentives for teachers who improve their qualifications, achieve high quality of students' knowledge and growth of achievements, both of their own and those of schoolchildren, assessing the capabilities of the team;
- Improvement of certification measures as a means of improving the qualifications of teachers and managers;
- The development of innovative behavior of teachers and their new pedagogical thinking;
- Development and improvement of the research and methodological culture of teachers;
- modeling of professional activities of teachers on the basis of psychological and pedagogical diagnostics, development of timely corrective measures based on the results of activities, analysis of the causes of deviations;

- improving the control system, creating flexible mechanisms for managing the results of teachers' activities;
- Creation of monitoring and diagnostic programs in educational institutions aimed at an objective assessment of the work of teachers;
- Social protection of teachers and resource support for their professional activities;
- raising the status of teachers and the prestige of the teaching profession

Theoretical significance: This model of the school's MS is more flexible and adapted for solving non-standard tasks and working in unstable conditions.

Practical relevance: The proposed methodological service model will work effectively and efficiently both within the community with the teaching staff of 25 people, and with other educational institutions of the village.

Possible difficulties in the implementation of the structure:

1. in the internal structure: fuzzy leadership and distribution of functions by project teams and coordinators of subject associations. Lack of motivation for teachers to innovate
2. In the external structure: the lack of motivation of teachers to participate in activities unfamiliar to them (conservatism, aging staff). Unity coordination

The main directions of modernization of the methodological service of the school:

The first area: Formation of the mechanisms of personal self-development of teachers, such as pedagogical knowledge, communication, adaptation, activity, relaxation, reflection, etc. This work is aimed at the formation of the main components of the formation of an individual style of pedagogical activity: cognitive, motivational, reflective and operational. The performance is captured through the teacher's personal creative plan.

The second direction Improving the pedagogical culture of teachers is seen as ensuring the formation of reference levels for the development of pedagogical culture, as the integration of pedagogical experience, the implementation of all types of teaching activities in all aspects of education: training, education and development. In this regard, we determine the main groups of skills relevant for this professional activity: subject skills, gnostic skills, design skills, adaptive skills, organizational skills, communication skills, motivational skills, control and analytical skills.

Third direction: Information and analytical. Improving the professional qualities of teachers should be based on information obtained as a result of methodological monitoring. Practiced methods such as research, questionnaires, testing, interviews, observation and analysis of the practical activities of teachers and its results. As a result, a number of problems are identified that are brought up for discussion by the methodological council, and taking into account the recommendations received, workshops, courses, seminars, round tables and other methodological events are planned. Based on the diagnostics, an individual educational route for the teacher is formed, which will serve as the basis for taking advanced training courses and working out "falling" topics. One of the main components of this direction is the formation of an information and methodological bank, designed to provide a holistic vision of the activities of teachers engaged in practical activities, effective systems and 6 technologies for training and

education. Using the questionnaire, diagnostic maps of work experience are compiled, i.e. addresses of pedagogical experience in any direction are determined.

Widespread should be the growth map of pedagogical excellence and the sheet of pedagogical career. It is also necessary to introduce a map of the effectiveness of the teacher in terms of health-saving technologies. This will make it possible to determine the effectiveness of pedagogical technologies, and identify the experience of the best work.

Monitoring studies allow us to create a model for the formation of key competencies.

The fourth direction. Targeted methodological support of educational programs through the creation of a network of methodological services, ensuring the continuous development of professional culture, cooperation with other organizations.

The fifth direction. Activities to refine the "open" model of the methodological service of the school. Effective social positioning of the school in a wider and generally significant context of the development of the educational system of the village. A very effective step on this path is the creation of various forms of partnership: practical seminars, pedagogical councils, scientific and practical conferences, a school for a young specialist, network problem groups. Combining the efforts of other educational institutions that have joined the project will allow lobbying of the interests of education in the village successfully. When the zone of influence of the school on the continuing education system expands, then the effect of a qualitative shift in public opinion occurs: as a result, the "shares" of education in the village increase

"Presentation of success" - presentation of achievements to society, the public, parents, round tables, the website of the educational institution, etc. The content of work in this direction will include the publication of newsletters, prospectuses, informing the work of an educational institution through the media. The users of this information will be not only teachers and school leaders, but also students and their parents. This work will continue with informational and methodological assistance to the innovative development of the educational process of schools at the modernization stage, by presenting a package of effective teaching technologies and

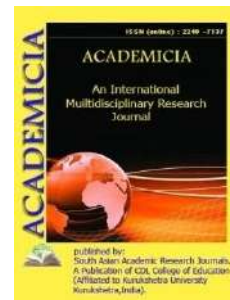
Expected results:

- advanced training and capacity building in the school;
- a positive change in the quality indicators of the work of teachers and the activities of the school as a whole;
- consolidation and successful activity of young teachers;
- creating conditions for changing the status of a teacher, transferring him from the position of a "lessor" to the position of a teacher-methodologist, teacher-researcher and experimenter.

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## THE PROBLEM OF THE FORMATION OF CREATIVE ABILITIES OF STUDENTS IN FOREIGN PSYCHOLOGY

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### ABSTRACT

*In gestalt psychology (M. Wertheimer, KDunker, K. Levin and others), the main ability for creativity is considered intuition, which along with holistic perception is the basis of creative thinking. In psychology in recent decades, the psycho physiological direction has become dominant in the study of the problem of abilities. Accordingly, researchers working in line with this approach have obtained the most significant results concerning, first of all, the connection between the basic properties of the nervous system (inclinations) and the general mental abilities of a person. In interpreting the totality of phases, the main difficulties were usually associated with unconscious work. Some researchers attributed the work of the subconscious to the number of "world riddles", others gave it fantastic or mythological nuances, while others removed this problem altogether, rejecting the general existence of the fact of unconscious work. One of the many secrets in this process is why other individuals who are in a similar stimulus environment (and in many cases deprivation) fail to gain recognition of their creative talent. Plato suggested that creativity could be the work of much more irresistible forces than the forces of the environment.*

**KEYWORDS:** "World Riddles", Mythological Nuances, Physiological



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## INTRODUCTION

Attempts to explain the mystery of human creativity have been made since ancient times. Plato and Aristotle (4th century BC) explained creativity as a gift from the gods. For centuries, this explanatory principle has remained the only one applied to creativity.

The natural inclinations of creative abilities are inherent in every person. But in order to reveal them and fully develop them, certain objective and subjective conditions are needed: early and skillful training, creative climate, strong-willed personality traits (perseverance, hard work, courage, etc.). [1]

One of the first researchers of creativity F. Galton claimed the predominant role of heredity and racial factors in the possibility of creative manifestations of people.

In further studies, creativity was developed from the standpoint of various psychological theories. So, for example, representatives of psychoanalysis (Z. Freud, E. Fromm, C.G. Jung, etc.) creatively associated manifestations with children's experiences of complexes, with sublimation of mental energy into creativity (Z. Freud), overcoming the deficiency complex ("inferiority") (A. Adler), by the action of the archetypes of the collective unconscious. [2]

In gestalt psychology (M. Wertheimer, KDunker, K. Levin and others), the main ability for creativity is considered intuition, which along with holistic perception is the basis of creative thinking. Gestalt psychology has a tradition of studying creativity as productive thinking, the process of solving problem problems (O. Zelts). Studies in the field of thinking (V. Keller, O. Dunker) made a significant contribution to the development of the psychology of creativity and were developed in heuristics (B. M. Velichkovsky, A. Newel, V. N. Pushkin, G. Simon, etc.) and the algorithmic approach (L.N. Landa).

The range of creative tasks is unusually wide in complexity - from solving a puzzle to a scientific discovery, but there is only one. When solving these creative tasks, new ways are found, inevitably something new is created, i.e. an act of creativity occurs. It is here that special qualities and creative abilities are required.

Vigilance in search of problems. The ability to see that which does not fit into the framework of what has been learned before is more than just observation. This freshness of view, a person sees with the help of the brain.

The ability to curtail mental operations (replacing several concepts with one, to use more capacious informational relations of symbols).

The economical symbolic designation of concepts and the relations between them is the most important condition for productive thinking. (Luke A.N., 1979).

The ability to apply the skill acquired in solving one problem to the solution of another, i.e. the ability to separate a specific "grain" of a problem from a non-specific one, which can be transferred to other areas (development of generalizing strategies).

Widely distributed attention increases the chances of solving a problem. By analogy with lateral vision, the English doctor E. De Bono called lateral thinking the ability to see the path to a solution using "extraneous" information. "To create, you need to think about" (E. Bono).

Readiness of memory. Memory includes the ability to remember, recognize, reproduce immediately or with a delay. When a person solves a problem, he can only rely on the information that he currently perceives and which he will be able to extract from memory.

The ability to perceive reality as a whole without crushing it (as opposed to perception by small independent portions). This ability was pointed out by I.P. Pavlov, identifying two main types of higher cortical activity - artistic and mental [3].

Flexibility of thinking, i.e. the ability to quickly and easily switch from one class of phenomena to another, distant in content. We can say that flexibility is a well-developed skill of transference, transposition. The absence of such a position is called inertia, rigidity, and even stuck or stagnant thinking, in fact, functional fixation [4].

Courage in creativity is the ability to make decisions in a situation of uncertainty, not to be afraid of their own conclusions and bring them to the end, risking personal success and their own reputation [5].

The ability to "grip" and "anti-grip." The ability to combine newly perceived information with what was previously known, to include it, and existing knowledge systems, to group data in one way or another in the process of perception is a condition and prerequisite for the ability to generate ideas [6].

Originality and ease of generating ideas. A thought or idea is not just an associative combination of two or more concepts. The combination of concepts should be substantively justified, reflect the objective relationship of the phenomena behind these concepts [7].

Another criterion is the breadth of the idea, embracing a large number of diverse facts. The most fruitful ideas include (predict) new, not yet discovered phenomena [8].

Fantasy - the ability to create something new, unusual is laid in childhood through the development of higher mental functions: thinking and imagination or fantasy.

Imagination is an inherent only to man possibility of creating new images (representations) by processing previous experience. There are three types of imagination: 1) logical - derives the future from the present with the help of logical transformations; 2) critical - looking for what is in the surrounding world that is imperfect and needs to be changed; 3) creative - gives rise to fundamentally new ideas, ideas that do not have prototypes in the real world, although based on elements of real reality [9].

Fluency. Creative thinking is mobile: it is not difficult for him to move from one aspect of the problem to another, not limited to one single point of view. Fluency of thought is determined by the number of ideas that arise per unit of time.

The ability to refine parts, to painful, painstaking fine-tuning, to improve the original plan. In a first approximation, three main lines of research on creativity can be distinguished. Firstly, creativity is studied from the perspective of ability, giftedness, talent, including specifically cognitive, intellectual processes, such as intelligence, divergent thinking, creating new things, solving problems - all these approaches in this context can be combined into one group, although Of course, they can be considered much more differentiated (Epiphany, 2002).

Secondly, creativity is considered as a characteristic of a personality, the question of a creative personality is raised.

In modern psychology of creativity, two main directions are traced: analytical and synthetic. The first continuation and development of the study of areas of knowledge that explored one of the aspects of creativity. The second is a synthetic approach to the study of creativity.

Almost all psychology textbooks included the definition of abilities given by B.M. Teplov and later almost completely accepted by N.S. Leutes. They define abilities as individual personality traits that are a condition for the successful implementation of one or more types of activity [10].

B.M. Teplov paid special attention to the inclusion of three mandatory attributes of abilities: by abilities are meant individual psychological characteristics that distinguish one person from another; abilities are not called any individual characteristics in general, but only those that are relevant to the success of any activity or many activities; the concept of “ability” does not boil down to the knowledge, skills, or abilities that a person has already developed.

And B.M. Teplov defended two more positions: “only anatomical and physiological features can be innate, i.e. the makings that underlie the development of abilities, the abilities themselves are always the result of development”, abilities are “created” in the activity. “This is not the point,” he writes, “that abilities are manifested in activity, but that they are created in this activity” [11].

In psychology in recent decades, the psycho physiological direction has become dominant in the study of the problem of abilities. Accordingly, researchers working in line with this approach have obtained the most significant results concerning, first of all, the connection between the basic properties of the nervous system (inclinations) and the general mental abilities of a person. Abilities are not given to a person from birth in a finished form. They are not innate human properties, are not inherited. Of great importance are the features of the structure of the brain. These features influence the development of other inclinations and further on the development of abilities for any type of activity, in the inclinations it is necessary to discern the psycho physiological properties, and especially those that appear in a person at the very beginning of mastering any activity. A particularly important role is played by the speed of formation and stability of conditioned reflexes, the speed of the formation process, and the stability of the inhibition reaction.

There are several ways to study this process. You should start with the main path, with the main methodological approach. This, of course, includes the application of a systematic approach, which is universal and is at the center of modern research in all areas of science. A systematic approach opens up the possibility of reconstructing a holistic picture of the processes of creativity, their research in a certain hierarchy of levels.

The first level is the study of the process of creating a single work from a point of view that reveals the purposefulness of the process to “focus”, to a specific goal, to resolve a problem situation, which is the basis of creative design.

The next level is the study of the process of creating works by this author in their unity. This opens up the opportunity to judge the nature of the creative process of a particular artist as a whole.

A higher level (in terms of systemic methodology) of the level of this hierarchy is a comparative analysis of the creative processes of various artists according to certain criteria, i.e. analysis of the typology of the creative process, for these processes, with all their individualization, can have

common features. The problem of the typology of creative processes is relatively new and very promising for the psychology of creativity.

Creativity processes are studied in dynamics, starting from the first phase (the emergence of objective and subjective impulses, the emergence of ideas and images and their crystallization) to the intermediate and final phases.

The core of creativity, the peak of the creative act is “insight”, in other words, insight. This is when a new idea penetrates into consciousness, is generated (generated). It can be scientific, philosophical, technical or artistic. But this often leads to a long way of preliminary work, a lot of work, during which the prerequisites for the birth of a new one are created.

Returning to the stages of the creative process, one should give due attention to one of the researchers of creativity Wallace (Wallas, 1926), because many years ago he described four successive stages of the creative process: 1) Preparation: Formulation of the problem and initial attempts to solve it. 2) Incubation: Distraction from the task and switching to another subject. 3) Enlightenment. Intuitive insight. 4) Verification: Testing and / or implementation of the solution.

The central specific moment was considered to be insight - an intuitive grasp of the desired result. Briefly about each of the stages.

1. Preparation. The preparatory period can last either a month or six months, more than a year. It all depends on how close the research area is, identifying possible solutions to the problem, with what intensity the search for the desired solution is manifested, identifying the optimal way to achieve the intended result. In other words, the preparatory phase can last from zero to infinity. A common theme in the biographies of many famous people is that even in early childhood they developed ideas, acquired knowledge and tried to develop their thoughts in a specific direction. Under the influence of such early ideas, the most distant fate of a creative person is often formed. One of the many secrets in this process is why other individuals who are in a similar stimulus environment (and in many cases deprivation) fail to gain recognition of their creative talent. Plato suggested that creativity could be the work of much more irresistible forces than the forces of the environment. Maybe it would be worth paying attention to the genetic basis of creativity [13].

2. Incubation. This is one of the mysterious periods of the creative process. The leading question has been and remains why it turns out that a creative breakthrough often follows a period during which the ground for solving the problem may remain completely unprepared? That is, looking, looking, it seems that you are approaching the cherished decision and it turns out that something is missing, some kind of dominant.

Perhaps this can be explained most simply, this explanation is that a significant part of our lives we relax, travel, walk in any free time, play sports, visit museums or just watch what is happening around. And this is all instead of stubbornly reflecting on any problem requiring a creative solution. So creative acts often follow periods of sleep or idleness, most likely simply because these periods take a lot of time.

There are many examples of enlightenment in the history of creative breakthroughs. The discovery of the structure of the DNA molecule, the discovery of the benzene ring, the invention of the telephone, the completion of the symphony, the plot for a painting or graphic canvas - all

these are examples of how, at the moment of enlightenment, a creative solution to the old annoying task comes to mind.

Enlightenment is a moment that either comes or does not. At the sensory level, enlightenment is characterized as a moment of maximum arousal. But after the joyful excitement that sometimes accompanies a discerning discovery, it is time to test a new idea.

4. Verification. Verification can be characterized as the process of cleaning the resulting creative product when it is checked for its degree of completeness. After a long and thorough study of the solution, which is a creative discovery, it turns out to be an individual product of intelligence, which is very valuable. This stage can be quite short, as in the case of rechecking calculations or a test run of a new design; however, in some cases, verifying an idea may require a lifetime of research, testing, and cross-checking.

In the above stages of the creative process are reflected in the scientific works of Ya.A. Ponomareva. He considered stages as phases: conscious work - preparation; unconscious work - maturation; the transition of the unconscious into consciousness - inspiration; conscious work - the development of an idea, its finalization and verification.

In interpreting the totality of phases, the main difficulties were usually associated with unconscious work. Some researchers attributed the work of the subconscious to the number of "world riddles", others gave it fantastic or mythological nuances, while others removed this problem altogether, rejecting the general existence of the fact of unconscious work.

The basis for the allocation of phases by Ya.A. Ponomarev was based on: 1) the fact of the transition from consciously organized, logically substantiated searches to an intuitive solution, the method of which is not initially understood, and the content seems in no way related to the content of previous searches; 2) the subsequent evolution of the intuitively found solution into a logically complete one. [11]

From the foregoing, it becomes apparent that the characteristics of the creative process are one of the forms for describing the dialectic of development. The solution of creative tasks is always carried out through the struggle of opposites, acting in the form of a dialectical relationship of the structural levels of the organization of the decision system. The solution to these problems, the future of our education.

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## PROBLEMS OF TEACHING MATHEMATICS IN PRIMARY SCHOOL AND SOME WAYS TO SOLVE THEM

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### ABSTRACT

*This material addresses some of the problems of teaching mathematics and how to solve them. Mathematics as an educational subject contains the necessary prerequisites for the development of cognitive abilities of students, it forms and corrects such forms of thinking as synthesis, comparison, analysis, develops the ability to generalize to concretization, creates conditions for the correction of memory, attention and other mental functions. Recently, the use of modeling methods has been increasingly seen. Teaching mathematics in secondary schools, including in the elementary grades, contributes to the formation of personality traits such as accuracy, punctuality, perseverance and strong will. Although mathematics is an exact science, nevertheless, teachers can experiment, apply, various manuals, music, movement, all that can show children all the beauty and power, as well as the importance of this discipline in everyday life.*

**KEYWORDS:** *Primary Classes, Mathematics, Teacher, Students, Method, Method, Psychology, Tasks, Education.*

### INTRODUCTION

Mathematics is one of the most significant disciplines, which can be very necessary in the life of every person. It is impossible to do without mathematics in principle, given the time in which we all live. Mathematics as an educational subject contains the necessary prerequisites for the development of cognitive abilities of students, it forms and corrects such forms of thinking as synthesis, comparison, analysis, develops the ability to generalize to concretization, creates conditions for the correction of memory, attention and other mental functions.

In this process, the development of children's speech is observed, it is enriched with special mathematical terms and expressions. When explaining the solution of a particular problem, the student acquires the skills of rational explanation of his actions, to do it accurately and concisely, without adding extra words or expressions.

The math classes in elementary grades are dramatically different from those in the older grades. A mathematics teacher in primary school should, like other teachers at this stage, possess the skills of a psychologist and educator in addition to his main responsibilities. Because training in this period involves not only the presentation of knowledge in various academic disciplines, but also its upbringing in psychological and personal terms.

Like other subjects, mathematics involves mastering the following knowledge and skills:

- a) Gives the concept of a natural number, zero, a natural series of numbers, their properties, the concept of ordinary decimal fractions;
- b) Forms in students' minds clear ideas about the basic quantities (length of a segment, cost, mass of objects, area of various geometric shapes, capacity and volume of bodies, time), measurement units, various quantities and their ratios;
- c) gives the concept of a metric system of measures, measures of time;
- d) The ability to carry out four basic arithmetic operations (addition, subtraction, multiplication and division) with multi-valued numbers and fractions;
- e) Develops in students the ability to solve simple and compound tasks.

To achieve the above goals in mathematics, various methods are used that are aimed at the most complete transfer of educational material to students.

The teaching methodology is a way of joint activity of a teacher and students, with the help of which a teacher transfers knowledge and skills by a teacher to a student. Such methods have many varieties.

The teacher chooses which one is appropriate to apply at this particular stage of training. Some of them are creative, others are called traditional. If new teaching methods have not yet been mastered by many teachers, traditional methods have long been used in the classroom and managed to show their effectiveness. More often in other primary classes, when explaining materials in various academic disciplines, including mathematics, the storytelling method is used; it is referred to as the method of exposing knowledge in mathematics. Along with him use the method of conversation.

During the conversation, the teacher sets the students tasks in which the latter will have to use existing knowledge. The methodology of teaching mathematics is closely connected with other sciences, primarily with pedagogy, developmental psychology, ethics, the native language and literature.

Recently, the use of modeling methods has been increasingly seen. Teaching mathematics in secondary schools, including in the elementary grades, contributes to the formation of personality traits such as accuracy, punctuality, perseverance and strong will. Also, mathematics can help with educational purposes. This subject teaches students rational thinking. If the lessons of the native language and literature help to reveal the creative abilities of the child, give him a

field for improvisation, mathematics teaches you to firmly assess a particular situation, draw the right conclusions and make the most correct decision in this situation.

Mathematics forms in students such forms of thinking as a comparison analysis, and the ability to generalize conclusions. Also, solving a mathematical problem, the student gets the opportunity to strengthen correct memory, sharpen skills of concentration, develop observation. In the elementary grades of secondary school, children very often perceive mathematics as a boring and monotonous subject, perceiving classes in this discipline as the most monotonous.

The guilty in this state of affairs can be called the teachers themselves, who for the most part do not seek to bring something new to the lesson process, they are not interested in how interesting their teaching abilities students consider.

It is important to remember that a teacher, whose teaching methods are considered interesting for students to perceive, is winning among them. Unquestioned authority and, as a result, at the lessons of such a teacher, they are engaged more diligently trying to get his praise. It is easier for such a teacher to convey to the students the training material provided for this particular lesson. Why do some teachers manage to gain confidence in children, while others, with all his undoubted pedagogical knowledge, fail? Because, as noted above, they must first be psychologists, which implies the ability to find an approach to each child.

It is very easy to work with children who have the ability to mathematics — they grasp the teacher's explanation on the fly, easily perform mathematical operations and solve problems of different difficulty levels. But, as a rule, there are few such children in primary school.

In the course of research, it was found that a child who had difficulties with addition and subtraction in preschool age also has them in primary school, which certainly prevents him from learning mathematical material. Since math problems become more complex over time, the problems of these children are exacerbated. It is all the more important that the teacher can figure out the number of such children in this particular class and build a lesson plan based on this detail. Primary school teachers solve this problem in different ways. Some practice dividing children into groups depending on their level of knowledge and ability to math.

In such cases, stronger or slightly weaker groups are formed. The teacher gives these groups tasks based on their abilities - a strong group solves more complex problems; a weak one is not so difficult.

The teacher gradually complicates the tasks of the lagging group, step by step bringing these students closer to the level of children from a strong group. It should be noted that this method has several advantages, but it is also not without drawbacks. It can be considered its advantage that children in lagging groups have the opportunity to catch up with their classmates from a strong group, to strengthen their skills in solving problems to eliminate their shortcomings. But you need to consider that this method can lead to the stratification of students, their separation into leaders and outsiders. Since children in the elementary grades are still not very confident in themselves and in their abilities, such a separation can hurt his pride, and especially for impressionable children, they can even hurt the psyche.

Therefore, the teacher who decided to use this method should be as attentive to the psychological climate of the class as possible, not to allow the arrogant attitude of students from a strong group towards children from the group weaker.

Another way of teaching mathematics is also known - for the lesson, a teacher transfers a strong student in mathematics to a weak student, giving them one task for two. In such cases, small teams are created from the students, which for two carry out a common task. This way of learning to teach children to work in a team, a lagging child, who is often timid in relations with a teacher, next to his peer feels more relaxed and can see how problems are solved by a living example, a classmate can use his language to uncover the essence of the problem of a given task and explain the ways to solve it.

But this method gives the result only if friendship is established between two such students. Otherwise, such work can turn into torture for both sides and can cause nothing but mutual irritation. And this again means that the teacher must be a subtle psychologist and an expert on children's characters.

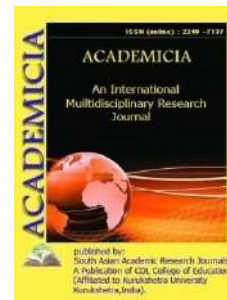
Because in such teams there is always a leader and a follower. If a leading student learns well-guided, he can improve his problem-solving skills; he will really learn how to solve arithmetic examples. But if the leader in terms of character is stronger, but learns worse, this method will not do anything good since he will dominate the couple and all the work will be done for him by a strong student, but a weak character student.

In such cases, the lagging student will not learn anything, all his activities in the team will only lead to the writing off of the tasks solved by the other student.

As you can see, the teaching of mathematics can be carried out using various methods and methods in order to use the time allotted to the lesson in the most rational way, in terms of conveying educational material to the students' consciousness. Although mathematics is an exact science, nevertheless, teachers can experiment, apply, various manuals, music, movement, all that can show children all the beauty and power, as well as the importance of this discipline in everyday life.

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**“CLINICAL-RESEARCH BASED AND MORPHOLOGICAL EVIDENCE OF FEATURES OF THE COURSE AND TREATMENT EFFECTIVENESS OF PERIODONTAL TISSUES AND ORAL MUCOSA IN ANIMALS UNDER THE IMPACT OF SODIUM HYPOCHLORITE”**

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**ABSTRACT**

*The aim is to substantiate the clinical course and pathogenesis of lesions of periodontal tissues, oral mucosa and liver in animals with sodium hypochlorite in experimental conditions and to evaluate the effectiveness of our developed methods of treatment. **Material and methods.** The study was performed on 60 white male mongrel rats weighing from 120 to 170 g. The animals were repeatedly exposed to sodium hypochlorite (SHC) at a dose of 1/20 LD50 (225 mg/kg intragastric), approximating the actual intake of this drug in real conditions. **Results.** Experimental studies indicate that during the 90-day priming in the blood of animals, in the studied tissues increases the amount of lactic, pyruvic acids, glucose (in the blood), there is a decrease in glycogen levels and reduced activity of enzymes dehydrogenase (GDH, SDH, MDH), which confirms the activation of glycolysis and inhibition of the potential of redox processes in the tissues of the body of animals. **Summary.** It was found that after the toxic effects of SHC on the general body and organs of animals PR is significantly reduced if in the conditions of priming animals specified harmful substance simultaneously carried out a set of recommended therapeutic and preventive measures.*

**KEYWORDS:** Oral Mucosa, Periodontal, Liver, Biochemical Parameters, Epithelium.

**INTRODUCTION**

It is reported that the most prevalent part of the household items made of surfactants is obtained by modern synthetic detergents (MSD) and synthetic cleansing agents (SCA) which have been displacing the non-synthetic cleansing agents. According to the specialists, further growth of the production of household chemicals is expected which requires reliable criteria of usage safety to



be developed for humanity and environment. The MSD and SCA are manufactured in the form of powder, pills, liquids, paste, gel, aerosol or sprays (Potemkina O.L., 2005).

The recent data shows that the poisoning caused by the household chemical agents including MSD and SCA makes up nearly 14% and tends to grow further, especially among children (Liushina A.B and co-authors, 2008).

High chemical input in the environment resulted in the emergence of new hazardous factor in houses: objects of household chemical agents affecting organisms with the compound and complex effect. After dishes have been cleansed with use of the MSD and SCA, on their surface remnants of the detergents can be detected (0,03-0,06 ml/l) as a result of flushing film formation.

Per oral intake of MSD and SCA in human organism is possible with water or food in the form of remnants left after cleansing, as well as incorrect storage and spontaneous intake occurs. The origins of contamination of drinking water are typically its insufficient refinement of washing and cleansing agents. With food MSD and SCA enters as a result of their accumulation in the outer layer of soil and migration into the green mass and fruits of plants. Each path is considered to be the main route of input into organism for MAS and SCA in life. Apart from the direct contact of MSD and SCA with the skin, one of the causes of skin irritation in people is the prolonged contact with the texture processed with the washing agents. Based on the research, safe levels of percutaneous pressure to an organism for anion-active PAV-0,55 mg/kg, for non-ionogen PAV-0,01 mg/kg are recommended. The marginal level of PAV remnant substances in texture equals to 5,0 mkg/sm<sup>2</sup> [1,3,4].

Research of atmosphere in the territory of "Organika" factory, where numerous types of MSD and SCA are manufactured, has detected the presence of substances like NO<sub>2</sub>, NO<sub>3</sub>, HCN, Ce<sub>2</sub>, CH<sub>3</sub>OH, CO, CH<sub>2</sub>COO, acetone, ammonium and the concentration of the latter with the sodium hypochlorite and CO exceeded PDK 1.5-2 times. The atmosphere in the different areas of the factory where workers are present most of the time is exceeded PDK NO<sub>2</sub>, NH<sub>3</sub>, CO – in some instances 1.2-1.3 times more [5].

While the research was carried out, the study of effects of MSD and SCA on periodontal tissues and oral mucosa of the workers in the republic had not been conducted, which in turn has defined the importance and relevance of the given problem.

**Objective.** In experimental conditions to explain the clinical features and pathogenesis of lesions of periodontal tissue, oral mucosa and liver in animals SHC and to evaluate the effectiveness of the treatment methods we developed.

### Tools and methods

With the aim of proving toxic effects of SHC on an organism kept in laboratory (white rats) experimental studies has been carried out (In the laboratory Sanitation, Hygiene and Occupational Diseases Research Institute under supervision DSc Askarov A.U.). The latter has undergone numerous impacts of sodium hypochlorite (SHC) with the dose 1/20 ЛД (225 mg/kg into stomach). Each group of animals were worked out in accordance the goal and preset aims of study. The first group of animals received SHC, the second – SHC and concurrently treatment was carried out, and the third group was for monitoring and received an ordinary water into stomach.



As treatment and preventive care agents, we used potions made of regional plants-rosehip fruits, licorice root, mint leaves, strawflower and daisy flowers.

During the experiment process the examination of oral mucosa of animals, observation of animal behavior and their weight, the biochemical analysis of blood serum, liver and oral mucosa was carried out. Meanwhile the generic protein, carbamide, cholesterol, glucose, ALT, AST, amylase and alkaline phosphatase were defined since these indicators are very sensitive to hazardous effects of industrial factors on an organism.

The study was carried out in 15<sup>th</sup>, 30<sup>th</sup>, 45<sup>th</sup>, 60<sup>th</sup> and 90<sup>th</sup> days of the experiment and after the experiment was finished with the duration of 90 days, the rats were decapitated. For morphological studies samples of gingiva, buccal mucosa and liver which had been submerged into the 12% solution of neutral formaldehyde. After the proper wiring and pouring, the slices with the thickness of 4-5 mk were stained with hematoxylin and eosin by Van-Hizon and were examined and photographed under MBI-15 microscope.

Statistical results of the experimental studies were carried out by the traditional methods with the implementation of application programs, by means of Microsoft Excel 2007.

## RESULTS AND DISCUSSION

The animals have undergone chronical poisoning with SHC with the dosage LD50 1/20 225mg/kg (1<sup>st</sup> group). 30 rats into stomach of which an ordinary water was inserted, were used for monitoring. (2<sup>nd</sup> group).

In the process of study, with the exception of the oral mucosa examination, the behavior and the body weight were observed. Alterations in the behavior of the poisoned animals (1<sup>st</sup> group) has not been detected. Visually they differed with hyper-saliva secretion from the monitoring group. In many animals, fungal lesions were detected. The 1<sup>st</sup> group of animals fell behind in body weight compared to that of the monitoring group (table 1.1).

**TABLE 1.1. COMPARATIVE DATA OF THE DYNAMICS OF THE MASS OF THE ANIMALS UNDER THE IMPACT OF SODIUM HYPOCHLORITE (SHC)**

Group of animals	Substance	Prior to poisoning	Days				
			15	30	45	60	90
1	SHC	121±3,5	124± 4,6	129± 5,7	134± 5,3	139± 5,4	140± 6,7
2	Monitoring	120±3,7	127± 3,7	138± 3,8	146± 3,4	158± 3,5	170± 4,3

Examination of oral cavity of the poisoned rats has shown that from 15-30<sup>th</sup> days of study, the oral mucosa alterations with the prevalence of inflammation progressed. So, in many rats (23 from 30) hyperemia and edema of oral mucosa have been observed.

In some animals, gingival papilla hypertrophy and its bleeding have been detected. Others had lingual desquamation in some spots.

When poisoning animals with SHC were kept on, starting from 70-80<sup>th</sup> days of study, dystrophic, atrophic and sclerotic changes of oral mucosa occurred. So, on day 90 of the experiment the animals had cyanotic oral mucous membrane, thinning, pathological periodontal pockets,

containing food debris and purulent exudate, formed. Gingival papillae are flattened and atrophied in places. On the tongue, cheeks and palate, bright red hyperemia, dotted white rashes, raids resembling curd masses, or whitish-gray films are found. They were removed with difficulty, and after removal formed an erosive bleeding surface. In some animals there was exposure of the neck of the teeth. In some cases, there were zones of bifurcation of the roots of the teeth and an increase in the mobility of the teeth. In some animals, by the 90th day of the experiment, changes in the hard tissues of the teeth were detected in the form of dullness of the enamel, its yellow pigmentation, abrasion of the cutting edges of the teeth and their carious lesion. As a result of exposure to the body of rats, diseases of the oral cavity such as gingivitis, periodontitis and stomatitis developed. In this regard, the study of the protective effect of herbal infusions was carried out under experimental conditions.

The analysis of the experimental data showed that during the whole experiment the death of animals and visible changes in the overall state of 2 groups of animals were not observed. There is a significant increase in the body weight of animals, resulting in both SHC and complexes of therapeutic and preventive measures in comparison with untreated animals (table 1.2).

**TABLE 1.2. THE DYNAMICS OF THE BODY MASS CHANGES UNDER THE INFLUENCE OF SODIUM HYPOCHLORITE AND AMID THE COMPLEX OF THERAPEUTIC AND PREVENTIVE MEASURES (M<sub>±</sub>M, GR)**

Groups	Type of study	Prior to poisoning	Days of study		
			30	60	90
1	SHC (without treatment)	129 $\pm$ 5,7	134 $\pm$ 5,3	139 $\pm$ 5,2	139 $\pm$ 5,4
2	SHC (with treatment)	133 $\pm$ 3,6	149 $\pm$ 3,7	146 $\pm$ 3,6	166 $\pm$ 3,9

Examination of the oral cavity of group 2 animals on day 90 of the experiment revealed some changes in oral mucosa in the form of redness and swelling with a cyanotic tinge. These changes were less pronounced and manifested later than in a similar group of animals, but without treatment (group 1). Next, we studied the effect of SHC on some functionally active groups (protein, cholesterol, urea, ALT, AST, alkaline phosphatase, amylase and others) of blood, liver and gums of experimental animals (table 1.3).

**Influence of sodium hypochlorite on the content of biochemical parameters in the biological environment of white rats and treatment with plant preparations**

Duration of study	Groups	Total protein			Urea	Cholesterol	Glucose
		Blood g/l	liver g/l	Oral mucosa g/l	Mk mol/l	Mk mol/l	Mk mol/l
	Monitorin g	73,5 $\pm$ 2,85	87,0 $\pm$ 2,4	62,9 $\pm$ 1,25	5,02 $\pm$ 0,27	6,32 $\pm$ 0,25	4,51 $\pm$ 0,33
Day 15	SHC %	70,7 $\pm$ 2,90	73,2 $\pm$ 2,7**	60,7 $\pm$ 1,76	5,6 $\pm$ 0,30	6,85 $\pm$ 0,30	5,02 $\pm$ 0,21
		96,2	84,1	96,5	111,5	108,4	111,6

	SHC +treatment %	76,6± 2,13 108,3	83,1± 1,96 113,5	62,3± 2,04 99,0	5,32± 0,35 99,0	5,89± 0,35 93,2	4,84± 0,19 107,3
Day 30	SHC %	64,6± 2,06* 87,9	72,2± 1,73*** 83,0	62,5±2,2 4 100	5,70±0,18 * 113,5	6,67±0,21 105,5	4,80±0,16 106,4
	SHC+treatment%	66,0±2, 18 102,3	73,1±2,7 5 101,2	63,7±1,3 3 101,3	5,52±0,23 110,0	6,17±0,27 97,6	4,70±0,13 104,2
Day 45	SHC %	65,4±2, 50 89,0	68,7±2,5 7** 78,9	62,0±2,2 4 98,5	5,69±0,21 113,3	6,60±0,20 104,4	5,09±0,08 113
Day 60	SHC %	62,2±3, 16* 84,6	65,5±2,3 1*** 75,3	58,2±3,1 2 92,5	5,58±0,11 111,2	6,50±0,18 102,8	4,20±0,03 93,1

Our studies have shown that in chronic poisoning with SHC on 15, 30, 45, 60 and 90 days of the experiment, an increase in the content of blood urea was noted and, respectively, amounted to 5.50+ and 5.7+; 5.69+ and 5.95+ mmol / l. In control was 5.02 mmol/l. With the introduction of medicinal plants, the amount of urea in the blood of the experimental animals decreased by 0.2 mmol/l compared to rats that did not receive treatment.

With repeated administration of the chemical for 90 days at a dose of 225 mg/kg, an increase in the concentration of cholesterol to 108.6-11.0% was noted. The treatment with plants for 30 days, on the 15th day of the experience revealed no therapeutic effect and the amount of cholesterol remained unchanged. On the 30th day of the experiment, the cholesterol level decreased by 105.5%. Consequently, in chronic poisoning of animals with SHC, a slight increase in serum cholesterol and urea was observed. The introduction of herbal preparations has almost no therapeutic effect. Administration of SHC to rats reduces the concentration of total protein in serum and liver tissue. The concentration of protein in the blood serum in all the study periods is reduced by 2.8-13 g/l In the liver tissue in chronic poisoning with protein levels of 15, 30, 45, 60 and 90 days decreased to 84.1-71,4%. On the gum tissue with mucous membrane the protein content remained essentially unchanged. Consequently, in chronic poisoning for 90 days, the level of protein in the serum and liver tissue is slightly reduced and in the gums with co ITS level remains unchanged. In table 1.3 changes in the activity of the enzymes alanine and asparagine-aminotransaminase in serum, liver and gums with repeated administration of the chemical SHC at a dose of 225 mg/kg and treatment with herbal preparations are presented.

**Activity of alanine -, asparagine- transaminases in chronic poisoning of laboratory animals sodium hypochlorite and treatment with herbal preparations**

Duration of study	Groups	ALT			AST		
		Blood Mk mol/l	liver Mk mol/l.	Oral mucosa Mk mol/l	Blood Mk mol/l	Liver Mk mol/l.	Oral mucosa Mk mol/l
	Monitoring	0,58±0,02	0,43±0,02	0,45±0,02	0,39±0,01	0,58±0,03 3	0,43±0,02
Day 15	SHC %	0,79±0,03 <sup>**</sup> 73,4	0,36±0,01 <sup>*</sup> 89,0	0,41±0,02 88,4	0,48±0,02 <sup>**</sup> 123	0,48±0,04 82,7	0,38±0,02 88,4
	SHC+treatment %	0,62±0,03 <sup>*</sup> 91,2	0,40±0,02 100	0,40±0,02 88,9	0,40±0,02 83,3	0,50±0,04 104	0,44±0,02 102,3
Day 30	SHC %	0,67±0,02 <sup>*</sup> 115,5	0,41±0,02 89,5	0,35±0,01 <sup>*</sup> 90,7	0,45±0,02 <sup>*</sup> 115,4	0,41±0,02 <sup>***</sup> 58,6	0,41±0,02 95,3
	SHC+treatment %	0,64±0,02 95,5	0,37±0,06 82,2	0,37±0,08 82,2	0,41±0,02 91,1	0,34±0,02 <sup>***</sup> 120,6	0,40±0,02 93
Day 45	SHC %	0,69±0,02 <sup>**</sup> 119,0	0,35±0,01 <sup>*</sup> 77,8	0,38±0,01 <sup>*</sup> 88,4	0,43±0,02 110,2	0,35±0,02 <sup>***</sup> 69,0	0,35±0,02 <sup>*</sup> 81,4
Day 60	ΓXH %	0,73±0,04 <sup>**</sup> 126,0	0,37±0,01 <sup>*</sup> 82,2	0,39±0,02 90,7	0,38±0,03 97,4	0,41±0,05 <sup>**</sup> 70,7	0,39±0,02 90,7

In table 1.4 it is seen that the intensity of the conversion between alanine and  $\alpha$ -ketoglutaric acid in the serum of poisoned animals in all studied periods increases to 117.2-134.5% in relation to animals that do not receive poison (control). In the liver and mouth, tissue enzyme activity is reduced to 89.0-77.8%, and in the gums and oral mucosa is also reduced to 86-91%. Therefore, in chronic poisoning with SHC, alanine aminotransferase in the serum of the blood is increased, and intensity of re-aminization in tissues is reduced, which suggests impaired permeability of cell membranes and the passage of the enzyme in cytoplasmic fluid and increased concentration of ALT in blood leads to increase.

Similar changes in the studied activity asparaginamide - transferase in the blood serum, which accounted for 15-90 day study 123-110% relative to the monitoring group. Especially, large changes in aspartic acid transamination activity in liver are observed. Activity decreased in the study period of experiments to 82.7-58.8%. The activity of the enzyme in the gums and CO under the action of the studied chemical does not change significantly and remains within the physiological fluctuations. The use of herbal preparations on poisoned animals on the activity of transaminases alanine and serum asparagine has no effect. On the liver tissue has a positive effect, the intensity of their re-aminization is normal. Thus, the use of herbal medicines has an impact on liver tissue: restored hepatocytes when exposed to SHC. We found that with repeated administration of 1/20 LD50 SHC in animals with chronic poisoning, there is a different direction of changes in the activity of amylase and alkaline phosphatase in serum, liver and gums (table 1.5).

**The activity of amylase and alkaline phosphatase in serum and liver oral mucosa with repeated administration of sodium hypochlorite**

Days of study	Groups	Amylase			Alkaline phosphatase		
		Blood Mk mol/l	liver Mk mol/l	Oral cavity Mk mol/l	Blood Mk mol/l	Liver Mk mol/l	Oral cavity Mk mol/l
	monitoring	28,9±1,42	50,7±2,2	44,1±2,13	0,99±0,07	54,1±2,89	46,9±2,47
Day 15	SHC %	22,2±1,15 * 76,8	64,8±3,03 121,6	48,8±1,30 110,6	1,66±0,2 167,7	47,9±2,46 88,7	61,1±2,67 118,6
	SHC+treatment %	36,7±1,67 ** 127	55,7±2,13 110	47,4±1,31 107,5	1,23±0,11 124,2	52,8±1,87 98	55,6±2,16 118,6
Day 30	SHC %	22,0±1,17 * 76,1	46,9±2,22 92,5	42,6±2,6 96,6	1,48±0,1 149,5	42,4±1,23 78,5	41,2±2,10 79,8
	SHC+treatment %	24,3±1,47 84	52,5±2,54 103,6	43,2±2,55 83,6	1,35±0,04 * 136,4	46,8±2,46 110,3	46,8±2,42 117,7
Day 45	SHC %	21,3±1,42 ** 73,7	48,1±2,12 94,8	44,8±2,20 86,7	1,42±0,07 ** 143,4	42,2±1,26 78,4	
Day 60	SHC %	22,8±0,76 ** 79	43,6±2,02 86	45,5±1,32 103,4	1,57±0,04 ** 158,6	38,3±1,73 70,9	

At the same time, the activity of blood amylase in the studied terms decreases 73.7-78.9%. In the liver tissue, the activity of amylase on day 15 increases to 121.6%, in the other periods of research, a downward trend was noted.

To identify the early signs of intoxication of the body with SHC of great interest are studies of the activity of alkaline phosphatase, deciding the question of in what biological media, first of all, there are changes in the amount of the enzyme. Our studies have shown that the most pronounced shifts in enzyme activity are observed in serum and liver tissue. Thus, the activity of alkaline phosphatase in the blood serum in all stages of poisoning is increased and totaled 1,66±0,2; 1,48±0,10; 1,42±0,07; 1,57±0,04; and 1,56±0,07 mmol/L. h, respectively, 15, 30, 45, 60 and 90 days of the decoctions (table 1.5).

In the liver tissue, the activity of alkaline phosphatase with multiple chemical poisoning is reduced to 70.0-88.7%, and in the gingiva and mucosa, enzyme activity at the beginning of the experiment 15 days increased (to 118.6%) and, starting from day 30, decreased from 79.8 to 86.7%.

Consequently, the introduction of SHC in the studied doses leads to a marked decrease in the activity of aminase in the liver and gingival tissue of the poisoned animals throughout the



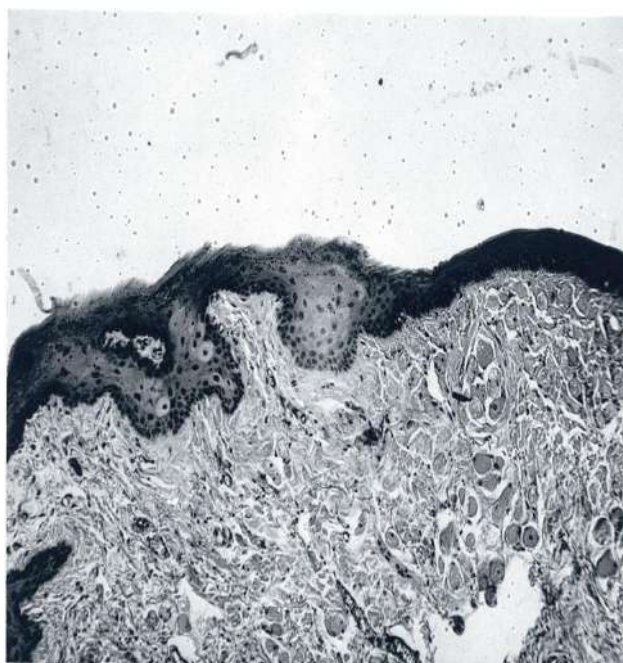
experiments. The only thing that could be noted was that the activity of amylase in the blood serum of the poisoned animals is at the level of control.

The detected increase in the activity of alkaline phosphatase in serum with a decrease in the studied tissues, indicate a violation of the functional state of cell membranes and enhanced enzyme output in the cytoplasmic fluid.

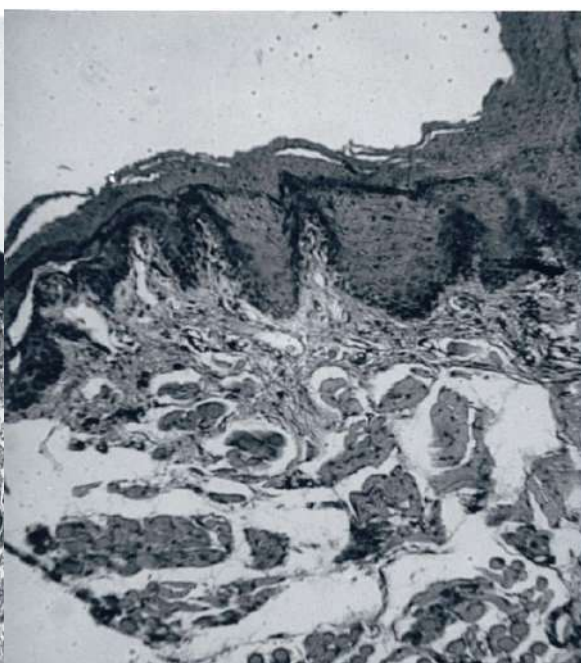
After the end of poisoning, morphological studies of the mucous membranes of the cheek, gingiva and liver were carried out in the dead white rats.

When describing the results of morphological studies, we found it possible to give the pictures of only those changes that were recorded when animals were exposed with a mixture of high concentrations of SHC (5 MPC) of the studied mixture of harmful substances.

When priming with a mixture of SHC, several morphological changes in the cheeks, gums and the liver occurred. The condition of the buccal mucosa is mostly heterogeneous, the epithelium is thinned for a long time and is represented by 4-5 rows of cells with a thin stratum corneum. In some areas, the stratum corneum is detached or completely absent, and the basal membrane is thin, very slightly convoluted Fig 1.1.



**Fig 1.1**



**Figs 1.2**

Spiny cells are differentiated poorly, their nuclei are slightly elongated horizontally, and the granular layer is thin with fairly distinct keratogialin granules.

Basal cell is clearly identified, visible mitotic figures, and dystrophic modified forms, sometimes **discomplexation**. The connective tissue stroma under the thinned epithelium is characterized by pronounced edema, more coarsened and the presence of large blood vessels, some of which are in a state of stasis is noted. The most characteristic feature is the presence a large number of fat cells in these places, glands are located between the muscle bundles and sharply edematous



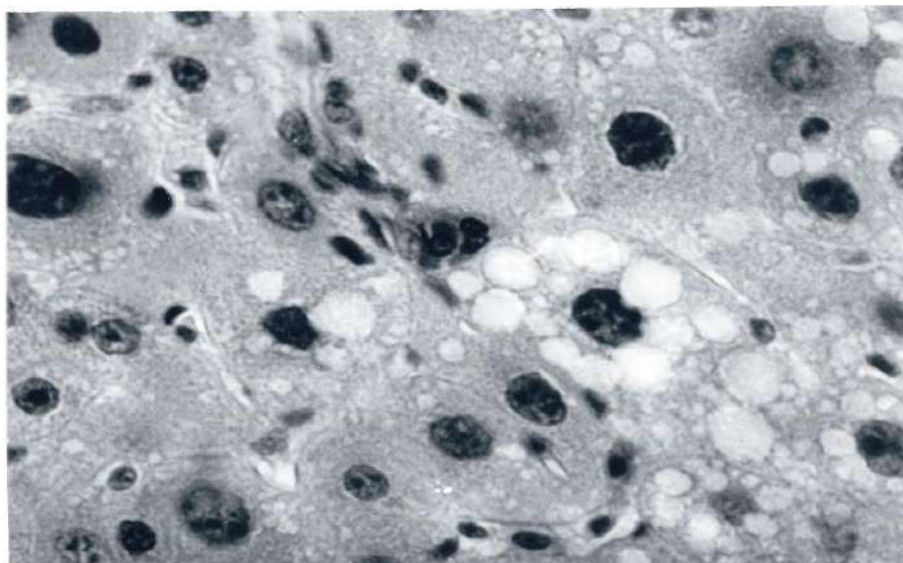
connective tissue stroma, and the collagen fibers are coarse, randomly located, enlarged, some of them hardened. (Fig. 1.1).

When priming with a mixture of SHC, the gum epithelium in all investigated cases is inhomogeneous in thickness, and more over it is atrophied with flattened papillary layer, smooth, poorly marked basal membrane, which are separate areas forms a weakly sinuous line. Epithelium is represented by 4-5 rows of cells. The stratum corneum is thin, sometimes rejected, sometimes layers are visible on its surface. Cells of the spiny layer without clearly defined cell boundaries, some of them swollen with homogenized cytoplasm without distinctly detected intercellular bridges, others-vacuolated. The granular layer is poorly expressed, represented by elongated cells with a small content of poorly contoured keratogialin granules. The nuclei are mainly hypochromic, some of them are in a state of karyopyknosis and the basal layer is poorly expressed. In some places its cells are destructively changed, the cytoplasm of some of them is vacuolated. In some fragments the figures of mitosis can be seen. Basal and spiny cells of the lower rows are disoriented in places. (Fig. 1.2).

The stroma around the vessels is loosened with pronounced edema between coarsened bundles of differently oriented collagen fibers (Fig. 1.2).Gingival mucosa in the presence of small areas of hypertrophied epithelium, its atrophy was mainly revealed.

In the connective tissue, compared with the monitoring group, there is an increase in inflammatory phenomena in the form of pronounced edema in the underlying and deeper located connective tissue stroma, its loosening and collagenization of fibers.

Morphological changes in the liver when inserted a mixture of SHC is manifested in reversible changes in hepatocytes in the form of granular and atomized fatty degeneration, the appearance of the 2-core and polyploid forms, and the development of dyscirculatory changes in the stroma with symptoms of congestive plethora. This causes the development in the liver of deeper dystrophic changes in hepatocytes in the form of fat, vacuole, their dystrophy, pronounced dyscirculatory and inflammatory changes with the presence of perivascular infiltrates.



**Fig. 1.3**

The lobular and beam structure of the liver is not preserved completely, sinusoidal capillaries are narrow, only at the periphery of the lobules are somewhat expanded, the boundaries of hepatocytes are clearly revealed, possibly as a result of pericellular fibrosis. There are areas with large hyperchromatic polyploid nuclei, hepatocytes increased in size, some of them in a state of granular dystrophy. There are groups of large hepatocytes with the phenomenon of vacuole and fatty dystrophy on the periphery of the lobules. In conclusion, we can say, the studied substances in the liver, in addition to the presence of fat and vacuole dystrophy, leads to deeper dyscirculatory and inflammatory disorders, such as congestive full blood vessels with their perivascular infiltration, as well as the appearance of signs of pericellular fibrosis.

Thus, the results of experimental studies have shown that the toxic effect of SHC on the overall body and organs of animals is significantly reduced IF, the conditions of priming animals specified harmful substance simultaneously carried out a set of recommended therapeutic and preventive measures.

This is expressed in the normalization of the general condition and body weight of animals, the clinical state of PR, as well as the regulation of biochemical parameters in the blood, liver and gums.

Thus, with repeated exposure to SHC for 90 days at a dose of 1/20 LD50 (225 mg / kg), a different reaction of biochemical parameters of carbohydrate energy, protein metabolism, the intensity of enzymes of these exchanges in the liver, gingiva and oral mucosa, as well as in the blood.

In biochemical experiments under the influence of SHC revealed significant changes in carbohydrate metabolism, energy-indicators: glycogen and end products of anaerobic glycolysis of lactic and pyruvic acids, the activity of redox enzymes: glutamate, succinate, malate dehydrogenase, amylase. In protein metabolism: total protein content, the intensity of transamination of amino acids alanine, aspartic acid between  $\alpha$ -ketoglutaric acid, urea - cholesterol, alkaline phosphatase enzyme activity in liver tissues, gums and oral mucosa. These changes are not the same when exposed to xenobiotics. Thus, in chronic poisoning in the blood, liver and gums, the greatest changes in carbohydrate and energy metabolism are observed-the activity of alkaline phosphatase. Experimental studies indicate that during the 90-day priming in the blood of animals, in the studied tissues increases the amount of lactic, pyruvic acids, glucose (in the blood), there is a decrease in glycogen levels and reduced activity of enzymes dehydrogenase (GDH, SDH, MDH), which confirms the activation of glycolysis and inhibition of the potential of redox processes in the tissues of the body of animals.

A special place among the functional groups of chemical compounds is occupied by protein metabolism due to their important ration ability. Thus, the activity of alanine aminotransaminase, asparaginates-amines in serum significantly activates, and tissue activity decreases and there is increase of urea in the blood serum.

Consequently, the data obtained indicate the selective action of SHC under repeated exposure to the activity of various enzyme systems. These data also allow us to conclude about the effect on the activity of enzymes phosphorylase-alkaline phosphatase, transaminases ALT, AST, which are increased in serum. In tissues reduced redox mitochondrial enzymes are inhibited in the studied biological media: serum, liver and gums.

Thus, from the data presented by us it can be seen that as early signs of intoxication of animals with SHC, the determination of the content of lactic, pyruvic acids and the activity of alkaline phosphatase, GDG, SDG and MDG in serum can be used.

Based on the results obtained, we assume that with respect to the mechanism of action of the chemical SHC:

First, the introduction of xenobiotics, obviously, the primary receptors of metabolites of carbohydrate-energy metabolism: changes the intensity of glycolysis and activity of redox enzymes tricarboxylic acid cycle.

Secondly, the action of SHC is based on the types of their influence on intracellular mechanisms of membrane regulation and related energy processes.

Third, the nature of the action SHC for these biochemical reactions are different, which is probably due to the specificity of the examined tissues; and; systemic toxicity mixture HHN it was found that its concentration higher than the MPC had a polytropic action, mostly breaking the functions of the liver, Central nervous system and irritating oral mucosa.

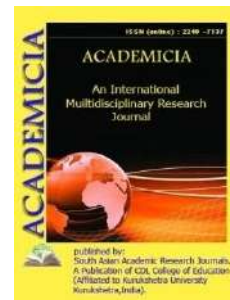
With the introduction of drugs during the 30 days, the poisoned animals were observed approaching the standards of the metabolites of carbohydrate, energy, protein metabolism in blood, liver and gums with the oral mucous membrane.

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## DECORATIVE AND ECOLOGICAL PECULIARITIES OF CATALPA AND SOPHORA TREES IN GREENING

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### ABSTRACT

*Studying the flora of the territory of the Republic of Karakalpakstan, especially, Japanese sophora and catalpa, which are introduced type in today's sharp ecological condition. Quantity and quality of greening is increasing in Uzbekistan, there are appeared terms as landscape projecting, landscape design in the list of greening in people living places.*

**KEYWORDS:** *Forests, Tree, Ecology, Nature, Greening, Japanese Sophora, Catalpa, Decorative, Sprout, Seed, Soil, Moisture, Sun, Wood.*

### INTRODUCTION

Researching strength to create forests households of the Republic started to carry out planting types of wood-bush plants in farms, which are suggested by the conference among the Republic and using them in the actions of greening city and villages.

It is obvious that forests are the strongest weapons in keeping ecological balance in biosphere. The role of forests in creating comfortable environment for human living is important not only in the places where they grow, but also in heartening nearest cities and human living places. Tree branches catch the main part of sun light, acquire it and does the task "umbrella" - saves human from sun radiation. In parks, where big trees and sprouts grow is cooler in summer, because trees and the process of transpiration increases air moisture and makes comfort for human living. Being in connection with nature destroys tiredness of human and calms down nerves. For this reason, construction scale is increasing, the cities are widening in our country. Therefore, it is very important to create comfortable conditions for people to live and rest, protecting environment, especially widening the works of greening people living places. The goal of the field greening is to provide each people of the city with 30 m<sup>2</sup> wood. For achieving this aim we need to increase the size of green zones near cities, to create additional parks, alleys, boulevards.

Japanese sophora - *Sophorajaronisa* L. Fabaceae - is one of the leguminous crops, height is 15-20 cm, wood. In our condition it can reach to 10 m. It has a crown like a sphere. Grows many years, wood crust is dark black - grey, it has cracks. Young branches are green, without thorns. Leaves are complicated, like one feather located on branches one after another, the length is 10-25 cm, leaf string has strands. Leaf has sharp head, 25-29 cm, like lengthened ellipse or wide lancet, 9-17 cm. Surface is dark green and underside is grey.

This type of tree is catalpa decorative tree, which is being used for greening in our Republic. Leaves go down from this tree, native countries are North America and China, there it is widely used for greening. It is a perfected type for greening city and villages of Uzbekistan.

We should pay a good attention to agrotechnics of growing sophora and catalpa trees' sprouts in the condition of saline soil of the Republic of Karakalpakstan, these catalpa and sophora trees certainly grow well from their seed. Japanese sophora - when it ripens it is brown-reddish, yellow-brown, its fruit ripens in September and October, seed is black, like a bud, as a bean. It is hanged on a branch during the winter. There are 45 kinds of sophora family. Mainly grows in Europe, North Asia, mountains of Pacific ocean, Australia and North America. The kind Japanese sophora mainly spread widely in China, Japan and Korea. It was cultivated from 1747. This plant is one of the symbols of China. In 1814 it was planted to botanic garden named after Nikitinskiy in Caucasus, Crimea. Then widely spread to Crimea, regions of Krasnodar, Kherson and Odessa. It is used in phytomeliorative and decorative aim in Crimea.

It is steady for dry and shade but not steady for freezing. Japanese sophora is one of the plants which are decorative, herbs and gives honey. Buds (*lat. AlabastraSophoraejaponicae*) and fruits (*FructusSophoraejaponicae*) are used as a raw medical element. Buds are collected when the weather is dry, at the end of becoming buds and fruits are collected before they ripen. There are flavonoids and mainly rut in the structure. "Rut" specimen is taken from its buds, it is used in treating and preventing hypo avitaminosis, when capillaries are destroyed. First it was known as a plant from which colour can be taken in its native country. Buds which are used as colour are called "Chinese yellow fruit" for many years.

The main five direction of developing decorative gardening in Uzbekistan is choosing local-tree bushes. Now there are appeared conditions for making precious, different types of trees. Catalpa is a new decorative in the condition of Uzbekistan and its morphology, biology was not studied deeply. For this, studying the peculiarities of this plant and the technology of manifolding its sprouts is being done for the first time in climate and soil conditions of our republic. Catalpa grows fast and beautiful in Uzbekistan than its native country and we should widely use it for creating beautiful landscapes as a beautiful tree in the list of greening. The paleography of catalpa types was studied well by A.N.Krishtofovich [20]. In author's opinion catalpa was met in ancient lands of the third period flora of Cheni in China. In scientific resource "Synopsis of the genus Catalpa (Bignoniaceae) [45-46] which was written by J.Paclt, there are given 31 taxonomic types of it, 11 of them are new types, 2 are hybrids, 5 are forms between kinds and 13 are natural and cultural forms. Author suggests to divide Catalpa type into 2 sections; (real catalpas and big catalpas).

The section of eucatalpa

1. *C. tibetica*-tibet catalpa



2. *C. ovata*-catalpa which has leaves like an egg

3. *C. bungei*-bunge catalpa

4. *C. fargesii*-fargesii catalpa

5. *C. bignonioides*-bignonia catalpa

6. *C. speciosa*-beautiful catalpa

The section of macrocatalpa

1. *C. logeissima*

*Catalpa* is a big tree which height reaches to 30 m, diameter is 1,5 m. Mainly grows well in forests, which has alluvial soil, lands which has productive soil. Branches are wide, diameter is 5-6 m. Mainly, the trunk is 50 cm, crust is grey. Crust of young trees is light brown. Leaves are 15-20 cm wide, like an egg or heart. Flowers are big, two gendered, they have white, yellow stripes and reddish, brown spots, they are collected to 15-30 flowers selection. Fruit is dry, seed is cylinder, the length is 25-40 cm and the wideness is 1,5 cm. *Catalpa* manifolds by its seed easy, is planted to soil to 3 cm depth. Seeds grow after 4-5 days. It was observed that new seeds grow best, the growth of the second year seeds is lower. Seeds which are kept 3 years do not grow. 2-3 years' seed sprouts are planted to one place. It blossoms in the 3-4 years for the first time. Seed length is 2,5 cm, it is spread at the two coasts of Mississippi, joining place of the rivers Missouri and Ohio, from the states Illinois and Indiana to Tennessee and North Arkansas. Trunk of beautiful catalpa is light colour, not heavy but very strong and does not rotten. Railway tie and telegraph pillars are made from catalpa wood in North America. Apart from this it is planted in parks and street sides.

*Catalpa bignonioides* is one type of catalpa, the height is 15-20 m and diameter is 1,5 m. Branches are like sphere, they are located on short trunk and create decorative view. Leaves are like whorl, oval formed, wide, the length is 20 cm, the basis is like a heart, if you rub leaves it makes unpleasant smell. Leaf handle is long from 6 to 10 cm. Flowers are 3-4 cm wide, white, 2 yellow and reddish spots are located in two sides. Fruit is 40 cm length, 8 mm thickness, thin, walls are dry. The length of seed is 25 mm, striped. This type is mainly spread in the lower part of Mississippi river in North America, in the states of Mississippi, Alabama and Georgia. Wood is light but strong and steady to rotting, for this reason telegraph pillars are made from it. Leaves fully or partly fall from all types of catalpa. All of them are big trees but only *C. tibetica* grows as a bush. Among the types of catalpa the highest is beautiful catalpa, it grows up to 30 m height naturally. Other types of catalpa is about 15-20 m. In China the type *C. bungei* sometimes grows up to 30 m. Crust of catalpa is light brown and grey, young sprouts are green. By growing crust of tree becomes reddish, then becomes light brown and strands fall down. Sometimes, on sprouts crusts cleave after many years. Branches are like sphere or pyramid. Leaves are long, located on handle, leaf plate is in different forms. The length of leaf plate is up to 20 cm, width is 18 cm, lower part is sharp. The basis of leaf plate is like a heart or round, green colour. Roots of catalpa leaves are like a feather, spread from the center, root of leaves are twisted before reaching to leaf sides. *Catalpa* is a hermaphrodite plant, flowers are two gendered. Fruits are like cylinder and long, dry seed. Root system of catalpas is formed like following: in the first year one arrow root grows on the length of 80 cm on vertical.

Spreading catalpa in Uzbekistan started in 1875 by introducing exotic plants to Zarafshan region of Turkistan according to the information of N.I.Sherbakov [33]. In 1872-1883, types of catalpa was introduced and planted the same as ailanthus, gledichiya, elm and etc. According to the information of O.G.Ottendorf [23] types of catalpa were spread in Ferghana region in XIX century. In 1885, forest sprout growing place was organized in Margilan and catalpa sprout was grown in it. In this period catalpa types were brought to Tashkent. N.I.Sherbakov [33] says that actions of creating forest sprouts started again in Central Asia and people started to plant widely catalpa types for greening. A.V.Gurskiy [13] mentioned that people started to plant widely the type *C.speciosa* from 1930 and the type *C.bignoniodes* from 1940 in cities and villages. S.Muxamadxonov, F.Jongurazov [22] say that simple catalpa was widely spread in ancient times and mainly it was manifolded from seed and sprouts, and planted as decorative plant in parks. I.Kuzmichev, V.Pechenichin [21] assess types of catalpa as fast growing tree, according to their opinion catalpa is a tree steady for hot and dry weather, also gas and smoke in the condition of Tashkent. Authors consider that it is easy to manifold catalpa from seed, for this we need to pick them in autumn and plant in spring. 1 year seed sprouts are moved into caring part and are grown for 3-4 years till they become sprouts, they like being moved to another place and grows well. A.Xonazarov and others consider that it is necessary to use widely types of catalpa as decorative plants in greening. This type is steady to dryness but if there is not enough moisture on soil its growth decreases and it can get dry. It is mainly suggested to plant it separately or in groups in creating alleys, its form like powder (it has white small spots on leaves) - *Catalpa speciosa*, *C. bignoniodes* is widely planted in greening. I.I.Galaktinov and others [12] give full botanic and ecological information about tekoma liana (*Tesoma radicans*), bignonia or lilac leaf catalpa (*Catalpa bignoniodes*), beautiful catalpa (*Catalpa speciosa*) which belong to the family of Bignonia. According to their opinion it is suitable to plant hybrid catalpa (*C.hybrida*) (got as a result of hybridizing bignonia and catalpa like and egg) for greening. This hybrid is a decorative tree with its dark green leaves and yellow-white, smelling flowers. V.P.Pechenichin and others [24] suggest to plant beautiful catalpa more in the condition of Tashkent as a steady tree. K.D. Vil'danova [43] gives information about xilocatalpa which was got as a result of hybridizing *Xilonsis* and catalpa. Apart from these oval leaf catalpa type was also introduced. The following interesting types were also included in the family apart from catalpas.

Chilopsis or desert willow (*Chilopsis linearis* (Gav.) Sweet.) is a bush or a small tree, the height reaches to 10 m. Leaves are like lapcet, the height is 15-20 cm, without strands, usually with clue, short handled. Flowers create collection of flowers, collection of flowers are located on the edge of straw, cup is with strands, flower crown is red or white, height and width are up to 3,5 cm, fruit is not wide, height is 30 cm, width is 6 mm. Chilopsis is manifolded by its seed. It grows well in the conditions of Tashkent, but in winter branches are damaged by cold then grows again. It is spread in South America, North California and Mexico. It is very important in selection and greening.

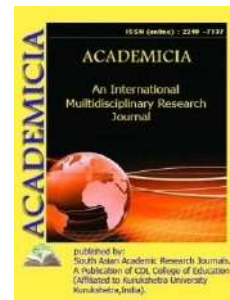
Tecoma or flower like tube (*Tecoma Campsis radicans* Lam) is a bush which grows twisted, the height is up to 10 m. Roots grow to the ground from thick straws and with the help of them it grows by sticking to rough and crack places. Leaves are like a feather, it has 9-11 small leaves. They are like ellipse, egg, the height is 6 cm, sharp, sides are toothed, handle is short. Outside flowers are white-yellow, inside are red, height is 9 cm, width is 5 cm. Seed is like cylinder, long, height is 12 cm, with wings. Seed is with wings, sprawl, brown, height is 12 mm. Tecoma

makes sprouts from root and manifolds from seed. It is steady to dry and hot weather. It is spread in South America. It was brought to Uzbekistan 100 years ago. It is suggested to plant for greening.

Bignonia (*Bignonia cepreolata* L.) grows by twisting to big trees with the help of handles, it can grow up to 20 m. Leaves have thick crusts, oval-long, like lacet, height is up to 15 cm, like a heart, complete, green. Flowers' umbrella is like a tube, handle is short. They are located on flower handle by five, height is 4 cm, flower crown is red, height is up to 5 cm, parts are round, shorter to four times than a tube. The height of fruit is 17 cm, sides are squeezed, width is 2 cm. This plant is spread in North America, Virginia, South Illinois, Florida states, it grows in moistured forests of these regions.

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## MODERN FEATURES OF SUICIDAL BEHAVIOR

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### ABSTRACT

*The article studies the socio-psychological characteristics of the individual, the committed act of suicide. Theoretical and practical problems of psycho prophylaxis of suicide are analyzed. Adolescent maximalist, feelings of loneliness in old age, special effects of the Internet aimed at human behavior, passion and worship of people for wealth, commodity fetishism are studied as factors of suicidal mood. Suicide and attempted suicide are studied from the point of view of existentialism, and Logo therapy, founded by Viktor Frankl, is proposed as their prevention.*

**KEYWORDS:** *Suicide, Suicide Attempt, Death, Consciousness, Intelligence, Adolescent, Factor, Crisis, Adolescent Maximalism, Syndrome, Mania, Social Environment, Internet, Needs, Emotions, Tendency, Disease, Motive, Complexes, Syndrome, Psyche, Psychology, Psychiatry, Psychotherapy, Psychosis, Depression, Aggression, Fetishism.*

*There are many ways to leave life and die. The best of them is to continue to live.*

### INTRODUCTION

In the 21st century, the phenomenology of suicide attempts has undergone certain changes and has begun to change qualitatively. We now have the notion of a "death stimulus" introduced into science by modern Russian researcher Sabina Spielrain, and it is one of the least studied mental phenomena.

According to Zebiniso Ahmedova, a well-known psychologist in the country, instead of the concepts of suicide, suicide and suicide, it is time to call these terms "renunciation of the future

(action, behavior, act)." This facilitates psychological work as a fact that is somewhat more easily accepted by experts and the general public. However, the terms "genocide" and "suicide" should be left as an imaginary category.

### **Methodological basis**

Uzbek and foreign researchers describe behaviors that lead to suicidal behavior in adolescents and young adults, but the type of "suicidal behavior in adolescents and young adults" is not justified by its stable personality traits. In this regard, Russian researchers Sokolova ET, Nikolaeva NN, 1995; Sokolova E.T., Sotnikova Yu.A., 2006; Moxovikov A.N., Donets O.Yu., 2013; Schneidman E., 2013; Blatt S. J., Blass R. B., 1996; The work of Paris J., 2007 can be cited. A number of modern researchers study the above problem in terms of the existential crisis in adolescence. About this L. V. Senkevich writes about the difficulty of overcoming the age crisis due to the increase in the frequency of individual crises (Senkevich L.V., 2011, 2012, 2013). Thus, the individual characteristics of the person exacerbate the age crisis in unfavorable socio-psychological conditions, and this period leads to a negative course. This puts every suicide incident in a situation that is unlike any other and cannot be prevented.

Edwin Schneidman's research in modern foreign research provides a good analysis of the socio-psychological factors of the problem. According to him, the purpose of any suicide is to find a solution to a problem that is constantly tormenting a person. E.. According to Schneidman, a person who commits suicide tends to avoid unbearable mental suffering (Schneidman E., 2013; Erickson E., 1999; Blatt S. J., Blass R. B., 1996; Paris J., 2007). Schneidman refers to suicide as an affective narrowing of the mind that narrows its intellectual capacity, and calls it the "tunnel state of the mind". [2. 66-67]

Experts have done a lot of research on the first feature of giving up one's life. First and foremost, it is the suicide of children and adolescents. As for children, a number of experts agree that the main reasons for this are related to the crisis of the family institution. It means the dissolution of the marriage and the divorce of one or both parents who are still "one in the same" with the child. The second negative factor is the drastic reduction in the amount of time parents spend with young children, distracting the child with questionable electronic entertainment and inanimate gadgets instead of parental love and attention. An additional factor is that the child, who has been the focus of the parent until now, may feel unnecessary and less affectionate with the appearance of the sibling.

Such behavior in adolescence and youth is explained by the maximalism of adolescence, the logical decline and complexity of school education, the crisis of ideals and the lack of ideology, more precisely the system of modernity. Society is in a state of deep cognitive illness, because a large part of society, including its youth (2000s), has character traits that are clearly incompatible with the modern model of spiritual and socio-economic relations. It will be recalled that the famous philosopher Nikolai Berdyaev once described the crisis of ideals as a temporary insanity.

Another category is extreme conditioning syndrome. For example, young people who are involved in car racing or accidents during extreme sports. In fact, these are also unfinished suicide options.

In 2010, hashtags of "death groups" appeared on social media, bringing to the attention of experts a point in their lives. In November 2016, one of the most well-known organizers of such

groups, Philip Budeykin (Blue Whale), was arrested on charges of inciting teenagers to commit suicide. In an interview with the newspaper, he answered the question of whether he encouraged teenagers to commit suicide: "Yes. I really did. But, they died happily. I gave them something that was not in real life: warmth, understanding, communication." [4.12 ] In general, mental crisis is caused by a lack of certain emotions. First of all, mutual understanding, the warmth of interpersonal relationships is formed only in a normal family.

It is known from the history of psychiatry that unhealthy and socially dangerous people (maniacs) give a lot of evidence that they tend to preach their savage and inhumane ideas with sincerity and extreme sincerity, sometimes they succeed, i.e. they can convince mentally retarded young people.

People with such mania can now affect everyone, rich and poor alike. Modern preschoolers are playing with inanimate gadgets, not social story-based role-playing games. This creates a huge gap in the process of socialization and self-awareness of the individual.

As a result, the computer becomes a favorite object that meets the child's need for communication. While the previous generation tried to show obedience to win the affection of their parents, gadgets are now perceived as an almost living being who believes infinitely, is attached to it, and wants to burn. We ignore this close relationship between children and computers. The creators of death groups use this to try to have a strong psychological impact on the target audience. Basically, when influencing teenagers who are introverts and children with a sense of loneliness, they often use phrases like, "It's for someone who doesn't understand, has their own opinion, and wants to hear it ..." and so on.

Here it is necessary to emphasize another peculiarity. In the pre-Internet era, the motive for suicide was personally emotional, naturally egocentric, selfish, focused on others in the struggle for inheritance, love, social or material status, and so on. In the present case, however, the only reason for boys and girls to commit suicide seems to be to satisfy their pathological desires as domination over their lives and destiny, and it is done anonymously, without giving a reason.

It should be noted that the specific form of suicide in society is not always evaluated uniformly. The suicide category should include the movement of rufflers and the like; the passion of successful people for extreme sports also belongs to this risk group. Tattoos are also one of the manifestations of the tendency to commit suicide (torture).

It should also be noted that, in contrast to the World Health Organization (2011) definition that "suicide is the result of conscious actions by a particular person" [3.35], and, at the same time, youth suicide it can be added that in many cases it occurs for absolutely spontaneous, emotional, affective, and unconscious reasons.

It is typical for sick seniors to have "altruistic suicides". Their main goal is the desire to save themselves and their relatives from unnecessary suffering. In other cases, such "altruistic suicide" may be the result of avoiding an embarrassing situation. For example, patients with AIDS. But when it comes to seniors committing suicide, factors such as hopeless poverty, neglect and abandonment of the elderly should not be overlooked. This situation is not typical for our country, but for megacities.

Another case is the competitive motive. In the early twentieth century, this motive was analyzed in the study of cases of student suicide at the universities of Vienna. It was led by young people



in creative professions - musicians and artists. The reason is that this state of mind, described as the "Salieri complex" (i.e., "I am not as talented as Mozart"), is self-evident.

In the past, suicide has been described as a tragedy, a special case involving a person and the people around him. However, the hundreds of events that have taken place so far show that suicide has changed qualitatively. That is, a situation in which a suicide bomber causes the death of many along with himself. Examples include hijacking planes, comedy, shooting people in the face, and then shooting themselves. It is a qualitatively new manifestation of human aggression and its distinctive manifestation. It is a suicide in the form of hatred for humanity and has not yet been sufficiently studied.

The psyche is a dynamic system: if everything was fine in the human psyche yesterday, today a mental disorder can also be observed. Therefore, it is necessary to support the development of psychodiagnostic methods that can conduct high-tech dynamic psychological and psychiatric examination, rather than an annual commission with the participation of a psychiatrist and psychologist in the assessment of human psyche. Of course, this is a complex task at the moment. The shortage of such specialists has not yet been resolved in our country. Private psychotherapeutic centers partially cover the situation, but they cannot provide mass free assistance to the population. The opening of scientific and psychological laboratories and psychotherapeutic clinics in Uzbekistan dealing with these problems is an urgent problem of education, personnel and science. Another problem is that today the science of psychology is moving away from medicine and physiology and closer to the socio-philosophical direction.

Returning to the subject of suicidal terrorists, the reason for such criminal actions is primarily related to the pathological thirst for recognition of the person by others, the narcissistic reassessment of one's own personality (i.e., people seem to appreciate it after death). They thus gain fame. Of course, these cases are being studied by various experts.

This was done in 2011 by American psychologist prof. James Fox explains, "In American society, some people are angry with the world around them, frustrated with it altogether, ruined their lives, and don't want to live anymore. These people are not emotionally supported by family and friends and they think they are responsible for their failures. and seek revenge on those who do not give them a chance to overcome the problems of life. Suicide and terrorism (genocide) carried out under the guise of psychosis are usually one and the same thing. also the demand of the study period.

## CONCLUSION

In the 1960s, Victor Frankl noted the loss of meaning in life for large sections of the population. According to his statistics, the risk of depression, addiction, alcoholism and aggression, car accidents is increasing. The notions of spirituality and ideology have lost their power, and some even believe they no longer exist. Of course not.

What is the role of ideology in solving this problem? First, any ideology has two main functions: 1) it must have an explanatory system aimed at eliminating contradictions; 2) it should give meaning to daily life and unite all citizens of the country around these meanings, as well as describe a positive image of the future. The ideology of our society is young and our people have suffered a strong national psychological trauma because it has been believing in a false ideology for so long. It was a loss of meaning, a loss of trust. After 1992, there was a peak in the number

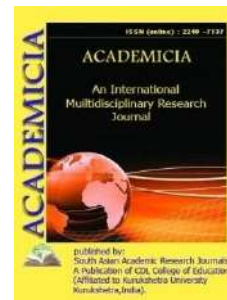
of suicides in our country and in neighboring countries - 46.1 per 100,000 people (and more than 60 in some regions), which gradually decreased to 22.4 by 2012. There are many studies that analyze the relationship between suicide rates and environmental and economic factors, national traditions and characteristics, but they have long been ignored on political platforms.

As noted by modern sociologists and politicians, there is now a worldwide tradition of material status, consumer sentiment, brand fetishism (i.e. devotion to wealth). This is contrary to the ideology of humanity. The great enlighteners understood the roots of this problem many centuries ago and expressed their thoughts and ideas. It is a dangerous tradition to view suicide as a psychological or medical problem, which is more of a social problem. The bottom line is that suicide is directly proportional to the spiritual crisis of society and the individual.

One of the methods we now have for psychoprophylaxis of this unpleasant condition is Victor Frankl's logotherapy. As existential psychology emphasizes, the search for meaning in life and finding it is the most effective way in this direction.

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## ISSUES OF DEVELOPMENT OF POLITICAL CULTURE OF YOUTH IN THE SOCIETY LIBERATION PROCESS

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### ABSTRACT

*In context of forming the foundations of civil society in Uzbekistan, the development the political culture of youth on the basis of creative approach is an important social process, serves to cultivate in our youth the skills as independent thinking, cognizing and a conscious attitude to objective events, moreover it helps to research and solve the existing issues on accordance of socio-political points of views.*

**KEYWORDS:** *Political Culture, Creative Approach, Ideological Processes, Ideological And Political Education, Political Literacy.*

### INTRODUCTION AND ACTUALITY

Nowadays, the struggle for the human heart and consciousness is becoming more intense than ever it has been. Examples include the changing ideological landscape of the world, harmonization of geopolitical goals and ideological policies, growing importance of ideological principles in post-independence countries, ideological processes and the level of political culture of young people in this regard. Therefore, it is important to ensure the effectiveness of the formation of political culture of young people in the world, for studying the forms and methods of effective mechanisms to increase their awareness of political processes. It is especially important to increase the level of influence of young people in socio-political life, to develop their political culture on the basis of a creative approach. Today, more than 60% of the country's population is under 30 years old. This is two and a half times more than in other countries. Forty percent of Uzbekistan's population is under 18 years old. Due to the growing attention in our country to the youth and their development activities, the head of our state Sh.M.Mirziyoev specially pays attention and said: "It is known that the upbringing of the young generation has always been important and relevant. However, in XXI century which we live, this issue is really becoming a matter of life and death[1]". Therefore, "education of independent-minded,

enterprising, courageous young people who are able to take responsibility for the future of our country" [2] has been identified as one of the priorities in the development of the social sphere in our country.

After reaching independence, one of the most important tasks of our time remains to grow up a new generation of thinkers who will adapt to these processes. Particular attention is paid to the implementation of state youth policy and the development of their political culture on the basis of a creative approach, and a number of targeted measures are being implemented. It is known that the improvement of the education system is important in the development of our society. Social factors, including the principles of democracy and humanity, have encouraged members of society to be spiritual nourishment, spiritual support in all countries and at all times. If deep insights into the essence of these principles and values are formed in the family, there is no doubt that they will make a significant positive change in the minds, upbringing, worldview and lifestyle of young people. In addition, a creative approach to improving the system of formation of ideological and political culture of young people is gaining important social significance in the spiritual and moral, educational development of society. In the speech of the President of the Republic of Uzbekistan Shavkat Mirziyoyev at the solemn ceremony which dedicated to the 24th anniversary of the adoption of the Constitution of the Republic of Uzbekistan said: "... the greatest dreams and vital interests of every single person and every family in our country are manifested and realized in the image of his children"[3]. The Presidents such opinions requires to be responsible and indifferent to the upbringing of the younger generation more than ever.

## METHODS AND STUDYING LEVEL

Problems related to the political culture of the individual were analyzed in detail at the end of the last century. A number of philosophers reflected on the problems of ideological and political education in the conditions of the socialist system. Also, in the articles of A.Azizkhodjaev, N.Berdaliev, F.Boboev, A.Jalolov, N.Juraev, M.Zaripov, U.Idirov, D.Nazarov, G.Yusupova and others, important elements of Eastern democracy, special characteristics of the democratization of society in Uzbekistan, issues related to the specific features, the role of democracy in shaping the political image of the individual are showed[4].

In the nineties, Uzbek scientists began to study not only the impact of political processes on the political image of the individual, but also the impact of the individual on public policy. They emphasize the importance of the role of the individual in government, the role of the political leader in the implementation of large-scale reforms.

A. Choriev also makes a structural analysis of the category of "political culture", while E. Bobomurodov thinks about the peculiarities of political thinking[5].

In addition, during the years of independence, the political processes in the country, the problems of forming the political culture of citizens have been studied to some extent in the scientific research of M. Ahmedova, B. Tuychiev, R. Jumaev, I. Ergashev, N. Khakimov and S. Juraev.

## RESULTS OF THE EXPERIMENT

Nowadays, the activity aimed at creating creativity, innovation is understood as a creative activity. Derived from the word creativity (English "create" - creativity, make something new that is not exist), which characterizes the ability of the individual to be creative, the level of creative talent, the individual's readiness to create fundamentally new ideas, far from traditional

or habitual thinking patterns, as well as unique solutions are creative abilities that are perceived as an independent factor of talent.

American scientist D. Vexler describes "creative thinking as a type of thinking that requires a person to come up with multiple solutions to a problem or issue at once, and helps to understand the uniqueness of the nature of things and events, as opposed to stereotyped, boring thinking." Being a creative person, and in our example, to be a creative student, is to have an advantage in today's world, for example, to stand out among other students, to be more interesting than others, to come out of life's challenges in an unusual way. Applying creative skills is not only to create new ideas, but also to improve the lifestyle, or aspects taken separately, and plays an important role in the development of the inner world of the individual.

Specific aspects of the formation and development of political culture in young people based on a creative approach to the formation of political culture in young people, researching it allows us to assess and imagine the level of knowledge of the future political situation in our society.

The use of the following resources to form a political culture among young people is very effective. These are:

- Teachings, ideas and works of great Scientists;
- Constitution and laws of the Republic of Uzbekistan;
- Works, speeches and lectures of the President of the Republic of Uzbekistan;
- International conventions ratified by the Republic of Uzbekistan;
- Science textbooks, literature.

Knowledge of the norms, legal principles, state organizations and functioning of government agencies, including law enforcement agencies, is a necessary condition for the formation of political culture among young people. Successful implementation of the state policy of the Republic of Uzbekistan "National Program for Raising Legal Culture in Society" on the formation of legal culture of the population, on the one hand, to create the necessary conditions for each member of society to acquire a certain level of legal knowledge, on the one hand, to create the necessary conditions for each member of society to acquire a certain level of legal knowledge; provides for the stratification of legal education. In addition, the study of political culture highlights the need for in-depth scientific research and consideration of the specifics of different social groups in society, and encourages it.

The new world outlook formed implies devotion to the Motherland, love for national values and traditions, kindness to one's relatives, loyalty to one's chosen path, profession, profession and faith during the years of independence. The builders of the civil society being built today must have a political culture, for which they must have political knowledge, of course. Because only a person who has political knowledge and reflects them in his behavior is considered politically cultured. It is well known that political culture is an integral part of a person's overall culture. To be civilized, one must be able to follow the law, act in accordance with the law, and analyze the political processes taking place in the country.

The role of political consciousness is important in having a political culture. Political consciousness is one of the forms of social consciousness, that is, it is a set of views and ideas of



people, which represent the political process in society and its relationship to law and the rules. This means that a person should feel justice and hate crimes and illegal acts. What does political culture consist of? Like any home, a building of political culture rests on a foundation. The foundations of political culture include:

- socio-political processes;
- Moral and spiritual views;
- creeds and beliefs.

Depending on the level of development of political culture in society, it is possible to know information about the state of values in public life, such as governance and the rule of law, the rule of law, the development of the system of separation of powers. In a people, nation, society, state with a highly developed political culture, the system of governance will be in a democratic form. In a state where the political culture of citizens is not well developed, the system of government is governed in an authoritarian manner. That is why the level of development of political culture is important.

We know that political culture is not a process that occurs suddenly in a person. For political culture to form, we first need to know what political culture is. In the encyclopedic dictionary of philosophy in the Uzbek language, political culture is described as follows. "Political culture is a unity of political consciousness and political activity, and reflects the attitude of an individual, social group or society as a whole to the social system, government, domestic and foreign policy of the state. It is a holistic system that combines many components and elements. Political culture consists of three aspects: cognition, evaluation, behavior, and manifestation in action. Each of them consists of several components. While the cognitive aspect includes components such as political knowledge, political thinking, political awareness, political consciousness, the evaluative aspect consists of political considerations, political moods, political values, political norms. Behavioral aspects include such components as activism, patriotism, nationalism, inter-ethnicity, which are carried out on the basis of socio-political programs. The basis of political culture is political belief. Political culture manifests itself in different forms and levels. "Political culture can be considered at the level of society (study of the conditions that create the basis for improving the political culture of citizens), at the level of a social group by analyzing the participation of this group in society, at the level of the individual"[6]. Why is it necessary to raise the political culture of young people? The question can be answered as follows, it is necessary to solve the socio-political problems accumulated in society by raising the political culture of young people, to democratize the life of the state, the state and society, and to carry out reforms. In order to develop political culture among young people, it is necessary to conduct legal education and upbringing together dialectically. We cannot pass without recognizing the role of legal culture in the development of political culture. Through legal education, it is possible to study legal factors such as law, law, legal culture, civil society. We know that there are many types of political culture. We need to teach young people an active political culture.

In an active political culture, citizens actively participate in the political life of society. This participation is based on the confidence of citizens to be able to influence themselves through political literacy and political decision-making.



The following issues should be considered in the development of youth political culture. In the early years of independence, Doctor of Philosophy Yuldashev Muhamadilhom Mamayusupovich in his doctoral dissertation posed the following problems and made suggestions to solve these problems:

- Achieving more national content in the political culture of youth, taking into account the national values and traditions of the Uzbek people;
- Using the full use of the rich spiritual heritage, reflecting the political culture of our ancestors in the formation of the political world outlook of young people;
- Broad involvement of young people in the management of state and public affairs, the creation of all necessary conditions for this;
- Formation of their political culture on the basis of moral values;
- Achieving the full enjoyment of the exercise of the constitutional rights and freedoms of young people;
- Supporting multiparty system and ensuring freedom of opinion as an important factor in the formation of political culture;
- Raising the political awareness of young people through the widespread dissemination of political knowledge;
- Formation of youth's inclination to the political values of independent Uzbekistan;
- To raise their scientific and spiritual potential to the level of the potential of the youth of the developed countries of the world. [7]

Political culture plays an important role in the way of life, traditional culture, national outlook and ideology of our people. It is necessary to rely on our national, spiritual, religious, moral, legal and historical heritage, the ideas of our ideology in the complete decision-making of political culture among young people. Therefore, the education of students and youth should be based on universal values, traditions, views of Central Asian thinkers. The ideas put forward in the works of the Qur'an and Hadith, Farabi, Biruni, Avicenna, Alisher Navai, Babur, Nakshband, Ahmad Yassavi, al-Bukhari, al-Termizi, Margilani and other famous scientists, which are the basis of Islam, humanism, honesty, purity, nationhood. Such ideas as love, pride in the Motherland, diligence, and kindness should be inculcated in the minds of young people. Our great ancestors considered the issue of child education to be a priority, regardless of the political, economic and spiritual foundations of the social system of their time. For example, according to the great scholar Abu Nasr al-Farabi, man, by his nature, is a perfect human being in the process of socialization, that is, in society, in the process of interaction and mutual assistance. According to Farabi, educating a person can be done in two different ways. The trainee must voluntarily direct the necessary, mental and moral qualities to be knowledgeable and at the same time to have high moral qualities such as honesty, love of truth, courage, loyalty to friends. For nurturing someone with such human qualities, there must be a team that leads to happiness. Consistent work is needed to raise a person to be a member of a happy community. Education should be aimed at preparing a person to be a mature, perfect person, both mentally and morally. So, the only task of education is to prepare an ideal person who can fully meet the needs of society and serve to maintain it in its integrity, peace and prosperity.

First of all, it is necessary to work consistently to bring up a person as a member of a happy community. Education should be aimed at preparing a person to be a mature, perfect person, both mentally and morally. Therefore, the only task of education is to prepare an ideal person who can fully meet the needs of society and serve to maintain it in its integrity, peace and prosperity[8]. To form a political culture, it is necessary to increase literacy. In order to increase political literacy among young people, it is necessary to do the following.

First of all, young people increase their level of knowledge by participating in different areas of education. They become more aware of the sciences that provide political knowledge, as well as knowledge in various fields of science. The knowledge imparted in educational institutions plays an important role in the development of the political culture of the youth of our country. As the number of students studying political science grows from year to year, so does the level of political culture of the population in our country.

Second of all, political literacy is the direct participation of young people in the political activities and political life of society. Each student expresses his / her views on political relations, conversations on political topics, meetings, events. Such communication and relations affect the individual's consciousness and create favorable conditions for the formation of political culture[9].

Based on the above considerations, by shaping the political culture of young people in the education system:

first, the political foundations of a democratic political state will be strengthened in our country;

secondly, the practice of applying political knowledge in our daily life will be improved in our youth;

third, the political consciousness and culture of the youth will be further enhanced. It is important to constantly enrich the political culture, to carry out consistent political work.

## CONCLUSION

In short, a creative approach to the system of shaping the political culture of young people in the family is an important social process. It serves to cultivate a conscious attitude to objective events and happenings, independent thinking, thinking in our youth. At the same it helps to increase the time management of a person's political principles, political considerations, or inclinations, bypassing destructive, destructive ideas, having a social character, having a strong influence on the human psyche, leading them to the goal, embracing the moral and spiritual obligations of society, to the general happiness of man its focused activities include the development of a society that serves justice and freedom, the achievements in social and spiritual life, and the preservation and preservation of our national and spiritual values. Growing young generation can be ensured only if family upbringing is inextricably linked with social upbringing. The absence of this or that has a negative impact on the educational process.

The formation of the political culture of young people in the family, increasing the effectiveness of education depends in many ways on the ability of our parents to correctly apply the methods and techniques of the educational process. In this case, first of all, it is important to rely on experience, to choose the most effective ways to achieve the goal, to apply the methods tested in practice. Professionalism in the educational process is characterized by the fact that in the family,

our parents or the older generation relies not only on their own experience or on the experience of others, but also on scientific knowledge that reveals the specifics of the educational process. However, given that social life is changeable and multifaceted, focusing only on past experiences will inevitably narrow the process of effective parenting.

Especially, in today's context of radical reforms, when the values, moods, aspirations, interests of young people are changing, a creative approach to the system of formation of ideological and political culture is especially relevant. A creative approach to the formation of the ideological and political culture of young people in the family as an important social issue plays an important role in the implementation of the following tasks:

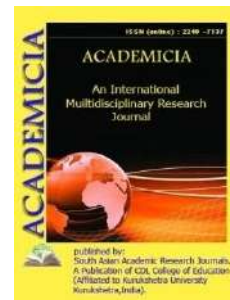
1. Strengthening cooperation between political parties in order to increase the ideological and political culture of young people and their active participation in the political life of society.
2. Organizing actions, forums and marathons against various alien ideas.
3. Achieving the improvement of the system of raising the ideological and political culture of youth through the quartet "Family-school-neighborhood-party".
4. Holding a scientific-practical conference on "Pedagogical conditions for the formation of ideological and political culture of youth in the family" in cooperation with the Republican Center for Spirituality and Enlightenment, the Ministry of Family and Mahalla Support, higher education institutions.
5. Demonstration of videos in the media aimed at the formation and strengthening of the ideological and political culture of young people in the family, increasing the political awareness of young people, political culture.
6. Establishment of a Youth Club to instill a sense of patriotism in young people, devotion to the motherland and the promotion of creative ideas.

Nowadays, Uzbekistan carries out the main tasks of state and society building on the path of renewal and reform of our lives based on the experience gained in the path of independent development. The methods and tools used by our people for many centuries to prepare the younger generation for life, their unique customs and traditions, ideas and life experiences of education, examples of oral and written creativity, are vividly expressed in their works. These thoughts and ideas are rooted in the historical and social conditions, have acquired a universal character, have been gradually developed, and have become an expression of the noble aspirations of the people.

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## THE IMPORTANCE OF DEVELOPING UNIVERSAL COMPETENCES OF FUTURE TEACHERS

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### ABSTRACT

*This article is devoted to the study of the terms "Hard skills" and "Soft skills" the history of origin, the importance of these skills in the preparation of future teachers The article also suggests the importance of skills by the help of different situations and questions.*

**KEYWORDS:** *Hard Skills, Soft Skills, Professional Skills, Communication, Emotional Intelligence, Adaptivity.*

### INTRODUCTION

Nowadays, in various pedagogical trainings and articles the new English terms "hard skills" and "soft skills" are used, but most people do not know about these terms and their meaning, significance and differences.

"Hard skills" are professional skills that can be taught and determined. An English teacher needs sufficient knowledge and methodology in this subject to conduct lessons. To form these skills following instructions and the acquisition of knowledge is required, the quality of education can be checked through an exam. Professional skills include: computer typing, driving, reading, math, knowledge of foreign languages, use of computer programs.

"Soft skills" - universal competencies, sometimes called personal qualities and attributes, which depend on human behavior and are acquired through personal experience, can not be measured by any indicators. Communicative, social, intellectual and volitional competencies such as teamwork, creativity, punctuality, hard work are examples of universal competencies.

The term was originally used in the military during the development of the program, the researchers identified the importance of hard skills for servicemen, as well as universal skills that cannot be taught with planned training.

The differences between these two skills are defined in 1968 in Military Doctrine Design Systems : hard skills are techniques, machines, and soft skills are people and documents. After the military and psychology, these terms began to be used freely in business. At present, they are used in pedagogy and methodology without translation.

While intellect (left hemisphere, intellectual coefficient, logic) is important for successful acquisition of professional skills, emotionality (right hemisphere, EQ - emotional intelligence, empathy) is important for the development of universal competencies.

Professional skills can be acquired in different educational institutions (schools, universities, additional courses). Usually, these skills are formed gradually from easy to difficult. For example, learning English is organized at different stages depending on the level of knowledge: Elementary, Pre-intermediate, Intermediate, Upper-intermediate, Advanced Levels are determined by examination.

Personal qualities (universal competence) are formed and slowly acquired in a person as a result of various mistakes and experiences during birth or life activities.

Professional competencies can be defined by a diploma or certificate, but universal competencies cannot be defined in this way. Personal qualities such as the ability to communicate in teaching, emotional intelligence, effective problem solving, critical thinking help students to communicate and organize their activities. Sometimes there are cases when a linguist's red diploma and high level of knowledge of the language is not enough to communicate with students and effectively organize lessons, the teacher must also have personal qualities. Therefore, in the training of future teachers we need to focus special attention to the formation of universal competencies.

The following situations and questions will allow each teacher to learn about the importance of personal qualities in teaching and whether or not they have these skills:

1. Effective communication. You will meet with the students' parents , the purpose of the meeting is clearly defined. Then you will provide all the necessary information, listen carefully to the parents to determine their views and formulate responses accordingly. It is important to understand their opinion from their facial expression. If you notice that the teacher does not understand something from the parents' facial expressions, they are reluctant to ask, you will repeat this information again.

To find out how you developed these qualities, answer the following question and find out how difficult it was to answer.

You need to explain to your 80-year-old grandmother how online classes are organized! How difficult is that for you?

2. Collaboration or teamwork. You are participating in a competition. Candidates are divided into groups. In this case, the roles should be distributed equally and correctly among all participants. When conflicts arise, you should try to resolve them.

Question:



The team is doing badly because the members are not able to fulfill their roles. How would you deal with this situation?

3. Evaluation and analysis of information. This is the ability to choose quickly and accurately what you need to make decisions.

You have been given a new group to teach, in the first lesson you have learned the level of knowledge and interests, goals of students. By analyzing the collected information, you identify common interests and try to make the lesson interesting for everyone. While explaining a topic to students, you plan in advance how to assign strong students.

**Question:**

You had to fix the problem, but you didn't have the information you needed. What did you do?

4. Creativity is about making non-standard decisions, implementing unusual ideas and taking a creative approach to routine tasks. You need to teach a student who is not good at grammar "The Present Simple Tense". You anticipate the difficulties that may arise and explain the topic using the student's favorite character (from a cartoon or book) so that the topic is easy to remember.

Q: If your life had been a book, what would you call it?

5. Emotional intelligence or empathy is the ability to identify and control the feelings of oneself and others. A student in the class does not pay attention to the lesson because he is not in a good mood. The teacher asks the student how he feels. In this way the teacher can bring him/her back to class by listening to it carefully.

Q: A close friend needs your support, how can you help him?

Your partner in front of you is trying to hide that he is disappointed with you, how do you know that?

You are very upset with the students who did not do their homework. How do you behave?

6. Adaptability is one of the most important skills in problem solving and adaptation to change. You are ready for all your lessons. But in the morning you were told that another teacher was sick and you had to organize his lessons together. You work in different programs, but quickly review the situation and change the lesson plan in a way that is beneficial to all.

Q: Do you remember the most difficult change you faced during your career and how you overcame it?

7. Efficient use of time.

Do you have time to do all the things you have planned for the day?

Do coincidences affect your schedule?

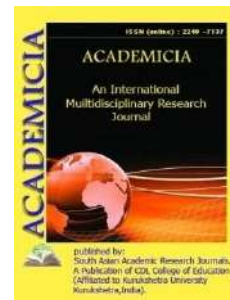
8. Self-control, self-improvement is a conscious attitude to one's life and development.

Nowadays, these personal qualities are important for all teachers, because our attitude to the profession is changing. In the past, the teacher was the only source of knowledge, and a new topic could be learned only from the teacher through a textbook. But now the situation is different. A lot of information can be openly used on the Internet. The teacher guides and teaches

students to think critically as a guide and assistant in the independent study of the material. Teachers who fail to adequately assess the importance of skills cannot teach effectively.

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## THE ROLE OF THE PRESS IN THE PROCESS OF HISTORICAL DEVELOPMENT OF UZBEKISTAN: CLASSIFICATION OF POPULAR MAGAZINES AND NEWSPAPERS.

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### ABSTRACT

*This article discusses the emergence of the press in Uzbekistan, its causes, needs, historical formation, its role in society, its stages of development. The press is based on the fact that during the Tsarist colonial and Soviet eras, the system became a tool of political propaganda.*

**KEYWORDS:** Writing, Periodicals, Pictograms, Ideograms (Logograms), Messenger, Writer, Carpenter, Historian,

### INTRODUCTION

Periodicals have a special place in the deep and scientific analysis of the history of Uzbekistan. Each historical period is studied by contemporaries and the events that took place in the press are sealed. Regardless of the political perspective of the information in the pages of periodicals, their critical study and scientific coverage are important in illuminating the unread pages of history. In particular, the history of the Soviet period is relevant to the situation we have mentioned above. One of the main hallmarks of civilization is writing [Childe, P.9-16; Gulyaev, 1979. P.19], and the first element of the press is writing [Abduazimov, 2007]. As the relations in the society became more active, as people's experience and knowledge increased, there was a need to receive, remember and pass on information to others. In modern parlance, the problem of storing and transmitting information has arisen. This will trigger the appearance of the record.

In science, there are sources and ideas about the "homeland" of writing, its stages of development. According to the scientist VS Drachuk, the stage of development of writing is as follows: pictogram - ideogram (logogram) - syllable-letter. [Drachuk, 1980. P.27]

Although there is an opinion that Central Asia does not belong to the region of inscription [Rtveladze, Saidov, Abdullaev 2000], taking into account the pictographic inscription of symbols

in Sopollitepa pottery [Choriev, Shaydullaev, Annaev, 2007. P.26], the inscription was discovered during the Sopolli culture [Choriev, Shaydullaev, Annaev, 2007. P.64]. Also, Jarqo'ton, Goose inscriptions, the discovery of an Aramaic letter from Katta Oybuyirqala [Mambetullaev, 1979.] in the ancient lands here ... , 1989. B.11] we witness.

In general, in Central Asia, before the Arabic script, the ancient Bactrian, Khorezmian, Sogdian scripts were formed on the basis of the Greek, Aramaic scripts, and the Uyghur alphabet was formed on their basis [Sodikov, 1997. B.3.]. which was. In the early Middle Ages, Turkish script, Arabic language and alphabet, and later Uzbek became the language of communication and administration. The history of the Uzbek language is divided into three periods: Ancient Turkic language (period up to XIV century AD); Old Uzbek language (the period from the XIV century AD to the October Socialist Revolution); Modern Uzbek literary language (from the revolution to the present day) [Abdurahmanov, 1989. P.9-10].

Thus, although language is the most important means of human communication in society, it is gradually evolving in accordance with the development of society as a product of the times. In the East, the roots of journalism go back to the works of medieval scholars [Fixtelius, 2002. B.12], and they can be called the first appearance of the press. In human society, there were special professions that were engaged in collecting and disseminating information, writing messages and informing people and rulers. People in such positions are writers of events in the state of Amir Temur [reporter] [Amir Temur, 2013. P.139; Amir Temur Koragon, 2000. P.285]. Favorable conditions have been created for the rapid transmission of information collected by reporters, the communication system is perfectly set up. The messengers had the right to take the horse of anyone, even a prince or queen, if necessary on the way. [Klavixo, 2019. B.96; Clavijo, 2010. P.127-128] The kingdom also created the legal basis for the profession of "habarnavis". In particular, the transmitter must pay attention to the accuracy, precision, delivery of information without regard to personal interests, otherwise it will be severely punished. [Amir Temur, 2013. P.139] The position of this professional was highly valued, his duties and responsibilities, the information they conveyed were extremely important in governing the state and society. In a sense, this can be seen as the first form of the social media industry. At different times, such professions were dabir (secretary) [Saalibi, 1976. P.11-15; Abdullaev, 1992. P.29-30], writer [Bakiev, Yuldasheva, 2017. P.149; Bakiev, Yuldasheva, 2019. p. 137-143; Voxidov, 2006. p. 56-92; Samarkand, Volume 2, Part 1. 2008. B. 317; Fozilov, Tom. 1. 1983. B.299.], Bitukchi [Bakiev, Yuldasheva, 2019. S.299; Fozilov, Tom. 4. 1983. B.629, 631], leafmaker, leafler [Bakiev, Yuldasheva, 2019. S.300; Fozilov, Tom. 1. 1983. P.145], numerator, numerator [Bakiev, Yuldasheva, 2019, p. 305; Fozilov, Tom. 2. 1983. B.614.], Roqim [Bakiev, Yuldasheva, 2019. S.306; Fozilov, Tom. 2. 4. 1983. b. 530, 631/2; 619/4.], Homazan [Fozilov, Tom. 4. 1983. B.411; 629], darakchi [Samarkandiy, Volume 2, Part 1. 2008. P.277], editor [Samarkandiy, Volume 2, Part 1.2008. B. 69-70], correspondent [Bakiev, Yuldasheva, 2017. B. 82; Xavafi, 1980. S.129; Samarkand, Volume 2, Part 1. 2008. B. 111, 299; Samarkand, Volume 2, Part 2. 2008. B. 422, 540; Shamiy, 1996. B.96, 215], barid-messenger, messenger [Shamiy, 1996. B. 348, 329], Informant [Samarkand, Volume 2, Part 2. 2008. B.597; Shamiy. 1996. B. 85], secretary [Bakiev, Yuldasheva, 2017. P.212-213; Bobur, 2008. B. 129, 179, 190-191, 232], muarrix [Bahodirxon, 1990. B.11; Shamiy, 1996. P.284; Fozilov, Tom. 1. 1983. b. 401, 245/16], storyteller [Natanziy, 2011. p. 47], news (a) [Fozilov, Tom. 1. 1983. b. 67] and is also referred to by other names. These professionals later served as a positive impetus for the emergence,

formation and development of the press in Uzbekistan. The role of the press in reforming society [Trufanov, 1972. p.42; Xmara, 1974. S.188; Afanasev, 1981. S.383; Prokhorov, 1980. p. 50] Jadid representatives, realizing its extreme importance, pay special attention to it. Although the newspaper and magazine-type publications appeared in Turkestan in the second half of the 19th century, the history of the national press began on June 27, 1906. [Dostmuhammad, 2007. P.103; Boboxonov, 2002.] We can read in N.Abdualazizova's researches that Turkestanskies Vedomosti and Turkiston viloyatinin Gazeti were the first publications in Turkestan that were not popular enough among the masses and even among the intelligentsia [Dostmuhammad, 2007. P.102]. [Abduazizova, 2000. B.6.] After that, a number of press releases were published. According to research on the publication of magazines in Turkestan [Abduazizova, 1997. P.252] Before the October Revolution of 1917, the first magazine in Turkestan was Sredne-Aziatskiy Vestnik (March 1896), in the early twentieth century Turkestanskoe selskoe khozyaystvo (1906-1918). ), "For the People" (1907), "Turkestanskiy skorpion" (1907-1910), "Srednyaya Aziya" (1910-1911), "Turkestanskiy kara-kurt" (1911), "Oyina" ( 1913-1915), "Al-Islah" (1915-1918), "Al-Izoh" (1917-1918, Turkestan is terminated by Resolution No. 243 of the Soviet Socialist Republic of Turkestan for non-compliance with the interests of workers) [Sayfullayev, 2019. P.59] magazines, the almanac "Stepnye mirage" (1914) and others were published and they mainly served the interests of the official circles, the local bourgeoisie. During this period, unofficial periodicals also operated in Turkestan. [Shadmanova, 2011. B.5; Dobrosmyslov, 1910. P.145-152] The work of Ziya Said (Soli Kasimov) is a unique bibliography of periodicals published during this period [Rakhmonov, 2009. P.5; Ziya Said, 1927], MP Avsharov's bibliographic index contains information published in Russian in Turkestan and not found in other sources on the history of periodicals [Shadmanova, 2011. P.12; Avsharova, 1960. S.198]. It is noted that 10 magazines were published in Turkestan before 1917 [Abduazizova, 2002. B.11], Avloni testified that 22 newspapers and 8 magazines were published in 1905-1917. Most of them were issued by Jadid progressives who believed that the only way to get rid of the troubles that befell Turkestan was through education [Mahmud, 1924]. These periodicals did not last long because they did not serve the interests of tsarist Russia, but instead worked to increase the national consciousness, social, economic and cultural level of the Uzbek people. [Hasanov, 2015. B.3]. During the period from February to October 1917 in Turkestan the newspapers "Najot", "Shorai Islam", "Turon", "Turk eli", "Ulug Turkiston", "El bayragi", "Ravnaq ul-Islam", "Ozod", "Al- Reforms ", "Izhor ul-haq ", "Bayon ul-haq ", "Yurt ", "Kengash ", "Ishchilar dunyosi ", "Chayon "magazines were published [Abduazizova, 2012. p. 198-202]. These newspapers and magazines published more articles based on the ideas put forward by the Jadids. After 1917, a multi-sectoral system of political party-Soviet press was established in Uzbekistan. The process of formation and development of this press was carried out under the absolute control of the Communist Party. The form and direction of the press were determined on the instructions of the "leaders" of the ruling party. In Soviet times, there was no law regulating the activities of the press, but the form and direction of the press were determined by government decisions, instructions of the "leaders" of the ruling party [Bahriev, 2000. P.5]. Russian-language newspapers Znamya Svobody, Kokandskaya Pravda, Shchit Naroda, Ishtirokiyun, Voice of Workers, Information of the Fergana Workers 'and Peasants' and Red Army Council, published in the national language since 1918, Workers' Shield ", " People's Newspaper ", " New East ", " Dawn ", " Freedom ", " Sun of the Revolution ", " Bukhara News ", " Salvation "and other newspapers published articles promoting the ideas of the system, [Ernazarov, 1962 , B. 15-16]



Newspapers such as the Red Banner did not give an objective assessment of the independence movement, but instead published articles that blamed the independence movement for all social problems [Khamaev, 2018. P.48]. A number of studies have been conducted on the history of the press during the Soviet period [Ernazarov, 1962. p. 221; Rastsvet narodnoy pechati in Uzbekistan. 1983; Shogulomov, Pidaev, 1965. B. 86; Yusupov, 1974. S. 85; Ernazarov, Akbarov, 1976. p. 288; Ernazarov, Akbarov, 1977. p. 310; Yusupov, 1977; Boboxonov, 1979. B. 149; Axmedova, 1983; Atamirzaev, 1983. S.184; Mamatova, 1994]. These studies exaggerate the role of the Soviet press in society and focus on its role. At the beginning of the twentieth century, newspapers and magazines began to be published not only in Uzbek and Russian, but also in Tajik, Kazakh, Kyrgyz, Turkmen and other languages living in Uzbekistan. [Abduazizova, 2008. P.384] In particular, in the Tajik language "Bukhara Sharif", [Rahimkulov, 2017. B. 13-14] "Ovozi tajik kambagal", "Roshnoi" in Jewish, "Bayroqi mekhnat", "Kutulish" in Uyghur, and later "Sharq Haqiqati" newspapers were published. [Ernazarov, 1962. B. 68-72; Azimov, 1994. p. 8-10] These publications in Uzbek and other languages made full use of the style of Pravda, the organ of the Communist Party [Ernazarov, 1962. P.132], published party resolutions and appeals, and paid great attention to the propaganda work of the regime. After the formation of the Uzbek SSR, by the 1930s, the press had become a full-fledged herald of Stalinism. 26 newspapers in Uzbekistan in 1925, [Ernazarov, 1962. P.22] 26 in 1926, [Aduazizova, 2002. P.36-37] 27 in 1927, 25 in 1928 [Ernazarov, 1962. P.22] newspaper, 24 journals, [Abdullaeva, 2010. P.17] In 1933, 54 journals and periodicals of the journal type were published, and by 1937 their number had risen to 57. [Aduazizova, 2002. B. 36-37] On all issues, these publications express not only the official guidelines and views of the party leadership, but also created an ideological basis for the general repression that took place throughout the country during these years. After the formation of the Uzbek SSR, by the 1930s, the press had become a full-fledged herald of Stalinism. 26 newspapers in Uzbekistan in 1925, [Ernazarov, 1962. P.22] 26 in 1926, [Aduazizova, 2002. P.36-37] 27 in 1927, 25 in 1928 [Ernazarov, 1962. P.22] newspaper, 24 journals, [Abdullaeva, 2010. P.17] In 1933, 54 journals and periodicals of the journal type were published, and by 1937 their number had risen to 57. [Aduazizova, 2002. B. 36-37] On all issues, these publications express not only the official guidelines and views of the party leadership, but also created an ideological basis for the general repression that took place throughout the country during these years. Between 1946 and 1990, the press expanded in number and paid great attention to the ideological and political "education" of all people. We can see from the researches of B. Yusupov [Yusupov, 1977] that the press is completely subordinated to the interests of the party and its control is strengthened. The resolution of the Central Committee of the CPSU set the task of increasing the role of the press and raising the ideological level of newspapers and magazines, their use in solving the most urgent tasks of communist construction. [Red Uzbekistan, 1960. 9] By the second half of the 1980s, the so-called "reconstruction" period began to see the effects of freedom of speech and transparency in the press. According to H. Dostmuhammad, the critical spirit was on the rise. The notion of impartiality and impartiality was mixed with the notion of the interests of certain groups in the interests of the people. Corruption and chaos reigned in the society and in the press. [Dostmuhammad, 2007. b. 126-127]



## CONCLUSION

The weakening of the former Soviet power, the collapse of the economy, the various problems in society were encouraging people to look at life with a realistic view. Although the periodical press operated under the control of the Communist Party, it also began to publish articles exposing the problems of the period, imbued with ideas of national self-awareness. Although the cracked ruling party tried to exert its pressure on such changes in the press through various means, it could not stop the growing force. In conclusion, until 1917, the issues of self-awareness, education, and independence were on the agenda of the national intelligentsia - the Jadids. expressed the will of the Communist Party, serving the purposes of the totalitarian regime, which consisted of mobilizing for the struggle for independence. During this period, the press was in need of radical reform due to its complete subordination to party interests, lack of democratic legal framework, lack of press freedom, lack of self-government, lack of a healthy competitive environment, and censorship. As a result of these problems, the press has become a powerful ideological and organizational tool to achieve the goals of the system. Many articles were published on their pages, which falsified the history of the people, undermined national values, widely supported the policy of monopoly in the country, and promoted atheism.

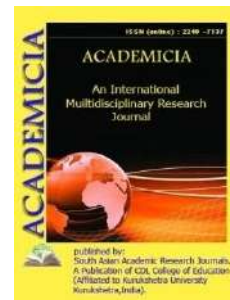
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## THE STUDY OF PHYSICAL AND MECHANICAL PROPERTIES OF CONSTRUCTION GYPSUM AND ITS STUDY ON THE CONSTRUCTION

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### ABSTRACT:

*This article discusses the physico-mechanical properties, curing period and heat release of construction gypsum grades G5 and G6.*

**KEYWORDS:** *Construction, Gypsum Board, Gypsum, Heat Release, Hardening Of Gypsum, Physical And Mechanical Properties.*

### INTRODUCTION

In the Resolution of the President of the Republic of Uzbekistan dated May 23, 2019 No PD-4335 “On additional measures for the accelerated development of the construction materials industry”. At a meeting with industry experts, the President instructed to reduce costs through the introduction of energy-saving technologies in the construction materials industry.

Building materials played a huge role in the development of culture and technique. Without them it is impossible to climb buildings and structures. In the construction materials occupy the first places the connecting substances. When the binder is mixed with water, it begins to thicken as a result of physico-chemical processes, its excitability decreases. This is called the period of the beginning of the thickening of the binding substance, and the last period after the complete destruction of the excitability (hardening).

## THE MAIN FINDINGS AND RESULTS

The basis of modern construction is fasteners. They are widely used in the preparation of plaster mixtures and various types of concrete.

Approximately in 3-4 thousand years BC, binder substances appeared to be obtained as a result of artificial burns. The first of them was obtained as a result of burning a gypsum stone - it was a building plaster. Gypsum Stone is considered a traditional mineral binder of substances obtained as a result of the burning of rocks and has been known to mankind for several thousand years.

Gypsum binders are widely used not only in plastering, but also in obtaining bulk building materials. When obtaining a binding substance, raw materials are natural mountain ash (gypsum Stone rocks, anhydrite).

In the world, a total of 35-40 million tons of gypsum binders are produced, of which 90% are used in construction work. The USA, France, England, Spain are the countries that produce the most amount of gypsum binders. The production of gypsum binders in Uzbekistan is well developed in Bukhara and Fergana regions. Much work is being done on the production of gypsum using the production wastes in Tashkent, Fergana, Samarkand regions.

Gypsum binders are a powdery mineral that is mainly a product of the dehydration of calcium by aqueous sulfate. Natural gypsum stone  $\text{CaCO}_4 \cdot 2\text{H}_2\text{O}$  and natural anhydrite  $\text{CaCO}_4$ , gilgips, as well as various wastes of the chemical industry, consisting mainly of calcium sulfate, as well as phosphorus gypsum, borogips, serve as raw materials for the production of gypsum substances.

Two molecules of aqueous gypsum are light minerals. It has a hardness of 2 on the SRHM scale, a density of  $2.2-2.4 \text{ g / cm}^3$ , and anhydrite of  $2.9-3.1 \text{ g / cm}^3$ . The composition of pure two-molecule aqueous gypsum consists of 32,56% CaO, 46,51%  $\text{CO}_3$ , 20,83%  $\text{H}_2\text{O}$ .

The density of gypsum binders is  $2.6-2.75 \text{ g / cm}^3$ , the average bulk density is  $800-1100 \text{ kg / m}^3$  and  $1250-1450 \text{ kg / m}^3$  in the compacted state. Its normal density is represented by 50-70% water consumption; the degree of fineness depends on the amount of impurities. Due to the fact that gypsum is an air binder, its strength is reduced in wet conditions. To increase its resistance to moisture, cement, puttsolan minerals and blast furnace slag powder, water-resistant polymers are added or the surface of the gypsum product is covered with varnish - paints and films.

According to the hardening properties, gypsum binders are divided into two types: fast-setting gypsum binder construction, ultra-strong, mold and medical gypsum, slow-setting anhydrite cement and high-strength gypsum gypsum binders.

The biting and hardening times of gypsum depend on the nature of the raw material, its preparation conditions, shelf life and conditions, the amount of water added, the ratio of gypsum to water - S / G, binder and water temperature, mixing conditions and the presence of any additives.

This condition causes a number of inconveniences, as the mixed plaster must be applied before it bites. If the biting process is disrupted, the crystalline tumors that form will disintegrate and their strength will decrease dramatically. It is therefore possible to finish using the plaster before biting or to mix it in small amounts or to add substances to the plaster that attenuate the biting process.



Special diluents are added to the plaster to prolong its bite time. Colloidal solution-forming, semi-aqueous gypsum (density 2500... 2800 kg / m<sup>3</sup>, bulk density 800 ... 1100 kg / m<sup>3</sup>, bulk density 1250 ... 1450 kg / m<sup>3</sup> in compaction) attenuates the melting rate and, as a result, two Examples of materials that delay the crystallization of molecular aqueous gypsum are bone glue, casein, gelatin, glycerin, magnesium, calcium salts. Water heated to 60 ° C can also be used to prolong the biting time of gypsum.

Enterprises are required to accelerate the biting of construction gypsum in order to make gypsum building materials and harden them in the cold. In the implementation of this, two aqueous gypsum, table salt, potassium sulfate, sulfuric acid, alkalis, potassium silicon fluoride and many other substances are added to the construction gypsum.

When construction gypsum looks more, very soft and quick-biting molded gypsum is formed. Construction gypsum is divided into two grades according to its quality. The tensile strength of gypsum is determined in samples prepared by casting in a mold measuring 40x40x160 mm. To prepare a gypsum mixture that meets the requirements of GOST 23789-2018, great attention should be paid to the amount of water.

In the laboratory, construction plaster G5 and G6 of the scientific production and commercial firm “Imorat-ADA” of Jizzakh region was selected. Normal thickness of construction gypsum, tensile life, flexural and compressive strength was considered as physical and mechanical properties. Samples of 40x40x160 cm were prepared in the laboratory. The test results are given in Table 1 below. The strength is given by evaluating the hydraulic press performance by dividing the surface area of the cube side.

The test time of the samples was set at 2 hours, during which the samples were tested for bending and compression in accordance with Interstate Standard 23789-2018 using a hydraulic press, and the results of testing the samples were determined.



Figure 1. Determination of bending and compressive strength of gypsum; a) bending, b) compression

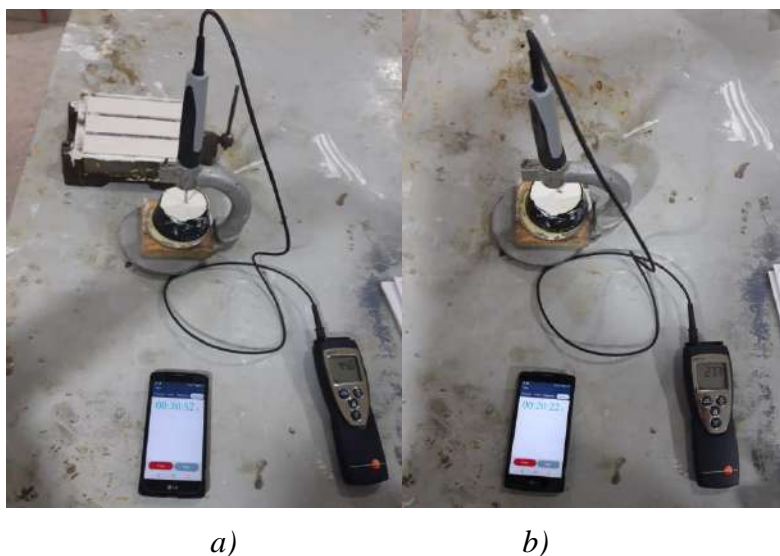
**TABLE 1 BITING TIMES OF CONSTRUCTION GYPSUM, (MINUTE-SECOND)  
OBSERVATION**

№	Gypsum type	Normal density, cm	Bite times, minutes-seconds		Bending strength MPa	Compressive strength MPa
			Start time	End time	2 hour	2 hour
1	Г5	17,5	1-40	17-55	5,42	5,49
2	Г6	18,0	2-13	18-15	5,62	6,05

During the hardening process of gypsum, its volume expands by about 1%. This makes it easy to use gypsum in the manufacture of architectural items, to close cracks and for other purposes. According to Interstate Standard, the beginning of construction gypsum biting should be after 4 minutes, and the end should last from 6 to 30 minutes. Hence, construction gypsum is a fast-binding and quick-setting binder.

The results showed that the curing period of G5 grade construction gypsum lasted up to 17.55 minutes and the curing period of G6 grade construction gypsum lasted up to 18.15 minutes.

The use of gypsum binder is highly dependent on its crystallization rate. Water accumulation of gypsum binder is an exothermic (heat release) process.



*Figure 2. Determination of heat release of gypsum of G5 and G6 brands; a) G5 and b) G6*

Heat dissipation diagrams of our samples taken in the laboratory, G5 and G6 grades of construction gypsum are given.

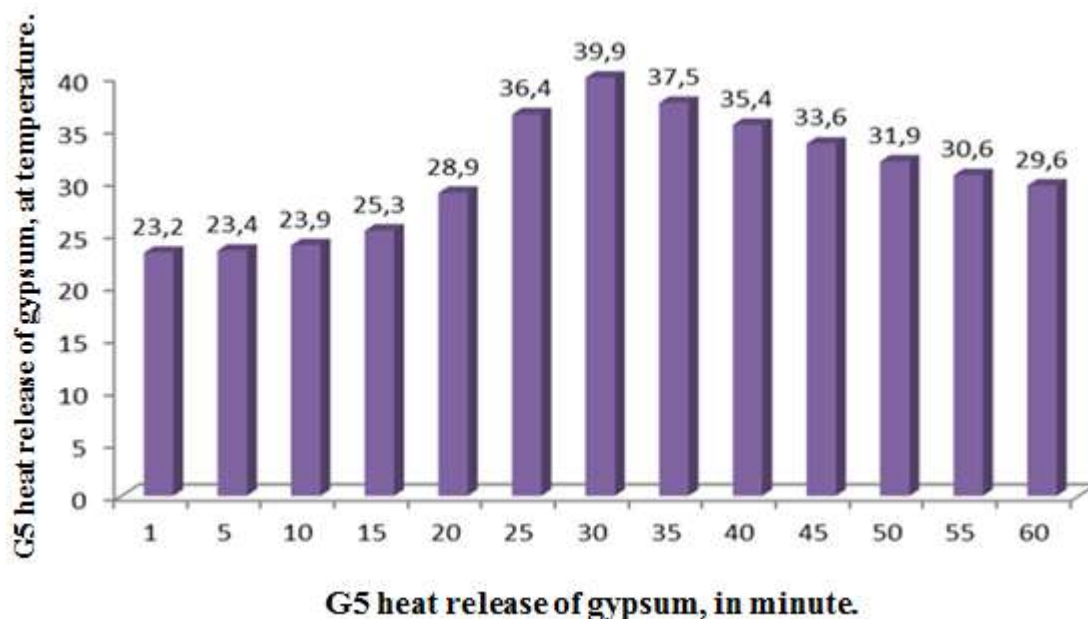


Figure 3. Diagram of the process of thermal separation of construction gypsum grade G5.

During the gypsum test of the G5 device, the room temperature was 22 ° C. From the 1st minute heat dissipation, the temperature began to rise from 23.2 ° C and after 30 minutes the construction gypsum reached a maximum of 39.9 ° C and started back again.

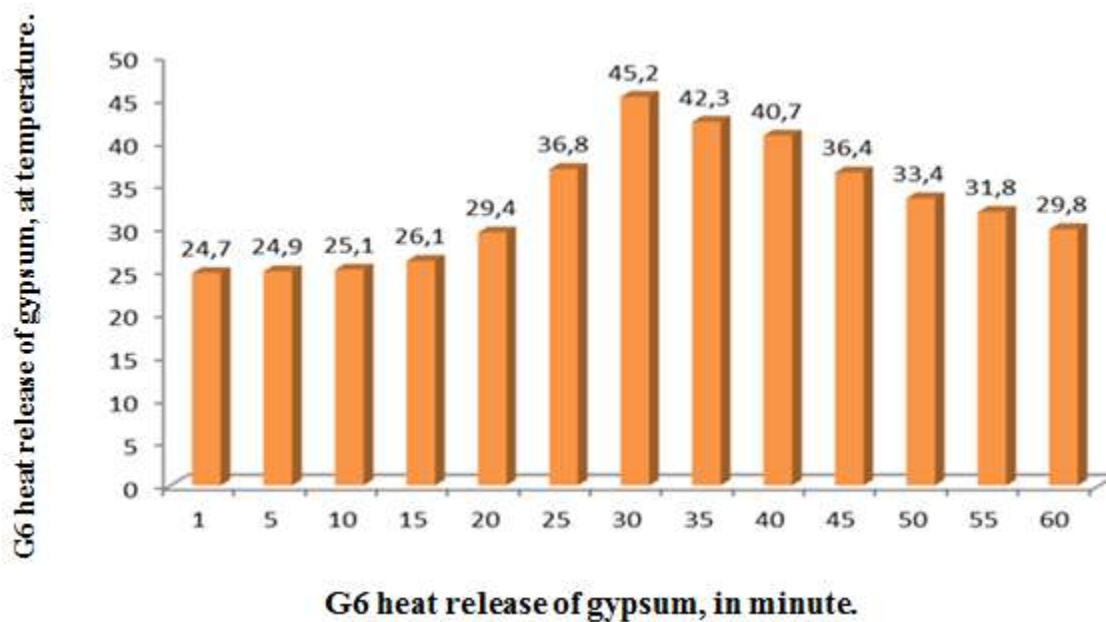


Figure 4. Diagram of the process of thermal separation of construction gypsum grade G6.

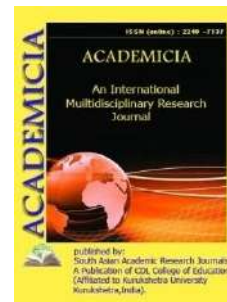
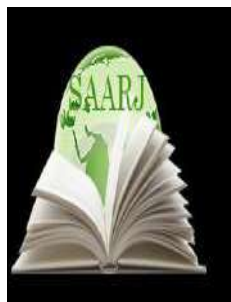
The gypsum test of the G6 device was carried out at a room temperature of 22.3 ° C. From the 1st minute the heat dissipation, the temperature began to raise from 24.7 ° C and after 30 minutes the construction gypsum reached a maximum of 45.2 ° C and started back again.

## CONCLUSION

To conclude, the physical and mechanical properties of gypsum grades G5 and G6 and its thermal conductivity were observed. The normal thickness of G5 construction gypsum is 17.5 cm, the curing period starts from 1.40 minutes and ends in 17.55 minutes. Heat dissipation reached a maximum of 39.9 ° C in 30 minutes. The normal thickness of G6 construction gypsum is 18 cm, the curing period starts at 2.15 minutes and ends at 18.55 minutes. Heat dissipation reached a maximum of 45.5 ° C in 30 minutes.

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## **FORMATION OF CREATIVE COMPETENCES OF THE FINE ART FUTURE TEACHERS DESCRIBING GEOMETRICAL FORMS (ON SAMPLE OF PENCIL DRAWING LESSONS)**

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### **ABSTRACT**

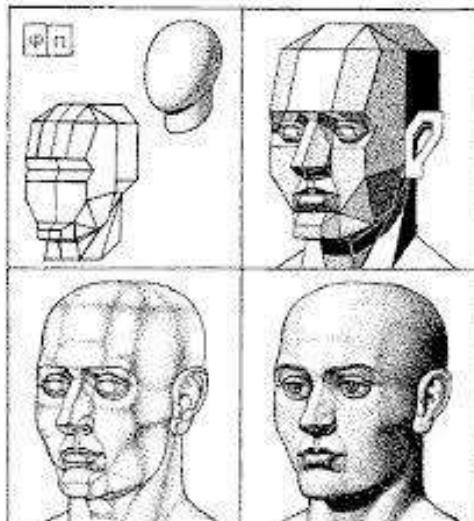
*The article discusses the role of pencil drawing in the formation of the creative competence of a future teacher of fine arts, the methods and techniques of using geometric shapes in drawing. The article also shows a step-by-step geometric representation of David's face in depicting the shape of a human head.*

**KEYWORDS:** *Fine Arts, Penmanship, Professional Competence, Geometric Representation, Methodological Consistency, Creativity.*

### **INTRODUCTION**

Decree of the President of the Republic of Uzbekistan dated April 29, 2019 No PD-5712 "On approval of the Concept of development of the public education system of the Republic of Uzbekistan until 2030", improvement of teaching methods, development of practical scientific research aimed at studying alternative approaches and scientific substantiation ". This shows that one of the most important tasks is to improve the creative competence of the future student of fine arts in the specialty [1, 2019].





### THE MAIN FINDINGS AND RESULTS

In higher pedagogical education, the subject of penmanship, along with all other disciplines, plays an important role in the professional training and formation of creative competencies of future teachers of fine arts. Pen is the leading science in all educational institutions specializing in fine arts. All in the category of fine arts, which provides professional training of future teachers of fine arts in higher education: "Plastic anatomy", "Painting", "Composition", "Technology of fine arts and printing" and "decay" is the theoretical basis and foundation of such disciplines. The great Michelangelo Buonarroti, a Renaissance painter, sculptor, and fine art theorist, made the following point. "Pencil drawing, in

other words, the art of drawing, painting, sculpture, the pinnacle of architecture, is the root and source of all science" [4, 1984].

Indeed, penmanship is a key discipline in the training of future teachers of fine arts and design in higher education. That is why the professional training of future art teachers is one of the most important tasks today.

The results of many years of practice show that in the fine arts it is not difficult to build a perspective image of a simple geometric object, but it is much more difficult to create a perspective effect of a portrait, human figure and other similar complex shapes. Therefore, based on the pedagogical principle of education - from simple to complex, from general to specific, Renaissance artists used the simplest geometric shapes in their teaching to depict complex shapes. They were taught to see and imagine the shapes as a whole, as well as each part of it on a geometric basis. Following this principle, the painter had to sculpt the shape like a sculptor and imagine its generalized appearance.

This is illustrated by A. Dürer (Figure 1). This technique has been used by many artists to analyze and construct images of the human head. An example of this is the paintings by Golby and Sean, two of the oldest painters. Practice has shown that the cross-sectional method makes it much easier to master the principle of perspective construction of the image. Since the Renaissance, and even to this day, this style has been used by educators.

Later, the great Russian artist-pedagogue D. Kardovsky spoke about the principles of drawing and teaching methods; *"So what is form? - These include geometric objects; cube, sphere, cylinder, and so on. They are objects of one character or another. Of course, the shapes of living things cannot be exact geometric shapes, but in fact they are close to these geometric shapes"* [2, 2006].

The subject of penmanship is the basis of all special disciplines taught in art faculties and provides a direct link between them. Without sufficient knowledge and skills in painting, a student will not be able to master composition, painting, sculpture, folk arts and other specialties at a high level.



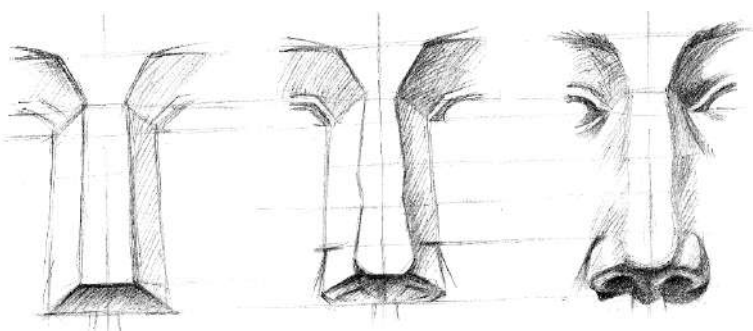
At present, the most pressing issues in pedagogical universities and institutes are the development of theoretical and methodological bases for the teaching of specialty subjects, including pencil drawing, and the development of new scientifically based ways, forms, content and methods. They are:

- To determine the current state of teaching fine arts to young people on the basis of state standards of fine arts education and to develop its future directions for the coming years;
- Scientific and methodological analysis of the activities of institutions that train specialists in the field of fine arts;
- Ensuring the development of young people as highly qualified professionals by expanding the use of local resources in the training of teachers of fine arts and the development of highly talented, loyal to the Fatherland, fluent in the art of national and world peoples. to ensure that they grow up to be people who can love and appreciate our culture.
- Training of highly qualified teachers for secondary special vocational colleges, secondary schools with a high level of theoretical and practical knowledge of penmanship, equipped with modern information technology.

This means that in order for a student to do his or her homework properly, he or she must first and foremost follow the laws and regulations that apply to the visual arts. Through them, he must exaggerate the primary objects in the image in the course of performing academic tasks, accurately describe the characteristics of the form, and make the secondary objects less general and simple to the eye.

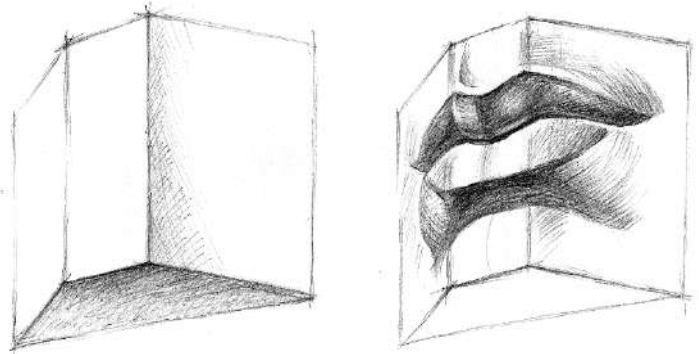
The laws and regulations in the field of fine arts, especially in the field of educational writing, are based on the laws of nature. These laws influence the development of the visual arts. The laws of illustration increase the competence and skills of students in drawing, develop their creative abilities, and thoroughly prepare them for future pedagogical activities. In order to develop students' drawing skills based on geometric shapes, we will get acquainted with the basic laws of construction of the nose shape from parts of the head shape (David's head sculpture) Figure 2. A plaster cast of David's head is recommended for the study of skulls in art schools of all types and stages.

When drawing a picture of the nose, the methodological sequence of image construction is followed - from simplicity to complexity, from general to specific. First of all, it is necessary to determine the prismatic shape of the nasal plaster specimen; we determine its position and proportions in width (according to the laws of perspective). The location and orientation of the nasal prism (anterior, inferior, and, if visible, the two lateral surfaces) are then determined. If the nasal prism is frontal towards us, then the anterior surface is well visible, and the rest is in perspective contraction; if we look down at the nasal prism, the lower surface of the nose is spread out and well visible, while the anterior and lateral surfaces are in perspective contraction.



Prism - If the structure of the nose is in four or three turns or in a profile, the side surface of the nose prism facing us is better, and the rest of the surface is in perspective contraction. Therefore, first of all, we need to correctly determine the general shape of the prism-nose in the image, to determine whether its position is correct according to the laws of linear perspective in latitude, and to check its proportions. This will open the structure of the form according to our scheme.

When drawing the lips, carefully observe the nose-lip shape plastic in front of the corners of the lips. The upper and lower surfaces of the lips are pulled in as they approach the corners, and the protruding part of the cheeks (nose and lips) seems to close to them. In most students, on the contrary, the lip arrows protrude forward; they are spread out on the pattern, so the plasticity of the entire lower part of the face is broken.



Students usually make their reflexes very bright. Use the following method to test your reflex strength; look at nature and close your eyes a bit while seeing the reflex - if the reflex disappears, it should disappear in the picture as well. If the reflex is too bright, it should be slightly lowered. To see the integrity of the shape in the picture, move it further away from you.

As you master the material, make sure that the pictures you draw at the same time are expressive. To this end, it is important to copy the classic manual. In this process, the student learns not only the form, but also the material properties of the forms.

Copying helps you control the pen and see the expressiveness of the graphics. These exercises also help to reveal the expression of color and shape.

To better understand the laws of lip construction, you need to draw a series of pictures of living nature (as a nature, your own image in front of a mirror also works).

In the implementation of this, the student draws himself with the help of a mirror, in the process of which he can try to express not only the plastic characteristics of the lips, but also his emotional state. Lips are very expressive, and a person can express his mood with his lips. The person raises the corners of the lips in a good, cheerful mood (i.e. laughs); when he is sad or crying, on the contrary, he lowers the corners of his lips. You need to lighten your lips in different emotional states and observe how the edges of the upper and lower lips change character, what the line of the lip line looks like. The shape of the lips varies from person to person (pay special attention to the appearance of the lips).

The expressiveness and character of the shape of the lips also depends on the thickness of the lips. The light spreads over the head, allowing the artist to see its plasticity. Initially, a person perceives the shape of the head very quickly in a generalized way; the head looks like a ball, the neck looks like a cylinder, the nose looks like a prism, and the eyes look like a spherical shell. Only by looking closely can the artist begin to grasp the subtleties of the plastic description of both the head and its parts.

From a psychological point of view, a person first begins to perceive the general form of an object, and only then its parts. The results of scientific research provide a basis for distinguishing five main stages of the cognitive process:

1. Distinguish between the spatial position of an object and the approximate estimate of its overall proportions:
2. The form stands in the raccoon:
3. Distinguish changes in perspectives:
4. Perceive the form in the same general way when its details are given indistinguishable:
5. Display the shape exactly to its details.

In case of compliance with the laws of visual perception, it is necessary that the drawing depicts, first of all, the general appearance of the head, indicating its shape-windy features.

Artists have been emphasizing this need since the Renaissance. For example, Alberti wrote in his book "Three books about painting". "When we look at something, we see that it occupies a certain place in space. Later, when we look deeper into this body, we see that all its many parts have come together"[3, 2017].

Artists and educators of the XII-XIX centuries also derived from the simplest geometric shapes in the depiction of complex shapes (Karrachi, Preisler, Losenko, Shebuyev, Sapojnikov, Dupuis, Chistyakov, Ashbe and many others). For example, Anton Ashbe, a Yugoslav art educator, used the "ball principle" and color modeling as the basis for his system of teaching to draw a sketch. The artist and educator D. Kardovsky believed that the first stage of painting is the use of the method of "cut" drawing. It should be noted that almost all artists from different schools and disciplines have come to the same conclusion; In describing the structure of the head, it is necessary to start large by exaggerating the appearance of the overall volume, and then move on to the smaller parts [3, 2017].

## CONCLUSION

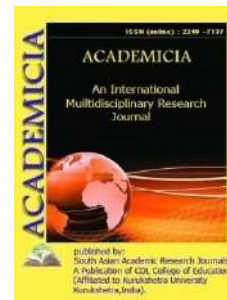
To conclude, the use of geometric methods of drawing in the organization of pencil lessons to form the creative competencies of a future teacher of fine arts should take into account the following main aspects:

1. Observation of existence, analysis of everything on the basis of elementary rules.
2. Draw simple things with a pencil, identify shadows and lights;
3. Draw and show the volume using the principle of comparison with geometric objects in the description of both simple and complex shapes.
4. Theoretical analysis of the shadows formed in the forms, their relationship.

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## CLASSICAL TEXT STUDY: HISTORY AND EXPERIENCE

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### ABSTRACT

*The following article is dedicated to Alisher Navoi's work "Khamsa", and artists over the centuries by various cases of clear prose. It is also drawn attention to adjust the interpretation of the works of changes in attitude to the works of art, the analysis of the level of understanding of the classical works of the reader. The characteristic features of that period, according to the needs of readers reviews were transformed into prose, carried out by analyzing changes in the first prose description of "Nasri Xamsai unique" case-lit. There were analyzed the original interpretation of the work, which shows the mistakes and flaws. English literature, research and analysis to new resources, "Nasri Xamsai unique" are presented as the comparative analysis of the case.*

**KEYWORDS:** Alisher Navoi, Hamsa, Poetry, Prose, Period, Reader, Publisher, Prosaic Statement, Stone Press.

### INTRODUCTION:

During the history of human civilization, there have been artistic treasures, all the spiritual descendants of the fullness of time, have been reading their influence steadily. Great Uzbek poet Alisher Navoi, which consists of five poems "Hamsa" (the fifth) is one of such works. For centuries, "Hamsa" was part of the poem, artists and calligraphers copied them in order to convey to the public the content of the work illustrated with miniatures. However, according to the requirements of each time it is not kept to its brahma uniform. Sometimes scribes to copy them to change the name of poems, through its innovative products, enter a brief part of the book "Amazed Abror" epic omitted from some of the narrations of the five integrity.

**MATERIALS:**

As you know, from the end of XIX century to the beginning of XX century the literature lovers of original stories of "Hamsa" were kept reading among intellectuals and common people and work in the style of the book of prose poem options was wide spread. Folklore "Hamsa" will continue in the direction of the intrigue of stories "Farhad and Shirin", "Layla and Majnun", "Bahram and Dilorom", "Iskandarnoma", "Amazed Abror" philosophical poem, which was not only a subject line, such as the creation of the common options. Natural writer Nosirxoja Vala Mansurxoja "Layla and Majnun", by poet grieve, "Farhad and Shirin stories," Mirza Secretary Alexander Namangani a great adventure novel "Iskandarnoma" s prose. Tashkent State Institute of Oriental Studies at the Center of Oriental Manuscripts named after Abu Rayhan Biruni many other prosaic stories of the same name created by the presence of the people, "Hamsa" poems written literature and folklore has served as an inexhaustible ideological source. In general, Alisher Navoiy the next phase of creative works devoted to the school as an example inspires them.

At the beginning of the eighteenth and early nineteenth century poet, who lived on behalf of Omar Baki Khan of Khiva Avazbiy Anakin "Khamasa" poem, "Farhad and Shirin", "Layla and Majnun" of creative, independent prosaic statement. Turkish Literature Khan of Khiva Avazbiy work, "Hamsa" to create a prose description of the cargo Omar ever undertake course, refers to a specific destination. The palace environment Navoiy understand the essence of the poem, and read the content of the original, deeply educated people capable of understanding a lot, but the masses of ordinary people can enjoy even more important to isolate. Academic A.Kayumov Ogahy carried out by the Khorezm order Muhammad Rakhimkhan Firuz Khan Nizami novels, "Haft Pike" free prose translation of the poem analysis, explains the goals set in its translation: "the initiator of the translations increase orders and supplier of Khorezm Muhammad Khan Rahimxon Feruz. He is the head of state. So, East masterpieces of classical literature to the public of the state policy in the field of education and culture event. This is the general public in the event that works and stick to familiarize the public with the effects to show, educate society, would continue to benefit from the ideas and works of service " [Kayumov, 2009, p. 28].

Thus, the Khan of Khiva Avazbiy Anakin socio-political, cultural and educational purposes Navoiy for the public to understand the purpose of the creation of a simplified version of the poem, I knew that. Prose descriptions Navoiy through deep humanistic ideas, creative minds of the people in mind. Umar talented artists ever work carried out by their results soon. Prose descriptions Navoi become one of the most beloved works of the night and spread across the entire region. The first of the lithographic printing according to the needs of self-publishers, readers will be published repeatedly.

**DISCUSSION:**

In fact, the promotion of the works of Alisher Navoiy say a little inappropriate. Not because of her work since the creation of the entire Turkic literature, the reader is not heard. But until the remains of the classic poem, increase again. Accelerate the popularization of the works of the creator of the saga.

Among the people due to particularly strong interest in the romantic-adventure books, "Farhad and Shirin", "Layla and Majnun" poem, prose versions of options and more creativity. As you know, Alisher Navoiy, "Farhad and Shirin" at the ancient eastern portions of the literature on the



part of the tradition gives praise to Allah and the Prophet. After Nizami Ganjavi teachers, Xisrav Dahlawo, Rahman Jami, who praised his friend Hussein Boyqaroni Bethel lights. People form of prose description of the creation of creative options in this section of the book are omitted.

Omar ever Navoiy more creative approach to the text of the legends, folk narratives, like any other major events in a statement, according to traditional prose sentence poem (Chapter 11) and the conclusion (Chapter 2) describes the prose plans. The main events Farhodov were born, and ended with the death of lovers. This is the original text and creative memory does not relate to the sensitivity of the genre taken into account.

This explains the choice of this particular study, the scientists N.Mallaev statement: "This, of course, Umar lasting Navoiy" preamble "and" Memory", but not indifferent form to a specific request, the method and style of expression," he said , and these sections Omar enduring great enlightenment, spiritual, aesthetic, and highlights the creative inspiration [Mallaev, 1973, p. 135]. Omar is eternal poem, traditions of the people of that time, the shape and direction of the story.

During this period, even translators, DTP publishers, book reader works in accordance with the level of simple, tried to. "Some of his works were translated into composite parts, reducing translators. Most of this reduction of the start of a part of the work, dedication and traditional praise" [Komilov, 1976, p.16].

Lithographic printing publishers, who worked in the early period of the twentieth century works of classic literature as active promoters of the process closer to the people, seeking to publish and distribute multiple copies. The situation in revenues, readership now in various development options, "created by Alisher Navoiy and allow her to enter deeper into the understanding of the validity of the original copy, and so the key will be to review the need for suspect " (Salomov, 1983, p. 149). Navoiy description of the first prose poem "Nasri Xamsai a unique" natural needs, the result of a creative process. Prose description created by the publisher Mir bin Shohyunus Mahdum Tashkent and Ghulam Hassan Orifjonov the year 1908, published in the Arabic alphabet print.

"Hamsa" Description of the first prose poem "Nasri Xamsai outstanding" at a certain file, there are many quotations. Edri original text has some way to reduce the omission in the evacuation, works of prose period, according to the requirements of the authors describe some of the clips are omitted from the description.

## FINDINGS:

Spoiling the inscription, "Hamsa" as a unique, unique and invaluable work indicates that the expression of a work of prose, the statement "Nasri Xamsai unique" names. In turn change the name of the poems and folklore storytelling tradition "of Farhad and Shirin", "The story is Layla and Majnun", "Narrative landscape Bahram week", "Iskandarnoma" style names. The ancient stories, "stories of King Jamshid", "Hasan and Husayn stories" and "The stories she Dilorom" story called simultaneously, such as that represented genres. Mir is the traditional way to attract the attention of readers have named Mahdum.

"Khamsa" poem in the traditional procedure, have a strong sense duration of sentence they are placed as follows:

Iskandarnoma

Narrative landscape Bahram week

Layla and Majnun stories

Farhad and Shirin stories

As is known, "Saddi Iskandari", which represents the views of Navoi latest saga. This will take place depending on the nature of the publisher poems, because "Saddi Iskandari" great epic philosophical and educational work, Navoi it a great quality of life, community, reflected in the attitude of the people. "Hamsa" is the largest of the epic legends; subject to the complexity of the composition in terms of approach him with a great sense of responsibility, political and social importance as a masterpiece. - Alexander, Bahram symbol of society, that seeks to influence people. Poem, rising by Mir Mahdum good ideas of their own, which directs the interpretation of the period.

Q. Ergashev, "Nasri Xamsai outstanding" poems that this position explains the procedure: "Mir Mahdum" Hamsa "lies in giving priority to the social content and in prose poem, and his place in accordance with these views. Indeed, the social content and ideas, "Hamsa" There are all legends. But "Saddi Iskandari" at the image of Alexander the idea of the Incarnation of the righteous king, the enlightened ruler expressed through the image of a very good" [Ergashev, 2009, p. 4].

Mir Mahdum one more reason to stop these two epic priority statement, first of all, it is the publisher of literature, science, education promoter, light to reveal the human person. As a result, the works of literary-aesthetic, educational exposure takes into account the strength of the report of the socio-political nature of this poem in the first place, and aims to bring people through the work of Navoiy spiritual Naf'ul. In addition to these ideas, the author of two poems after a small deviation from the people and the rulers of justice, generosity, mercy will be part of the story was that a few of the book. Professor M.Muhiddinov "Seven planets" plot of a number of works in the analysis of the content of this book "of landscape Bahram week," explains the different stops, and a number of conclusions: "The works of the publisher Navoiy a better understanding of the importance of education in his day. It knows that he is calling the rulers giving Adlung gain. Therefore, as an example of Alexander the Great and the kings of the humane justice, "according to the publisher and justice, devotion to promoting the works should be spread among the people, he says [Muhiddinov, 2007, p. 86].

Poems considered "Amazed Abror" does not have the whole story. "Amazed Abror" is not clear prose descriptions from destruction in the next few years, "Amazed Abror" relatively prosaic explained later. When the author explains abbreviations full prose poem, which is unusual artistic statement. However, we think, the publisher according to the purpose of the set period, depending on demand and opportunities.

"Hamsa" in the Preamble chapters, instead of the traditional praise and Mullah Mirza Xomushiy "praise" Turkey is "Shohnoma" and separate, shorter ("Shohnoma Turkey" the first edition of the publisher's). This praise and served as the beginning of the period to stay in shape. Was published in 1908, "the king of storytelling Jamshid", "murderer a hero of the stories," such as the outbreak of the text of such works.

After the traditional praise and who intended to report and how to interpret the potential to do this: "book "Hamsa" Navoiy travel Rahmatullah gardens and multicolor gathered to hear prose poetryю "Hamsa" I loved every single soul in poetry and Navoi Lazio, openhearted people and wise and spiritually enlightened people. But the wisdom of the people and the story is the story of the love and of a sound mind. But this is the time most people only literates can not balance and grant enjoy poetic prose gradually, I patiently explain anything goes, so pardon error" [Mir Mahdum, 1908, p. 3].

Thus, the publisher of his day poem, simpler case, that it is necessary to provide for the common people think. Only created great masterpieces of poetry readers think, needs to turn a prose work as a result of natural highlights. In fact, people are fascinated by the beauty of his poetry, poetic weight. Prose description paving the way towards the understanding of its essence.

### RESULT:

Omar ever as he went the way of rounding, the content of the pages and reduces the number of events completed in the next chapter "in general", "Chun", "but" had contact with on a regular basis. In turn, changes in the structure of the chapters. As it is known, Navoi areas presentation of the descriptive part of the image and lyrical input" set up. Mir Mahdum introduction of the (al Rawi say), description and image storage, lyrical prose can not be relied upon your conclusion, this is a conscious being. According to the plan, because the tab after the sections are combined under a single big sections should be the overall total. This is the essence of epic poems during the four losses, the structure went out of four. Lyrical memory "Saddi Iskandari" at the first 7-8 chapters of a house, then 6 bytes in a row. "Farhad and Shirin" at 3 bytes, "Layla and Majnun" is 2 bytes. Prose memory bytes will not be displayed next chapter will be linked to the events. "Seven planets", which will be given upon arrival at the Lyric, resulted in the original text. In this case relate to events in the adaptation of the genre is very easy to connect to one another.

Mir Mahdum prose coincides with the original text for clear-cuts, if slightly positive approach. In particular, the "Seven Planets" at Navoi in the memory of a dream Bahrom remain motivated. In addition to the text of the work, "Saddi Iskandari" and "Seven planets" after a small description and the ideas they expressed intention to withdraw approval for the expansion of their riches and blessings of the kingdom, which reflect the fair makes a nice story, and the following objectives expresses: "Alexander has been Bahram King narratives mentioned above, together with Real, but other King stories. Hamas should make the ADL and cabbage, and compliance with the Shariah and the pardons with the higher ranks. Other people, even if these qualities Musavvad, honor and respect in the middle of the crowd. So, I'm writing a little preserve old died and cabbage, and should make clear pardon" [Mir Mahdum, 1906, p. 3].

Author "Amazed abror" story from the four and a common story among the people - a total of eight prose place as described in the story. This time the author of prose describes two functions: "Hamsa" portions of the poems were the main events in a simple, common style, along with prose to make clear to the opportunity to carry out his creative plan. Do not affect the content of the poems in the book "Saddi Iskandari", "Seven planets" ideological content of this part of the story, and it describes the synchronization of a specific innovation.

Among the poems "Saddi Iskandari" a complex subject, the composition of the device, which is able to work, "Alexander has been a part of the story after the events of the world, is the study of the philosophical views expressed in the life of society chapter. ... After his story that points to

prove after the conclusion of wisdom are" [Kayumov, 1975, p. 21]. The saga of the structure of any such complexity into trouble. For this reason, the publisher of the work of prose reflect deep on the left and down into chapters, they do not affect the basic plot level, the majority of the life of Alexander the prose sections. Navoi philosophical and ethical ideas of the chapters in this instance, narrations and opinions expressed by Aristotle, Alexander's plan while the minimum amount of questions and answers. However, the epic stories and wisdom of each specific role. They are "working directly with leading content access, he explains, is completed, the evidence is much brighter, and the opening of the validity of the idea." Brought a great responsibility in this chapter Nasr, of course, reduces the value of a work of art. There are specific reasons for it. Meanwhile, Mir Mahdum according to their level of business opportunities must be taken into account. Philosophical prose section, retractable great work, perseverance is required. His main aim to bring readers interesting plots. In addition, the book also takes into account the size of the whole of the poem, prose to describe his work, and therefore a plus for the philosophical and ethical chapter is a tool to get to know the original student.

1939-1940 Latin alphabet in a statement published prose to prevent cuts. But "Khamsa" poem, and in recent years most prosaic statement omitted from the preamble and memory prosaic statement. However, the statement made cuts in the same context, can not be overestimated. Literary scholar A.Erkinov version has two phases: the first stage - "Eastern way of thinking and living is still preserve the innocence" of the period; During the second stage of the western way of thinking increased interpretations created [Erkinov, 1998, p. 63]. "Nasri Xamsai unique" Oriental Uzbek people still keep thinking of the period. In recent years, the statement was a result of political, ideological constraints created in praise of the departments descriptions are omitted. Prosaic statement made a special study of literary A.Hayitov and stunted Reductions in fact change, but also the requirements of the dominant ideology during the recession, he continued: "That is the view of religious, philosophical and mystic poet be free of them tends to be construed as secular works for the same period was caused by a common cause" [Hayitov, 2000, p. 85].

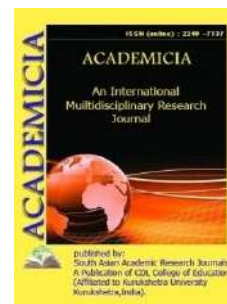
## CONCLUSION:

Prose created during the period described above, there was no such restrictions. Taking into account the needs of the interests of publishers and readers demand, which necessitated a period of adaptation statement. So, Navoiy poem, prose versions of each period defined by the literary process, created to meet the needs of the broad masses of readers, and this process continues. Every one of them an important place in literature of the period, with their functions.

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## SOME COMMENTS ON THE HISTORY OF THE PENETRATION OF THE CHIGIL TRIBE INTO MOWAROUNNAHR

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### ABSTRACT

*This article summarizes the historical and ethnographic information about the Chigils, one of the Uzbek tribes. It also analyzes the areas inhabited by the seeds of chigil and traces the history of their entry into the Mowarounnahr region.*

**KEYWORDS:** *Chiyaal, Chigil, Jigidil.*

### INTRODUCTION

Chigils played a key role in the formation of the Karakhanid state. They are also one of the ninety-two clans that played an important role in the ethnic history of the Uzbek people. Chigils originally lived in the south of Zhetysu and Issyk-Kul.

There is a large village called Chiyaal in Chirakchi district of Kashkadarya region. Chiyaal village is famous not only in our republic but also abroad. So why is the name of Chiyaal village famous and the history of the village, what does the toponym Chiyaal mean? According to historical records, the name of the village of Chiyaal is associated with the Chigil tribe, one of the Uzbek tribes [1.209].

Chigil, also known as Jigil, Jikil, Chiyaal, has been mentioned in historical sources since the 4th century AD.

According to the narrations, the name of one of the sons of Turk ibn Yafas ibn Nuh was also Chigil [2.24]. Khiva khan Abulgazi Bahodirkhan in his work repeats the information that the name of the third son of Japheth was Chigil [3.5]. The Chigils are also mentioned in Firdausi's Shahnameh as the ruler of Turan [4.89].



## THE MAIN FINDINGS AND RESULTS

Mahmud Kashgari described the Chigils as follows: When Alexander the Great reached the city of Argu on the Syrdarya, it rained and the whole place became muddy. So what kind of mud was Alexander the Great's "In chi gilast" in Persian? He said how we can get rid of it. He builds a castle here. After that, the name Chigil began to be given to those who lived in this place [5.374].

The name Chigil is called Chuyue in Chinese sources and means "the place of the moon" [6.250]. A. Khodjaev writes that in the process of studying Chinese sources, the Chinese called the Turkic tribes Tele, Cheli [7.9].

In Persian sources, they mean "forty". In the Majmua at-Tawarikh of Gardizi, Chigil states that it originated from the name of the chief of this tribe [8.200].

Abu Dulaf, who made a long journey from Bukhara to Ching during the reign of the Samanid ruler Nasr II, presents the Turkic tribes along the paths he traveled. In it, Abu Dulaf mentions that on the twenty-first day of his journey he went to an area inhabited by squirrels [9.145].

Where did Chigils live?

If we look at the historical literature, we can see that the Chigils originally lived around Lake Issyk-Kul and on the banks of the Ili River.

Mahmud Qashqari writes that the Chigils live in areas from Jaihun to the upper Qing (China) [2.487]. This information was mistaken in the translation of "DīwānLughāt al-Turk" by SalihMusalibov. In fact, the Chigil tribes were nomads and lived in different places during the reign of Mahmud Kashgari in the Talos Valley, Fergana Valley, East Turkestan and the Kashkadarya oasis, around Samarkand.

Mahmud Kashgari also mentions that the nomadic tribes living in the city of Kuyas near the city of Barsagan were also called Chigil [2.374]. Muqaddas cites in his century as a residential area consisting of a mosque where the name of Juma is recited near the city of ChigilTarozi [8.200]. In fact, the city was located near Tarozi. The city is named after Chigil. This city was formed during the settlement of the Chigils, and the bulk of its population was also Chigils. Some of these were nomadic pastoralists who lived around Tarozi (Torozi) [10.206].

"Hududul-Alam" also mentions that Chigillarni wore a felt hat and migrated to large areas on the shores of lake Issyk-Kul and the Ili River, grazing sheep and cattle [11.271].

According to K. Shoniyazov, one of the largest seeds in the snowdrops, Chigils lived on the banks of the Jugoriya and Irtysh rivers before they came to Zhetysu[12.158].

G. Babayorov stated that he lived northeast of the town of Beshbalik of the Chigals and west of Barqul [13.38].

There are also different views on the arrival of the Chigil tribes in Mowarounnahr.

Mowarounnahr and adjacent areas were inhabited by local Sogdian and Turkic peoples. In the VI-VIII centuries, along with the seeds of argun, yagmo, duglat, qarluq, halach, turkash, kangli, kipchak, oguz and others, chigils also came and settled. Most of them settled in the areas of Central Asia up to the Amu Darya and mixed with the local population [14.260].

K. Shoniyazov writes that Chigils migrated to Tokharistan along with the descendants of Qarluq and Khalaj in the late 6th and early 8th centuries during the Turkish Khanate. During this period, the rulers of Tokharistan were called yabgu [12.146]. In the VI-VIII centuries the Oghuz, Qarluq, Chigil, Khalach, Yagmo tribes settled in the middle and lower reaches of the Syrdarya and in the Tashkent oasis [15.37].

The Chigils, along with the Qarluqs, took part in the battle against the Chinese by the Arabs in 751 near Talos [16.38]. This indicates that in the VIII century, the Chigils migrated to Central Asia.

Another researcher converted the Chigil and Yagma tribes to Bukhara and Samarkand in the 10th century during the Samanid period and converted to Islam. However, the large urban population and their interference led to a loss of identity [17.349]. This is not true. Because even during the Samanid period, the Turkic tribes made up the majority of the population, and the population also spoke the Turkic language. Only state affairs were conducted in Persian. In addition, the highest position of the Samanids was that most of the pilgrims were Turks [18.110-111].

According to "Ibn al-'Asir", when the Qarakhanids attacked Samarkand, most of their soldiers were Chigils [19.226]. After that, the Chigils moved around Samarkand.

Another source states that the Chigils entered Movorounnahr in the 11th century under the rule of the Qarakhanids [20.114]. This is also not true until this period.

According to AsrorQayumov, before the Mongol invasion, ancient Turkic ethnic groups such as Chigil, Yagma, Usun, Tuxsi, Khalachi and others came to Central Asia and settled there [21.38].

The political life of the Karakhanid state was led by people from the Chigils. According to researcher O. Pritsak, the lion was the totem of this chigil seed. The rulers of Western Karakhanids were also called Asrlonkhans [22.24].

The famous scholar Yusuf Khas Hajib was also a Chigil. Because he wrote many poems in Chigil language. Also at that time the majority of the population was chigils [23.79].

Also known as Aynud-Davla, the deputy of the Qarakhanids in Samarkand was one of the Chigils and at the same time the leader of the Chigil soldiers [19.226]. Aynud-Davla also played an important role in the political relations between the Qarakhanids and the Seljuks [24.295].

Many of the settlements mentioned in medieval sources have names derived from the ethnonym chigil. In the Tashkent oasis, Chatkal also originated in the Middle Ages. At that time, there was a city called Jidgil in this area [25.203]. The city associated with the name Chigil also existed in the Fergana Valley in the IX-X centuries, and the name of this city was also called Jigdil [12.191]. In the Middle Ages, in the city called Yar on the southern shore of Lake Issyk-Kul, there was the residence of the chief of the Jikil (i.e. Chigil) tribe [26.92]. The city still retains its name in the form of Chal. In addition, the names Chigilkent and Chigil-balyk in Xinjiang (China), Chigil in Zhetysu (Kazakhstan) and Chingeldi in Tashkent region [26.42] are also derived from Chigil. This chigil toponym occurs in various forms, such as "shiyen", "shal", "chal" and "chiyal" (i.e. Chigil) [26.146]. Villages associated with the name Chigil have also been preserved in the Sivas region of Asia Minor, Beyshehri, Kastomonu districts [27.103-106].

## CONCLUSION

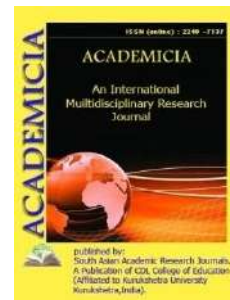
Thus, the Chchigil tribe has been living in the Issyk-Kul and Talos valleys of East Turkestan since BC. From the beginning of the twentieth century, a part of the Chigil tribes slowly entered the territory of Uzbekistan, first as part of the Khionis, Kidaris, and Eftals, and mixed with the local population. During the Turkish dynasty, however, its entry was felt a little. When the Arabs came, many Turkic tribes lived in these areas. In the X-XI centuries, the Chigils played an important role in the formation of the Karakhanid state, and it was this process that led to the emergence of the Chigils on the stage of history. Information about the Chigils was recorded by Arab historians such as Al-Muqaddas, Al-Gardizi, Ibn Hawqal, Ibn Istakhri, IbnKhurdodbek.

Today, in addition to the above-mentioned settlements of the Chigil ethnos, it is found in Asia Minor, Azerbaijan, the Volga region, the Xinjiang Uyghur Autonomous Region of China, Siberia and other regions. This suggests that the Chigils were involved in the ethnic history of the population living in large areas.

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## POLITICAL DEVELOPMENT IN UZBEKISTAN

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### ABSTRACT

*This paper clarifies the political development and socio-political modification in Uzbeks in modern times. The political advancement of Uzbeks and its connection with the particular social-political arrangements, as well as the effect of the Soviet guideline on those structures are analyzed. In addition, the paper examines the development of an Uzbek political character and its impact on post-Soviet autonomous Uzbekistan. The fundamental argument is the Uzbek experience in the Soviet rule has transformed the Uzbek society and made relative progress in changing the conventional structures into apparently modern ones. However, regardless of the practical political modernization in the Soviet period, the particular socio-political association, tribes, and family relationship structures intrinsic in the Uzbek society succeeded, adjusting and even changing current organizations and structures forced by the Soviets. These customary informal structures have developed as stable organizations in the post-autonomy time.*

**KEYWORDS:** Political Improvement, Uzbekistan, Informal Politics, Administration.

### INTRODUCTION:

The fundamental point of the paper is to examine the Western view on the bases and outcomes of development in Central Asia and Uzbekistan dependent on the modern conceptualizations and attempt to offer an increasingly centered methodology on the socio-political framework and the change occurring in Uzbekistan. These conceptualizations revealed a Western-arranged method that appeared to ignore other experiences, for example, those in Central Asia with totally different social-historical structures and skills. In this paper, real purposes of discussion give a premise of research on the political change of Uzbekistan. The predominant methodology on post-Soviet Central Asian nations would expect that the recently made states, similar to

Uzbekistan, would follow the western model into the post-socialist political frameworks and would build up modern types of vote based systems and liberal economies. The move of political identities from modern socio-political association to colonial characters, from Sovietisation to new national identities in the post-Soviet freedom period, establishes a fundamental issue for current Uzbek politics, for example, for the national identity-making, during the modification frame. The philosophy of the country state pushes the old, conventional, and pre-current types of social associations. It replaces them with the modern standards of social-political organizations, law, and financial matters. Governments in the modification are relied upon the change politically, legitimize, bureaucratize, and make the practical arrangement of political foundations in which the legislative power legally utilized. The legitimization of politics, economy, and lawful framework are the primary determinants as advanced by this Western-one-sided approach.

In addition, the most pivotal point in analyzing the subject of inquiry, to be specific the role of curious socio-political structures, of casual governmental issues and factions as the operator of occasional legislative issues in Uzbek political modernization must genuinely be considered. Uzbekistan is the most strong communities for Islamic development in nations of Central Asia, the place that is known for contemporary Uzbekistan situated at the focal point of Central Asian civilization. The impact of the Oasis (Bacon, Elizabeth E. 1980) culture is altogether observable in these grounds, with a more decentralized populace of mixed origins, in contrast with the itinerant societies of the east. Uzbekistan can depict as one of the most 'conventional' social orders in Central Asia, which makes it a different case for an examination of modernization.

### **METHODOLOGY:**

So as to break down the political modernization in Uzbekistan, this paper will use theoretical ways to deal with modernization in a more broad sense by alluding to standard scholars and discussions on political modernization. Likewise, an authentic record of the rise of the Uzbek will be made by utilizing the material from the scholars on the Central Asian region, to find and characterize the idea of current Uzbek society. The common socio-political framework, just as part of religious identity will be analyzed. The paper will use secondary material on the pre-modern development of Uzbek society, for the most part, dependent on the Western history specialists'.

### **Political Upgrading in Central Asia:**

On account of Central Asia, it is difficult to make a distinct meaning of the modernizing society, because political modernization itself requires the existence of a modernizing ability and society with the adequate power and assets to assemble modernization venture. The case is firmly related to being a newbie into the modernization process. And still, Central Asia does not appear to move towards a natural modernization process. However, it is remotely constrained to adopt an institutional, social, and political requirement of modernization introduced by the Soviets. Because of the Russian Revolution, Turkistan turned into a Soviet Socialist State (1918), and Khiva and Bukhara both turned into People's States (1920). During that time, there had been no viable and clear political development option to displace the Soviets in Turkistan. With an end goal to conquer the desires of both the Muslim Socialists, aim at setting up a free Turkic state and the container Islamic powers behind the Basmachi revolutions, Moscow, along these lines



split Central Asia into five the Soviet Communist States, each one overwhelming ethnic gatherings in the territory.

The early periods of Soviet ruling in Turkistan has encountered state-building just as country building tasks to assemble agreement for the new ideological and political system. Even though this paper manages the political part of modernization, it is clear that on account of Central Asia, financial, social, and political modernization was anticipated all the while, yet with the utilization of various techniques and intentions. In Central Asia, while the tsarist principle was concerned more with monetary advancement, which they projected to achieve political and social change, the Soviets gave much accentuation on self-assurance rights and relative decolonization in earlier eras advancing political modernization. Yet, the new Soviet system was upset by a civil conflict, which profoundly felt in Central Asia. Then again, legitimizing agree to the Soviet government was not all that simple. At the same time, the customary structures were kept alive or even advanced in the early period of the Soviet principle. It has various reasons; Soviets put themselves contrary to the Tsarist colonialism, which was a foundation of Turkistan as per the radical targets. Accordingly, the Soviet revolution abandons any colonialist right on Turkistan or needed to appear forsaking. Relative self-governance of the social orders in Central Asia did not represent a risk, in short, keep running for the combining Moscow-based Soviet system (Sengupta, Anita, 2003: 83).

After the Civil War and Revolution tailing it, the urgency for stability and control in Central Asia made Soviets forsake any self-governance for the regional elites. Any conventional association viewed as a risk to Soviet power in Turkistan. The modern and controllable structures must change the traditional structures. Soviets attempted to set up the ideal control instruments by means of the development of another ideological identity, in particular, the Soviet character.

The political change that Soviets expected to control and to balance out Turkistan meant to change customary identities, limit and merge them, or swap the conventional identities and loyalties with fake ones so as to prepare social orders as per Soviet political and ideological targets. The infusion of another Soviet-type training and culture intended to make monetary functionalism, centralization, the bureaucratization of political power, and the procedure of imposition of the formation of new regional elites, including Korenizatsia. In that manner, the conventional social and political association would supplant the sub-national and religious identities with functional and assimilated characters. Soviet upgrading of Turkistan along these lines attempted to get control of any probability of contention as a response to Soviet change. They understood that political modernization had turned into an essential element for their crucial point of controlling Turkistan and changing the region into a proficient and functional monetary factory regardless of whether there existed no genuine political risk. This required production of political interest structures, in particular, bureaucratization to bring together control, which is the straightforward component of whether confrontation or development will be the response to Soviet control.

Obviously, in the period of modernization, activation of assets and individuals through identity turns out to be especially significant. The social orders of Central Asia and Uzbeks specifically did not have a typical character that is brought together by a state and which can control people. The two mobilizing elements, to be specific Islam and Turkic genealogical administration, had restricted impacts for the Central Asian social orders to react to the difficulties raised by the

Soviets and the Russians. Other possible mobilizing sub-national characters, for example, alliance with the family, clan, or connection, had likewise been dividing instead of joining together. Political administration was overwhelmingly local and concerned more with steadiness than change. Soviets required a change, in any case, to control and fuse Central Asia. Tribe, clan, and territorial identities so much divided that it was difficult to mobilize Central Asians.

Regarding the Uzbek situation, political modernization started when Uzbeks went under the Soviets, and their legislative frameworks were hindered by the Russian elites to reshape the political structure of the region. The control was applied by means of the bureaucratization, strengthening, and centralization of the administration. Even though the tsarist system did whatever it takes not to change the ethnic synthesis, it somewhat attempted to order it, since "achieving much information as could reasonably be expected on the recently consolidated subjects would improve potential outcomes for control (Haugen, Arne, 2003). "Soviets neglected to keep up the set-up framework, which was weakened by various elements, most significant of which is the integration of customary structures into the new institutional arrangements. Russification and Sovietization, all together for the foundation of political control and modernization, attempted to make an elective identity for such extensive, however disintegrative characters.

### **Results of Modern Period for Uzbekistan:**

The Soviet goals of building up political and strategic control in Central Asia by delimitating the people groups made relative progress. During the Soviet time, Uzbek political modernization advanced around the creation of local elites, expanding the number of Communist Party enrolment, escalation of Soviet-sort of instruction (Tomiak, J.J. 1972: 11) together with the Russification, demolition of the vast majority of the conventional social and political structures, for example, those concerning agriculture, the bureaucratization of the local people and the formation of a cotton monoculture system. Uzbek customary socio-political association, which depended on the local, neighborhood, and connection ties as opposed to the modern Uzbek ethnic, has changed to follow the advanced structures forced by the Soviets, to be specific family structures and religious ceremonies (Sengupta, Anita, 2003: 83).

One of the approaches to undermine and build up a reaction to the Soviet principle firmly identified with administration and power associations in the Soviet framework. It contended that the local elites had discovered methods for subverting the nomenklatura arrangement in the oblasts, starting with the de-Stalinization phase. Hence Moscow's endeavor to re-impose control was a partial achievement (Rywkin, Michael, 1985: 41). One of the real outcomes of Soviet period modernization in Central Asia has not been the absorption of the customary political structures into current organizations, yet the other way around, in particular, the appropriation of traditional political loyalties to the difficulties of modernization. Soviets controlled almost all the political choices and establishments in Uzbekistan, while civic associations in the community couldn't be entered. It achieved a versatile and adaptable political structure. The political leading structure proceeded with their web of associations in the modern institutional arrangements. They were merged into the Soviet foundations, not as their customary identities, however, with the expectation that this sort of joining would loosen their faithfulness to the conventional connections.

Another purpose of the adjustment was the moving of loyalties in structure, while the substance of the power legislative issues continued as before. Donald Carlisle gives a point by examination of local commitments in Soviet Uzbekistan somewhere in the range of 1938 and 1983. He contends that "it is the legislator's local loyalties, for example, to Tashkent, or Samarkand, that might be the way to their direction and viewpoints. He further proposes the term "group legislative issues" as a critical idea for understanding Uzbek governmental issues (Donald Carlisle, 1986: 91). The significant division here is the Central Asian versus European division. Yet, such loyalties to the region have two elements: first, the common governmental issues and the strategic significance given to one area over the other. Olivier Roy clarifies how the Soviet system prohibited Bukharan Jadids, specifically Khojaev and his supporters from the political organizations, and infused those numbers of Ferghana origin. At the point when the cotton scandal happened (1983), Soviets attempted to conquer this ethnic political structure, this time trying to infuse new Slavic frameworks rather than the local elites, which anyway made colossal restriction. The rise of Islam Karimov in 1989 was an endeavor to reinstitute the regional balance for the Samarkand-Jizzak group (Roy, Olivier, 2000: 159).

The common hidden types of political association survived and demonstrated to be fit for being changed by the impact of Soviet suppression into a progressively standardized structure. Collins gives two types of adjustment to Soviet establishments that the conventional social structures had the option to make due through 1. Most local towns and settlements stayed in place, by a modification to kolkhoz and sovkhoz, 2. These two organizations were changed into clan and tribe (Collins, Kathleen, 2006: 21).

A similar association of the organizations along tribal and clan lines was genuine likewise for the Communist Party frameworks. The Communist Party units and power positions, explicitly three most high positions, and the sharing of the locales in these three positions characterized the political balance in the significant clans of the republic as the characterizing component of stability. Uzbek SSR's heads were picked among the two clans, in particular, Ferghana and Tashkent.

Falsely made countries bit by bit progressed toward becoming a part of the fact during the Soviet period, despite the way that they come up short on a powerful modern political conversation, which expected to change them into an appropriate state in the freedom time. Religious and local divisions have made systematized positions in the structure. Uzbekistan rose from the Soviet control as one of the most segregated and centralized governments in Central Asia, swaying between genuine governmental issues and the political change implemented by external pressures. Tradition in Uzbekistan couldn't represent a danger for Soviet-arranged modernization, but instead of that became incorporated into the framework, making its specific socio-political association with relative integration as often as possible Soviets had additionally advanced the casual socio-political structures in the Soviet frame (Critchlow, James, 1991).

### **Clan Politics:**

The most urgent matter for the country-building procedure was the foundation of authenticity among the natives of an autonomous nation. Karimov's government attempted to overrun the transformative conventional political structures, which don't represent a danger to political modernization, however, present continuous flexibility, which brought the customary arrangements re-imagined as reactionary or radicalized in conflict with the counterfeit and non-

modern procedures of control and centralization. So as to dissect this encounter, it is essential to take a look at the embodiment of political improvement, where the power situated in this advancement and the players who govern it in the Uzbek society. The primary issue is the avoidance and concealment of the customary political structures from the portion of intensity in the state structure. Karimov government attacks to tribe and family relationship links, while he is reliant on them. As the hypothesis expects, strife, and conflict, whenever introduced inclination towards change, may create progress in the general public. However, on account of Uzbekistan, the concealment by the Karimov government counteracts dynamic political improvement and rivalry. The fundamental reason is hence the utilization of state regulation to build up authority and control to avoid restriction, which anyway bars the conventional and participative political structures from the basic leadership and asset allotment, making major provincial and neighborhood clashes.

At that point, where is the whole power set, and how the Karimov government neglects to keep the balance among the power-centers? Rather than government modification studies and accepting modernization hypothesis on account of Uzbekistan, the absolute power legislative issues are implemented not through the constitutional structures. Which the new period powers upon the countries of the recently rising nations, yet on the tribe governmental issues, to be specific the casual political systems. These informal political systems are not primordial and conventional bottlenecks for modernization, yet have further socio-political significance, which has legitimized through the development of legislative issues during the Soviet period. There have not been new state foundations or national identities in Central Asia with legal and bureaucratic structures working, until the Soviet mastery and vital delimitation approaches.

Additionally, the point of political modernization by the Soviet government has not been the advancement or justification of governmental issues through improvement, yet rather expected to re-establish Authoritative Soviet control by dissolving the pre-frontier, socio-political, and conventional structures prominent in Central Asian social orders. These vital points, anyway, are affected by political modernization (Central Asia), which uncovered during Glasnost time before the finish of the Soviet government and during the freedom time. New types of organization, bureaucratization, and monetary projections occurred in the Central Asian political division. These progressions, anyway, couldn't overcome the casual and traditionalized political structures, which were adjusted and kept on adjusting to the modern nation and financial matters.

What has been persevering even when political modernization was not the customary structures, however, the "modernized tradition (Lloyd Rudolph and Susanne Rudolph 1967: 13)," which uncovered an inappropriate presumption that the modern and customary structures oppositely restricted to one another. Clan links in Uzbekistan introduced a massive case of this interrelation and mere presence between the two. Thinking about the duality of modernization and tradition, the predominant worldview of modernization displayed a two-overlap improvement cycle through which political modernization happens. 1) The conflict is inescapable as in the conventional structures, casual governmental issues, and financial association would challenge the prerequisites of modernization. 2) It would bring about the change of the general public to wind up modern, balanced, bureaucratized, developing, and liberalized.

Since the conventional constantly located as steady and static, the space between the late-modernizer and the advanced Western couldn't overcome. Huntington focusing on the

difficulties of the clan and religious loyalties contended that modernizing national approaches would move "loyalties from town, and clan to country (Huntington 1968: 140)." Therefore, the final point of political modernization depicted as a move of loyalties to modern frames from customary and casual associations. Be that as it may, clan governmental issues demonstrated to be prevailing the advanced structures, changing them, and organizing control by adjusting them.

Clan legislative issues rely upon a reasonably characterized network connection, which organizes family relationships and deep imaginary family relationships attach among the individuals to the clan (Philip Khoury and Joseph Kostiner, 1990: 334). The modernized connection oversaw through the advancement of tribe individuals, subsequently making reliance networks and focusing riches and influence in their gathering (Daniel Vaisman, 1995: 109). During the Soviet period, these family systems figured out the way to utilize the framework to their advantage, to set up their customary casual strategies and systems, which allowed them to beat the Soviet barricade and to control their assets. Deniz Kandiyoti breaks down how these systems "created casual techniques and procedures of adapting, particularly when different roads for investment have all the earmarks of being blocked (Deniz Kandiyoti, 1998: 576)." Therefore, both the Soviet frameworks played a harsh, however valuable job that improved the rising of casual systems. In contrast, the discernment of these systems gave an adaptable and versatile character to these systems to endure, and even to change the progress/change happening in Uzbekistan and Central Asia.

Then again, what makes them so incredible throughout the political change in Uzbekistan are the bonds that contain the identity and obligations of socio-political association in the general public. The deep fictive connection that the tribe systems clutch goes past the genuine blood bonds while speaking to the subjective feeling of recognizable proof, so these relations encourage individuals to utilize the standards of family relationship and safeguard its individuals, advance them in the political and social levels. Like ethnic identities, clans give vertical and flat relations, breaking points of which not fixed and perpetual but somewhat hard to penetrate.

Perceptibly, families establish systems which are ground-breaking and discerning enough to undermine government solidification, while making government changes and ideological disintegrations moderately shallow. The families do not form the results, yet they can shape and compel the inclinations and choices of individual players of the government changes. Thinking about the Uzbek autonomy, families assumed an extremely versatile job in government change, comprising the balanced arrangement of the new free government and characterizing its new regimes' earlier inclinations of political change. Concerning the political change in the autonomy period, families had the option to obstruct across the country's development and financial means of the individual natives. Or maybe the family assumed a distributive job, which is played by the nation in modern Western nations. Along these lines, instead of the nation-building projection of the unavoidable modernization of the autonomy time, clans assumed a deciding job in the course of characterizing the players of state assembling, their political inclinations, and decisions concerning the government change. The modernization or democratization endeavors with respect to the new government are effectively undermined by the incredible clan links, since "at both world-class and mass level, clans' links hinder both post-transition government and state combination and longer-term feasibility (Collins, Kathleen, 2006: 21)."



Uzbekistan is today depicted as one of the most controlling governments in Central Asia. Political modernization, which viewed as an inescapable result of government change in post-Soviet, does not appear to bring anticipated outcomes. While Karimov governments kept on smothering decentralization endeavors in the nation and still overwhelm contemporary legislative issues in Uzbekistan. This Western- arranged methodology fails to get the genuine idea of Uzbek governmental issues and its legacy of political modernization and misjudge casual socio-political structures clearing approach to centralize power in the hands of a couple of tribes elites, who at that point collide with one another to accomplish control. The subsequent political circumstance has been the nation's restraint of these casual groups by the Karimov government in Uzbekistan. The Western-arranged methodology naming the government in Uzbekistan as totalitarian is deluding not in the sense that the government isn't harsh; however, the conditions that make ready for the attestation of expanding state control misjudged to mark it strict. The state suppression, at last, stifles the natural and progressive development of the framework, causing strife between the nation and the families.

The impact of tribe legislative issues is enormous in that failure to change, not because the clan links took a static and constant demeanor to evolving conditions. Yet, the government stayed static under the influence of Karimov's strategies. After the Soviet breakdown, Karimov depended massively on the tribes that brought him the situation as a dealer of family interests. The Rashidov and Jurabekov groups of Samarkand, the Sultanov family of Tashkent, and the Azimov family of Ferghana, which involved the most dominant families of Soviet Uzbekistan in the start of the post-autonomy period, all supported Karimov for the presidency and thusly profited (Khaknazarov, Usman, 2003). Karimov's this reliance on tribes anyway returned out to have obliging impacts for Karimov rule. Henceforth, while attempting to take these tribes' control, he additionally needed to manage and assuage them.

#### **The eventual fate of Political framework in Uzbekistan (Anthony Clive Bowyer, 2019: 89):**

The different projects proposed by the new President and currently under operation hold the guarantee of reshaping the residential political scene, changing the essential connection between the native and nation, and rebalancing the geopolitical direction in an area since quite a while ago consigned as the space of extraordinary outside forces. In 2016 Presidential elections, Mirziyoyev promise on the standard of a legislature with a more prominent level of receptiveness and straightforwardness serving the individuals – a curiosity in the experience of autonomous Uzbekistan and other post-Soviet nations. To propel this motivation, President Mirziyoyev published three key things: A Plan to Reform the Judicial System; an Action Scheme on Five Important Areas of the Nation's Improvement for 2017-2021; and an "Idea" of Governmental Reform.

The Action Strategy, which threw light on guaranteeing the standard of law, changing the legal framework, advancing monetary progression, and the improvement of the social circle, contains various sub-destinations which, if completely actualized, will on basic level change the connection between Uzbekistan's administration and its citizens, and lift autonomous community support associations and casual establishments, for example, Mahallas, to the status of accomplices of the legislature. The Perception for Governmental Reform expects to bring about a compelling and straightforward arrangement of public administration capable of securing the privileges of natives and reinforcing Uzbekistan's monetary intensity globally. It characterized



six critical zones, among which are; "the development of the institutional, authoritative, and legitimate structure of the official specialist's exercises" and "the development of a viable arrangement of expert civil administration, and the acquaintance of powerful instruments to battle corruption in the arrangement of official specialists."

In the coming years, one can anticipate that further practical changes should be done to the territorial government, with the probability of numerous new faces in places of power, every one of them famously chose without precedent for Uzbekistan's free statehood. The new heads should be intently watched to decide if they are following up for the benefit of natives or are stepped over into territorial or local faithfulness systems. At last, elections are an essential yet not adequate condition for advancement: the elections additionally should be expertly and decently managed at all levels – especially the Precinct Election Commissions. Moreover, they should be investigated by dynamic, free NGO monitors.

The President likewise approached the parliament to be substantially more dynamic in the enactment. He pushed parliamentarians out of their workplaces and travel around the nation to meet individuals, particularly the young, hear their worries and returns with a proposition on the most proficient method to determine the issues distinguished by residents. He encouraged them to dissect proposed enactment and propose upgrades. The President likewise recommended that political groups associate with foreign partners, which had been the standard until the mid- the 1990s; however, in later years, it had been found in a progressively negative light.

It brought outcomes: parliamentarians presently visit provincial regions, where they have shown up in live programs, utilized internet based life, took an interest in different gatherings and attempted to turn out to be increasingly associated with their constituents. However, there is as yet far to go so as to accomplish a solid, multiparty framework that acknowledges and empowers an assorted variety of stages and programs and does not see contradicting arrangements as anathema to the nation. Mirziyoyev's changes have likewise had significant ramifications for the collective society. As opposed to an enemy, the administration currently looks to see cooperative society as a partner in its change motivation. It was shown in various authoritative revisions and activities to facilitate the capacity of NGOs to work in the nation. Since Mirziyoyev got to work as Interim President (2016), 685 advocacy associations have effectively enlisted with the Ministry of Justice in excess of an 8 percent expansion. A larger objective of the President's Action Strategy is to find inefficiency and corruption at the national levels.

## CONCLUSION:

The social-political structures that implied to bring the conflict in Central Asia, to be specific religious and ethnic clashes, rising fundamentalism, corruption, and monetary underdevelopment are not the main issues, however just results of political modernization. The political on account of Central Asia is beyond the regular classifications concerning the pith of contention in Uzbekistan. The odd conventional structures of political association in Uzbekistan are the versatility and adaptability of clan governmental issues that are capable of on-going in the limits of the modern structures, its dissemination of monetary riches, its diverting of political parity and social order. Besides, the conventional and in-formalized tribe governmental issues do not make a clash with the political modernization, which is outside or inside forced on the general public. Casual governmental issues are transformative, yet just when the framework finds a channel to coordinate its assets, to receive and adopt the upper organized modern structures. The casual

governmental issues are banished from the continuous political context, as in Uzbekistan (Karimov time), at that point, conflict is possible, which makes further pressure among the structure. The tyranny of the state is a result of its powerlessness to oversee inner political balance. At the same time, Islam-based restriction to the government is a constrained reaction of the individuals who can't influence the political field of Uzbek legislative issues.

There is a connection between history change and conflict, to give a general comprehension of the modernization hypothesis, the spot of belief in it, its Western-based belief system, and issues with this methodology. Hence, three essential highlights of modernization that are explicitly related to the Uzbek case.

I. Modernization is seen to be a Westernization procedure. Formalization of legislative issues, the foundation of ideological groups, and the accentuation on the national character in Uzbekistan are viewed as an endeavor towards Westernization, which anyway comes up short. In contrast, Karimov saw as a tyrant who neglected to start a fruitful change.

II. It makes an unclosing space and, in this manner, authority between the modernizing/conventional and the modern. Western nations are progressively attempting to build up relations with Uzbekistan, particularly after the German Presidency and the presentation of a Central Asia Strategy. In any case, events, for example, Andijan, keeps the West reluctant towards Uzbekistan, as the US, UN, and EU organizations categorize Uzbekistan as an unsuccessful nation like Afghanistan and Iraq.

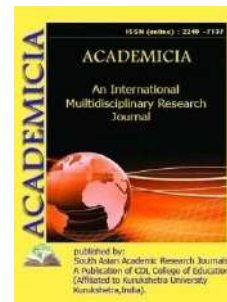
III. The conventional stays in reverse and usually needs to be developed by the inconvenience of establishments, legal framework, monetary principles, and political mind-set. This paper expected to demonstrate that the complexity between the conventional structures and the modern isn't so distinct.

The customary political structures in Uzbekistan demonstrated a versatile and adaptable character in the aspect of political change experienced in Soviet rule and the freedom following the Soviet period. Accordingly, the paper presumes that the general observation that the shift would pursue a way-reliant change, which is pointed towards advancement and is a misguided judgment since the connection between the modern and the conventional does not appear to be advanced enough. This issue is firmly related to the oppressive utilization of modernity to characterize tradition for its key and authoritative mastery over the emerging world. Be that as it may, as the instance of casual legislative issues dependent on clan structures proposes, customary arrangements are more adaptable and versatile than the Western logical methodology recommends. The job of religion or ethnicity is constrained, while other political loyalties have a more grounded impact on preparing and propelling individuals in Uzbekistan, even changing the advanced foundations, arrangements, and philosophy.

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## THE PECULIARITY OF LINGUISTIC TRADITIONS OF CHINESE STUDIES IN JAPAN (BU THE EXAMPLE OF NUMBERS)

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### ABSTRACT

*This article is partly dedicated to "The Kuraisi Dictionary", created by 60 collectives of linguists led by Professor T. Kuraisi, a Japanese linguist-sinologist and chairman of the Chinese Language Society. It is well-known that in general linguistics the method of studying homonyms, which is based on dictionaries, is widely used. The research material of quantitative composition and character of homonyms was taken from "IvanamiTu: gokuoziten" – the phonetic Chinese-Japanese dictionary, released by the Ivanami Publishing House in Tokio in 1972, with the overall quantity of 37 thousand words. The article gives a broad overview of the definitions provided in the dictionary, given a semantic field of numbers from one to nine in Chinese, which can be used as a material for various studies of Chinese words, thanks to the listed grammatical information.*

**KEYWORDS:** Japan, China, T. Kuraisi, Dictionary, Numbers, Homonymy, Lexics, Phonetics, Tone, Hieroglyph, Sound.

### INTRODUCTION

Chinese words and hieroglyphic writing began to penetrate Japan in the 4<sup>th</sup> and 5<sup>th</sup> centuries. Hieroglyphic texts were difficult to read because the Chinese and Japanese languages differed in their methodological structure. Nevertheless, the first Japanese written work - "Kodziki" (a collection of myths and legends, 712y) was written on the basis of Chinese hieroglyphs and Chinese grammar. In addition to the hieroglyphics, their Chinese reading of the word "on" was assimilated with certain phonetic changes. After that a meaningful Japanese form of reading the word "kun" appeared. The phonetic use of hieroglyphs made it possible to have a national writing. The rise of the Chinese-Japanese vocabulary as a result of progress has had a profound

impact on lexicography of the two languages. This effect does not bypass the issue of homonyms.

The issue of homonyms is not only an important theoretical issue related to defining the boundaries of the word, the main unit of the language, but also one of the most complex issues of applied lexicography.

There are different points of view about the importance, position and role of the homonymy phenomenon in the language. Some linguists believe that the formation of homonymy is the enrichment of the language vocabulary, while others regard it as "a fatal wound" of the language. A. A. Reformaty, A. N. Gvozdev and a number of other linguists view homonymy as a negative phenomenon, "a barrier to understanding", "a language defect." Other scholars, e.g. L.A. Bulakhowski, O. S. Akhmanova, R. A. Budagovs, do not consider this phenomenon to be "abnormal", although they may in some cases find homonymy difficult to understand the speech and the text. In exploring the issue of homonymy, researchers refer to both native language materials and foreign languages.

In general linguistics, there are four approaches to the question of the phenomenon of homonymy, and there are four basic points of view on the concept of "homonym".

At first sight, homonyms are the words that have the same phonetic shape but have different meanings regardless of their graphic writing. A large group of local and foreign linguists, including, V.V. Vinogradov, O. S. Akhmanova, L. A. Bulakhowski, E. M. Galkina-Fedoruk, S. I. Kanonich, B. Trika, Sh. Bally, L. Blumfield and others agree with this view<sup>1</sup>.

By the opinion of the second group of linguists, homonyms must have the same spelling, although they have the same pronunciation and different meanings (V. V. Brown, I. V. Arnold, N. M. Shansky, M.X. Akhtyamov).

A number of other scholars include homonyms in the list of words that have the same pronunciation, but with different meanings and spelling: H. Ogata and R. Inglott.

The view, contrary to these three notions of the term "homonym", is reflected in Skit's "The Etymological Dictionary," where he describes the homonym not on the principle of the sound, but on the principle of graphic similarity. We agree with the first group of scholars that the words under the term "homonym" are the same words (pronounced). Thus, in the present research, the word "homonym" means the words that have the same sound but different meanings.

It is well known that in Chinese linguistics there are different approaches to the notion of homonym. Up to the present day, Chinese scholars have not yet come to an agreement about the phenomenon of homonym, as well as the exact definition of the term "homonym". According to one comment, Chinese means the words that have the same pronunciation and different meanings, irrespective of the sounds. Depending on this notion, the words that are distinguished by their tone are called "homonyms":

1. 妈 mā - mother; 2. 麻 má - kenaf (canop);

3. 马 mǎ - horse; 4. 骂 mà - to fight, to swear;



However, such a view is not entirely justified because A. A. Dragunov and E. I. Dragunova note that "... the minimal phonetic unit that can be expressed as part of a word (morpheme) is understood as a syllable, not a tone (phoneme), but a tone syllable<sup>2</sup>. In Chinese, a tone (tune) is an integral part of the phonetic crust (upper cover) of a word or morpheme, and plays a distinctive role. That is why the word "homonym" means the words that match each other in terms of pronunciation and tone (supporters of this view are Chinese linguists Zhou Tsumo, Liu Shusin and others<sup>3</sup>).

It is known that in modern Chinese hieroglyphic writing, each symbol - a hieroglyphic word or part of it with a minimal meaning - serves to represent a morpheme in writing. Therefore, in the study of the phenomenon of homonymy, according to N. I. Feldman, a Chinese word, despite its hieroglyphic writing, should be treated as in any other language<sup>4</sup>. Thus, Chinese homonyms can be described as the words that have the same tune (including a tone) but have different meanings regardless of their hieroglyphic writing. For example, the following pairs of words include:

1. 花 huā - flower; 2. 吉利 jílì - happy, lucky;
3. 花 huā - spend; 4. 极力 jílì - with all its might

It is known that scholars propose a number of norms to differentiate between homonyms and polysemantic words, including different word-formation strings, paradigms, links with other lexical groups (sorting of synonyms and antonyms), syntactic relationships (distributive methods) and differences in management (verbs).

The "homonym" phenomenon of the Chinese language and typology, its similarity to or difference from all other languages, has attracted the attention of linguists-sinologists and other language specialists.

As you may know, in Chinese linguistics, special attention was paid to the issue of replacing the Chinese hieroglyphic writing by phonetic writing in the early 1950s. According to Chinese scholars, such a transition was a major challenge, one of which aspects was related to homonymy. At that time, in China, the issue of homonymy was widely covered in the press, and linguists, such as Zhou Yuguan, Bo Han, Zhou Yaoen, To Mu, Tsao Denfan and Zhang Shilu, actively participated in the discussions.

During the discussions, the following issues were raised:

- define the essence of the term "homonymy";
- determine the boundary between homonymy and polysemy;
- classify homonyms;
- determine the sources of homonymy;
- find the ways to eliminate homonyms;
- reform homonymy of names and geographical names.

Many of the issues raised there are still unsolved and retain their relevance. In contrast to grammatical homonymy in the Chinese language (research works by S. Yankiver and V. Gorelov), lexical homonymy is still not studied as an independent research object<sup>5</sup>.



In general linguistics, the methodology of studying homonymy based on dictionaries is widely used. To investigate the composition and specificity of modern Chinese homonymy, a 37,000-word “IvanamiTyu:gokugodziten” - the Chinese-Japanese phonetic dictionary, printed by the Ivanami Publishing House in Tokyo in 1972 (the first edition in 1963) serves as the research material. This dictionary is the collective work of 60 linguists under the guidance of the leading Japanese linguist-sinologist T. Kuraisi, Chairman of the Chinese Society for the Study of the Chinese language.

The Kuraisi dictionary (the dictionary was called so later on) consists of 10 sections: 1) Introduction, 2) Preamble, 3) Glossary, 4) Chinese and non-Chinese Nouns, 5) Hieroglyphic Index, 6) Semantic Index, 7) Relationship Tables, 8) Scale and Weight Charts, 9) Tables of Chinese language syllables, 10) Conclusion.

In the introduction, the authors point out the essence of the dictionary and its sources. Specifically, the following sources were taken: Lu Zhuivey's “北京话单音词词汇” “The Single-word Dictionary of Beijing Dialects”, “汉语拼音词汇” (the Chinese Phonetic Dictionary) published by the Lexicology Group under the Chinese Committee on Writing Reform. In addition to compiling this dictionary, some of the works by Lao Shee, a contemporary Chinese writer, as well as the materials on oral vocabulary collected by Lee Bao, a lecturer of the University of Tokyo.

In the introduction, the authors also provide information on phonetics, grammar and vocabulary of modern Chinese.

In the “Phonetics” section, the words included in the dictionary are characterized. This section focuses on the grammatical nature of a Chinese word, as well as on the problem of separation of its components, that is, the distinction between words and morphemes, words and phrases.

In addition, this section gives information on some of the features of the words that fall into the 11 categories of words that have been identified by the authors. On the other hand, the authors comment on the distribution of words in 11 different directions.

The “Grammar” section provides a brief overview of Chinese syntax. Here, the ways, in which the words in the Chinese sentence are interconnected, are indicated and the sentences are described. It also provides a classification of modularity and structure of sentences.

It is not accidental that this dictionary has been selected as a research material. First, it is a phonetic dictionary, where the words are arranged in alphabetical order in China, and are followed by tone indexes. All of this makes it easier to find and identify homonyms.

Second, this dictionary contains only words from the modern Chinese vocabulary. S. X. Ioffe says that “... this is the most perfect and interesting dictionary in Chinese lexicography at the moment”, because, in the first place, “not the whole Chinese language (from the earliest written works to the present day) but the modern Chinese language has been chosen as the object of research.”

Third, due to the ancient Chinese lexicographic tradition, it was based on words and morphemes, but not on hieroglyphics. The selection of the word as a main dictionary unit in the dictionary,

according to S. X. Ioffe's opinion, indicates a certain grammatical tendency (direction) that is manifested in Chinese lexicography.

The "grammaticalization" of this dictionary (a term proposed by S.X. Ioffe) is related to the grammatical information on the word, as well as its inclusion in a particular category<sup>6</sup>.

When it comes to grammatical approaches to the word in the dictionary, or in general to the grammaticalization of the dictionary, it is important to note that the process is determined not by the inclusion of a word in a particular category, but by the boundaries and the nature of the word.

Another feature of the dictionary is directly related to the problem of determining the boundaries of words, that is, the grammatical characterization of words. The authors of the dictionary describe Chinese as a polysyllabic language at the outset, emphasizing the superiority of the two compound words while emphasizing the monosyllabic tone of the ancient Chinese language. The definition of the word in ancient and modern Chinese is of great importance in the separation of 11 lexical layers in the present-day Chinese vocabulary.

-The vocabulary of ancient classical works, which is found in the present oral language and sometimes used in quotations (excerpts from the works).

-The vocabulary of ancient classical works, which is widely used in modern Chinese.

- Scientific and special terms that are not widely used.

- Literary lexicon.

-The vocabulary used on the radio, television and public appearances.

-The neutral vocabulary -a common oral vocabulary. (Here, the authors include the putunhua - the modern literary language lexics).

-The simple speech language lexicon (the authors include "Bezzinhua," the words used in the Beijing language).

-Beijing dialects, slang, etc.

- Taboo, words used as a ban.

-Swear (slandorous) words.

- Words in other dialects that came into Putunhua and are rarely used.

The study of these lexical layers suggests that a number of them correspond to the functional methods laid down by modern linguists. However, another layer of vocabulary arranged in the dictionary cannot be included in the functional style layers. For example, O. S. Akhmanova's "The Dictionary of Linguistic Terms" contains the following selection of functional methods: scientific, daily-domestic, daily- business, official-documentary, journalistic, and artistic-novelistic.

This distribution of lexical layers in a given dictionary is of great importance in analyzing the unity of the Chinese word, and in particular the phenomenon of homonymy. Each word is highlighted in the dictionary to indicate the appropriate style, and each particular word should be studied only within the framework of that style. Except for the style specified, this unit may not be the word. We should take into consideration this originality of the Chinese language when

analyzing the phenomenon of homonymy. It is also important to take into account the methods used to determine the prevalence of homonymy.

Some information on grammatical features of the Chinese language is provided, along with definitions of the concept of the Chinese word. For example, the introduction says that the dictionary is composed of (a) modern words and (b) understandable words upon hearing. Besides that it was also noted that if any lexical unit used in the sentence is written in Latin letters, it is recognized as a detached word in the dictionary.

Based on the information presented above, the authors describe the unit defined as a word by two criteria: the clarity of the word upon hearing and its "continuity" (integrity) in the recording.

As it was emphasized above, all words in the dictionary are organized according to word categories. Each word has a specific lexical meaning and a specific function in the sentence, so the following categories of words are defined in the dictionary: 1) 指示词 zhǐshìcí - demonstrative words; 2) 数次 shùcì- numbers; 3) 量词 liàngcí- account-related words; 4) 名词 míngcí - nouns; 5) 动词 dòngcí- verbs; 6) 形容词 xíngróngcí - adjectives; 7) 副词 fùcí- adverbs; 8) 介词 jiècí - prepositions (front auxiliaries); 9) 助词 zhùcí - modal words and particles;

10) 接词 jiēcí- conjunctions; 11) 问投词 wèntóucí- appeals.

In this classification, the units called speech parts and particles in the European tradition are listed as separate word categories.

In general, the classification of independent words in the dictionary corresponds to the classification of words in Chinese studies(sinology). The main differences lie in the classification of auxiliary words. For example, the pronouns were included in the list of demonstrative words. A. A. Dragunov called the pronouns as word-substitutes and included them in a separate general lexical-grammatical category (peer group), independent parts of speech. In this dictionary, the calculation words are also classified into the group of words with independent meaning. The words contained in this category are considered to be auxiliary words by the following authors: V.I. Gorelov, Li Jinsy, Zhao Yuandjen, and also the authors of the Chinese Language Review. In A. A. Dragunov's case, account words are studied as a separate lexical-grammatical category in nouns.

Another advantage of the dictionary is its structure based on dictionary articles. The Kuraisi dictionary contains grammar materials or grammatical description of a word in each dictionary article.

The dictionary article has the following structure: first, the Latin word transcript is followed by its hieroglyphic writing. The dictionary uses 517 simplified hieroglyphs, as well as their complete spelling in brackets. The dictionary also provides a variety of hieroglyphic inscriptions, with a special designation. After the hieroglyphic spelling, a part of speech's symbol is noted in brackets, for example, 动 dòng - (verb), 名 míng - (noun), etc., and behind the brackets the number of the corresponding lexical layer is indicated. Further, the translation of the word into Japanese is followed by confirming examples, because using them, it will be possible to check

the information in the dictionary. Such examples are found in about 25 percent of words, mostly composed of single words.

The dictionary also contains words that are related to the numeric category, with several meanings of the numbers and other words used in the same tone. In the article we found it necessary to review numbers from one to nine. For example, the number "one" is called "yī" in Chinese, and it has 11 different meanings as "one", "head", "same", "only". Here is an example of the homonym words yī: - one, 衣 yī- clothes, 医 yī- "he" (in Russian), 医 yī - nurse and so on.

The number "two" is translated into the Chinese language as "二 èr" and has its accompanying words. For example, 二 èr – two, 而 èr- even then.

The number "three" is called "三 sān" and has melodious words. For example: 三 sān –yч, 髫 Sān- hairy, woolly.

The number "four" is translated as "四 sì-four" in Chinese, and it gives the following meanings: 寺 sì- Buddhist temple, 似 sì- exact, 祀 sì – to sacrifice, 饲 sì - fodder, 嗣 sì- afterwards and etc.

The number "five" is translated as "五 wǔ" and has similar homonym words. For example: 午 wǔ -afternoon, 武 wǔ - military, 舞 wǔ- dancing, 捂 wǔ-closing and other words.

The number "six" is translated as "六 liù" and has such homonym words as, 溜 liù - stream, 溜 liù –heating, 溜 liù –walking, 鸱 liù – skate.

The number "seven" is called "七 qī" in Chinese. Like many others, it has a lot of melodious words. In Chinese, there are more than a dozen similar words, such as; 期 qī –period, 栖 qī - sitting, wintering, 戚 qī- relatives, 欺 qī – to lie.

The number "eight" is called 八 bā. It has the following melodious words: 巴 bā- to be thirsty, 把 bā –holding, 疤 bā-scar, 笆 bā-pack, texture.

The number "nine" is interpreted as 九 jiǔ, and there is a list of homonym words: 久 jiǔ – old, ancient, 灸 jiǔ- burning, 酒 jiǔ - wine, or 韭 jiǔ-onion.

The articles on multidisciplinary words cover all the meanings of these words as lexical units. Opposite each meaning there is a symbol of the part of speech, as well as a reference to a particular lexical layer of the word in this meaning, followed by a Japanese translation, whereupon an example of the word use in one or another meaning is given<sup>7</sup>.

The dictionary includes different meanings under the single word symbol, as well as different meanings of the multivariate words that refer to different categories of words. Opposite various meanings, not only the signs pointing to different categories of words can be indicated but also different signs of lexical layers.

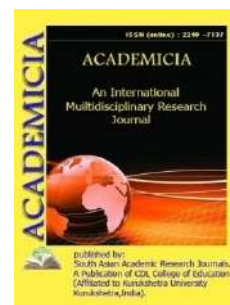
When two or more meanings of a word belonging to the same category defined, the dictionary studies them as a single lexical unit. When multiple meanings of a word are defined by different categories of words, the dictionary treats them as the meanings of various words formed by conversion.

The authors of the dictionary place different grammatical meanings of the word 讨论 tāolùn – (to discuss, discussion) in a single dictionary article and refer to these as the root meanings of a single word. These two meanings of different word categories are studied by the authors as a language condition rather than as a condition of speech. The authors distinguish the cases in which the word can be changed. For words that appear in the function of a different word series in the archetype, a special "+" character is inserted before the example and indicates that the word is used in a non-specific function. For example, such kind of dictionary articles containing the words in the form of 讨论 tāolùn are, are fundamentally different from the ones mentioned above. For instance: Compare 报告 bàogào (动) with (我把这件事报告给他 wǒ bǎ zhè jiàn shì bàogào gěi tā (I informed him about this case), 作了报告 (lecture, made a speech).

From the statement mentioned above, we can conclude that thanks to the grammar information provided there, this dictionary can be used as a valuable material in all kinds of research on Chinese words and numbers.

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## **CIVIL SERVICE PROFESSIONALIZATION: PROBLEMATIC ASPECTS AND WAYS TO ACHIEVE SUCCESS (RUSSIAN EXPERIENCE)**

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### **ABSTRACT**

*The article focuses on the current aspects of the problem of professional development of civil servants. It pays special attention to the essence and interdependence of such concepts as "civil service", "civil servant", "qualification requirements", "competence", "employee training", "professional development", "professionalization". Taking into account the results of public opinion polls on this activity, the issue of scientific review of the process of professionalization of the civil service is raised. It was noted that the main problem in the field of governance today is the growing contradictions between the stereotypes of traditional management activities and the requirements of the current stage of development. The author substantiates a new approach to the content of professional development of civil servants, given that the civil service is a multifaceted and complex activity. The proposed measures raise the issue of developing a professiogram - a document containing a list of requirements and standards created for public civil service, aimed at professionalizing the service in the public system and improving its*



*quality. It is also proposed to develop a new scientific field (for us) that studies the problems of the profession - a special branch of professionalism, sociology.*

**KEYWORDS:** *Civil Service, Professionalization, Professional Activity Of Civil Servants, Professional Development Of Civil Servants, Professionogram, Professionalism.*

## INTRODUCTION

According to Russian legislation, the Civil Service means the service of citizens of the Russian Federation in professional positions in the civil service. This service is an activity related to the powers exercised by the federal state bodies and organizations of the Russian Federation, the structural units of the Russian Federation (subjects of the federation) and their deputies [1].

This activity is social in nature and is conducted in a formal, transparent (open) manner. Professional development of civil servants can be achieved only if a number of necessary conditions are met:

- the social need for this type of activity and the availability of specially trained people who meet this need;
- sustainable organized cooperation that promotes the formation of corporate culture of the subjects on the basis of unity of social interests;
- a certain professional environment - a set of conditions and means of organizing professional activities that provide it.

A civil servant with appropriate qualifications must perform his or her job at a high level of professionalism in accordance with established norms and rules, which in turn is a key factor in the effective functioning of a public body.

Thus, the civil service places high demands on civil servants in terms of professionalism in their field, availability of general professional skills, and general culture.

## The main results and findings

The term “professionalism” itself (Lat. Profession) has a broad meaning and can be interpreted in several contexts. It also includes high skills and ability to perform their duties wisely, ability to achieve high performance, professional performance results and so on. This term includes many characteristics, such as values, professional knowledge and skills, professional thinking, professional experience, duty, skill, professional creativity, professional creativity and so on. Professional skills are manifested in certain qualities. E. Durkheim emphasizes that professionalization leads to social change and contributes to the development of society.

E. Durkheim emphasizes that placing specialization and division of labor at the center of the theoretical basis of development as necessary parameters for the development of society, emphasizes that a professional group can be one of the institutions that maintain social order [2].

A.Flexner, who studied the problem of professional competence, emphasized that a civil servant should have special knowledge acquired during the training process and certified by the required certificate, as well as special technologies and professional ethics [3].

B.Barber dwells on professional creativity and professional experience as the main quality attributes of professionalism, having a high level of knowledge and skills, focusing on the public interest, “self-governance through high ethical requirements”. In his opinion, these features form the basis of professionalism [4].

M. Weber considers professions as a social institution, and professionalism as an indicator of value, efficiency of activity. According to Weber, the main characteristics of professionalism are rationality (ie, activities based on scientific knowledge and professional skills). The bureaucracy, in Weber's view, requires strict adherence to formal rules. In this case, the government official must stay out of politics.

In the Russian Federation, the powers of a modern civil servant are enshrined in the Law on Civil Service. Service of the Russian Federation (Article 17). These include strict adherence to the law, high level of professionalism, modernity, protection of citizens' rights and freedoms, political neutrality, impartiality, proper treatment of citizens in solving problems, prevention of conflict situations, conscientious performance of official duties, observance of statutory restrictions make and so on.

Given the nature of the responsibilities set out, the skills required for specialization, training areas, and civil service positions are detailed in the manual prepared by the Ministry of Labor and Social Development. It contains requirements, specialization and other skills, as well as requirements for jurisprudence, which include the basic professional and functional skills established for holding positions in specific government agencies.

The main requirements include the candidate's education, general education, work experience, knowledge of the state language (Russian), the basics of the Russian Constitution, as well as knowledge and skills in the field of information and communication technologies. In addition, general and managerial skills are taken into account.

General skills (for all categories and groups of civil service positions) include:

- ability to think systematically (strategically);
- ability to plan work time, use it wisely and achieve results;
- culture of communication;
- ability to manage change.

Management skills (for “managers” and “managerial assistants (advisors)” categories of civil service positions include senior specialists (as well as for key, managerial, and senior group positions) with the following functions:

- ability to manage subordinates, effective planning;
- Ability to quickly make and implement management decisions [6].

Functional qualification requirements are regulated by job responsibilities in accordance with the functional powers of a civil servant. In June 2019, Russian President V.V. Putin signed a decree

"On the main directions of development of the civil service of the Russian Federation for 2019-2021" [7]. This decree improves the procedure for appointment to civil positions in the Russian Federation, encourages civil servants, provides them with legal and social protection to improve the effectiveness of their professional services, develops a system of guarantees, introduces new forms of professional activity, including the use of information and communication technologies issues were raised.

Based on the President's decision, the Russian government approved a "road map" for the development of the civil service. This document provides for the improvement of the system of recruitment, remuneration and incentives for civil servants. The task was also set to improve the system of advanced training of civil servants. Today, civil servants must have a high level of consciousness, high education, solid skills and professionalism. Unfortunately, modern state civil service personnel cannot meet these requirements.

Professional development should be carried out regularly, throughout the life of the civil service. Its results should be taken into account during the certification, in appointments to other positions, at the service level.

Professional growth includes:

- 1) general education in the form of additional professional knowledge and skills (seminars, trainings, master classes, lessons aimed at the formation of new knowledge and skills;
- 2) Conference and hands-on experience that provides reading and best practice sharing;
- 3) self-education using special information;
- 4) training courses.

However, in this case, the question arises, what kind of knowledge do civil servants currently lack to perform their duties professionally? According to their answers, they lack management skills, legal knowledge, skills to work with citizens, communication culture [9, 10].

According to experts, the lack of qualified lawyers in the civil service, modern management, personnel, information management specialists, psychologists and sociologists, as well as the lack of sense of responsibility for the staff he recommended for public service positions.

This is certainly not a coincidence. Because the decline in professionalism in the civil service is due to several reasons. Among them, recruitment to the civil service on the basis of acquaintance, promotion to leadership positions is not due to professional qualities, but on the basis of personal devotion, due to such shortcomings as the decline of moral and spiritual qualities of civil servants. In this case, the staffing of the civil service is associated with a clear social demand. After all, the effectiveness of the activities of an official has a direct impact on the development of the state and the well-being of the people.

The achievement of a civil servant, the high level of professionalism is not only his personal wealth - he also has social significance. Therefore, professionalism, professionalism should be free from vices such as formality, bureaucracy, indifference, dry administration or improvisation of active activity.

Success is usually accompanied by civil servants who understand the nature of the processes taking place, are able to act in non-standard situations, and are able to critically evaluate the

actions of themselves and their colleagues. The main problem of the current situation is the sharpening of the contradictions between the stereotypes of management activity and modern requirements for management.

The results of a survey conducted by the Levada Center in January 2019 showed that the majority of Russian citizens have low confidence in officials. Two-thirds of the respondents (78%) said that officials hide the truth about their work situation and avoid solving current problems [11].

However, professionalism involves looking for ways to solve a problem in society. According to Weber, civil servants usually serve the interests of the organization they serve, their bosses, or worse, instead of fulfilling their professional duties.

As noted above, the normative legal acts will set out the criteria for improving the professional skills of civil servants, their level of professionalism. In this regard, there are normative documents stating the qualification requirements for candidates seeking to enter the civil service. They contain the basic qualification requirements for civil servants (level of professional education, work experience, knowledge of the state language (Russian), the basics of the Constitution, office work, documentation, knowledge and skills in information and communication technologies).

Functional qualification requirements are also formed. They are related to experience in a particular specialty, area of teaching, knowledge and skills required to perform in a professional setting.

Taking into account the professional requirements for civil servants, it is also necessary to define their forms of self-training, to form a practice-adapted production of self-education methods that take into account the specifics of the employee's activity. This leads to the assessment of professional self-development in its own way, the improvement of methodological tools and technologies for effective development. The process of acquiring competencies within the framework of additional vocational education programs should be ensured in accordance with the competency model of the position of this civil servant, which depends on the competence.

Speaking of changing the policy of civil service training, we believe that based on the strategic guidelines of the new public paradigm, it is desirable to introduce more active management, ie training of civil servants using mixed learning technologies - audience and distance learning-interactive methods, including project activities. In addition, learning outcomes should be linked to the motivation of the civil servant for professional growth and effective performance.

Referring to foreign experience in improving the skills of civil servants is useful in the study of its practical direction. For example, in Europe, the training of such specialists is carried out mainly in practice, the acquired knowledge and skills are immediately applied in practice, that is, the knowledge in practical activities aimed at professional development is closely linked with change management. In Russia, on the other hand, vocational training is still based on more theoretical knowledge, not always related to real life.

In the civil service system, a coaching school can become an effective tool for professional development. This system provides an effective exchange of management experience, provides the transfer of knowledge, professional skills, training of personnel, strengthens team spirit. The urgency of coaching schools is evident in today's new environment, which is essential for new

employees in the civil service, and is increasingly needed to adapt them to new positions in government agencies without delay. Of course, coaches themselves must be highly qualified professionals, respected by their colleagues and staff.

The establishment of coaching institutes, the appointment of coaches excludes the use of a single prescription. It is necessary to develop a well-thought-out plan and roadmap, including various incentives. Coaches and trainees need to be based on mutual interests to achieve goals. Well-known expert in the field of management D. According to Meister, only as a result of a high corporate approach can the coaching school be seen as an investment in long-term development [12].

Given the growing qualification requirements for civil servants, there is a need to reconsider the powers of public service personnel, increase their responsibility in the selection of personnel and the rational use of best practices in management. To do this, it is necessary to create a reliable mechanism to protect the professionalism of civil servants from serving the interests of some high-ranking officials. In our opinion, in the eyes of the personnel service should be all the tasks of personnel management.

## CONCLUSION

The process of professionalization of the civil service requires scientific study as a management activity. Management activities should be supplemented with new scientific terms, concepts related to professional activities, including professional growth, professional skills, professional knowledge, professional service, professional interest, professional development, professional experience, professional responsibility and so on.

We also need to think about the development of a professionogram - a document that includes a system of signs describing the specific features of the civil service, a list of requirements for civil servants. A professionogram is a document that meets the requirements of the law, i.e. high qualification requirements, and should be based on ethical and psychological qualities.

As a branch of sociology that conducts research related to the study of problems of professional growth, as well as the study of management activities - the inclusion of the science of professionalism in the list of sciences is a topical issue today. Advanced foreign countries have this science. The subject studies the problems of improving modern policy in management, the correct organization of public policy in the civil service, the evaluation of the effectiveness of management, their improvement and so on. All this serves as a basis for a healthy workforce.

Undoubtedly, the professionalization of management activities will be the basis for improving the skills of civil servants, their service efficiency, improving the level of scientific validity of these processes will affect all aspects of public administration and ensure its efficiency.

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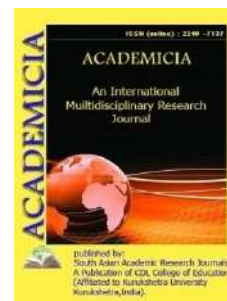




# ACADEMICIA

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### FACTORS INFLUENCING THE CREATION OF A COMFORTABLE MICROCLIMATE AND ENVIRONMENTAL CONTROL OF ZONE BY LANDSCAPE DESIGN

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#### ABSTRACT

*In this article, in order to increase environmental sustainability in the desert and oasis zones of Uzbekistan, the creation of planned multifunctional landscape areas in public buildings, the appropriate use of landscape design components to improve the microclimate of the region, increase the impact of their artistic and aesthetic appearance, important strategic issues related to increasing the role of public buildings in socio-economic life have been studied in detail.*

**KEYWORDS:** *Urbanization; Landscape Design; Hot And Dry Climate; Landscape Design Elements; Construction - Climatic Zoning;*

#### INTRODUCTION

Nowadays, the problem of increasing the harmful effects on the environment as a result of the

rapid development of the urbanization process is being raised all over the world and is causing a heated debate. *Replacement of natural surfaces like soil and vegetation cover by various urban surfaces – bricks, paving, asphalt, concrete surfaces, glass and iron started modifying urban atmospheric environment at different levels above ground in local geographic scale[1].*

*Thermal comfort and air quality are major concerns for people living in urban areas. Currently, due to the influence of factors such as building density, building materials and anthropogenic heat emission in residential areas, high temperatures may frequently occur in hot summers and may negatively affect residential life. Moreover, traffic-induced emissions are one of the major contributors of air pollution in urban built-up areas, emitting several harmful pollutants in the form of particulate matters[2]*

However, we can also describe urbanization as a factor in preventing desertification. It is known that Arid zones are one of the important resources for the location and development of settlements in the future. This requires improving the natural and climatic environment of the desert and oasis zones of the country, which have a wide economic and social potential. A large area of the Republic of Uzbekistan is highly exposed to solar radiation, combined with high summer temperatures, low air mobility and low humidity. These conditions cause significant thermal stress on the human body and a significant decrease in its performance in residential and public buildings, leading to overheating of their area.

*Air Temperature is the most common indicator of human thermal comfort. Nevertheless, air temperature alone is not an accurate indicator of thermal comfort. There are other environmental and personal parameters must be taken into account.[3]. According to ASHRAE Standard 55-2010, environmental parameters are air temperature, mean radiant temperature, wind speed and relative humidity. Personal parameters are activity level and clothing insulation. In general, outdoor thermal comfort is much more complex than indoor comfort. For example, the spatial and temporal microclimatic variations of meteorological variables are often very large. Other reasons for the difficulty include lack of climate control in outdoor spaces[4].*

In complex natural and climatic conditions, it is important to create a favorable thermal (thermal comfort) environment to improve the conditions of social and practical activities of people, increase well-being, living standards and quality indicators.

*Green infrastructure, such as urban parks, community gardens, green buildings, and green roofs, represents a network of human-managed and natural ecosystems that together enhance ecosystem health and climate change resilience, contribute to biodiversity, and benefit human populations through the maintenance and enhancement of ecosystem services.[5].*

Improving the ecological and hygienic condition of public buildings and planting trees, parks and alleys, even if they are small in cities, will help to keep the microclimate, air temperature and humidity moderate. Not only landscaping around the city recreation areas, but also in the areas of public buildings, which are not a small part of the city, a "small corner of nature", the effective use of landscape solutions, natural conditions for work and study, leisure and strengthens the role of man in the development of society. It strengthens the connection of human activity with the environment and increases its role in social life.

*Urban Green Infrastructures (UGI) have been recently defined as sets of man-made elements that can provide a range of environmental benefits at buildings and urban scales.[6]UGI*

*comprise urban forests, street trees, parks, turf-grass, private gardens, green roofs and green walls. They play an important role in contributing to a range of ecosystem services such as improving aesthetically the environment to live and work, removing airborne pollutants and improving air quality, improving the habitat for invertebrates, birds, weeds and plants and promoting and increasing biodiversity, providing sound insulation and noise absorption, enhancing of storm-water management and water run-off quality[7].*

In recent years, much attention has been paid to the issues of construction and landscaping in hot climates. The design of the exterior of the building, its surface coating has a great impact on the heating, cooling and lighting of the building. In this regard, the landscape design and landscaping around the building play an important role in heating, cooling and lighting the building. However, in many cases, the specific climatic conditions of the region are not fully taken into account. In landscaping, regardless of the climatic conditions of the region, the use of landscape design components only as a decorative ornament, nature does not solve the problem of improving the environment, but also has a negative impact on them.

*Although plants are very popular, they are usually used for their aesthetic rather than functional benefits. Ideally, along with their decorative function they could act as windbreaks in the winter, as shading devices and evaporative coolers in the summer, and as lightfilters all yearlong. Plants can also reduce erosion, noise, dust and other air pollution, the level of carbon dioxide, and increase the level of oxygen in the local air[8].* Especially in dry climates, by creating a pleasant microclimate by landscaping public buildings, not only provide people with work, education, cultural and educational recreation, but also to identify and develop principles for improving its artistic and aesthetic appearance. output problems are emerging transversely.

## **MATERIALS AND METHODS**

### ***I. Regional climate.***

Climate is one of the most basic factors of life in the universe around us, and man is in constant contact with it, i.e. man is always under its influence. Climate affects the lifestyle of the population, influences the organization of activities, recreation. Therefore, it is necessary to take into account the correct and comprehensive climatic factors in the design and construction work. The task of designers is not to passively adapt to local climatic conditions, but to develop effective measures to eliminate or completely eliminate the shortcomings of the natural environment, to maximize the benefits of climate.

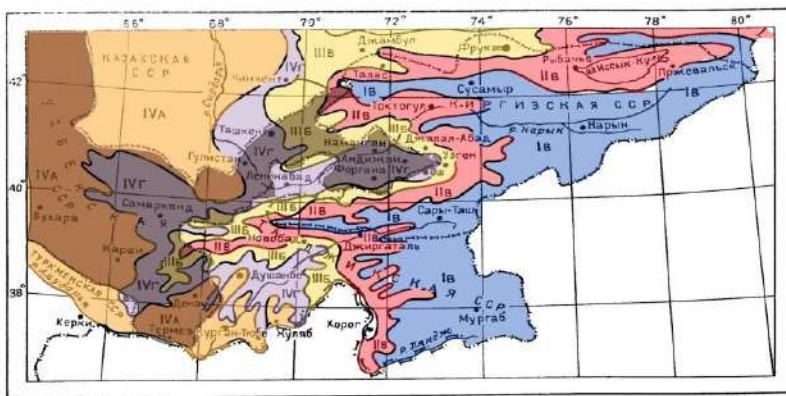
As 2000 ago, Vitruvius said, "*The damage caused by nature must be remedied through art.*" In addition, we can say that landscape design is able to change the natural environment based on human needs. The main feature of landscape design in desert and oasis zones with dry and hot climates is the inclusion of landscape components (green vegetation and water basins) to create a comfortable living environment. This will help to create a favorable climate and reduce the harmful effects of the climate.

As with all areas of architecture and construction, one of the most important and decisive factors in the design of landscape design is to take into account the natural, geographical and climatic characteristics of the area. Designers are well aware of the negative effects of hot climates on human life activities. The diversity of natural and climatic conditions in the world, in each case, requires the creation of a detailed climate zone and the establishment of design rules in places

where the city originated or developed. The diversity of natural and climatic conditions on Earth requires detailed microclimatic zoning of the area for construction and urban planning purposes. When dividing the area into different climatic zones, the elements of climate that affect the design of the building, as well as the elements that need to be taken into account in construction and operation, are analyzed. Large areas of the country are studied and divided into regions with similar climatic parameters. The laws of the climatic zone are formed, and on this basis the typological requirements of buildings intended for different purposes are formed.

## *II. Climatic zoning of the territory of Uzbekistan.*

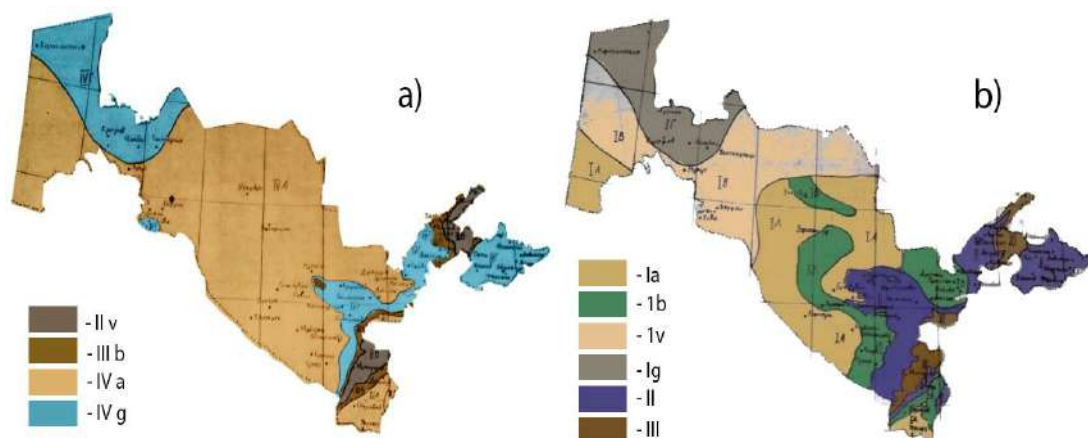
The natural and climatic conditions of individual construction sites are a vital factors in shaping the architecture of buildings and structures. The term “*natural-climatic conditions*” refers primarily to natural landscape, insulation, solar radiation, temperature, humidity and wind conditions. With the similarity of these factors, the entire territory of the USSR was divided into four construction and climatic zones. Each of them has its own temperature-humidity and wind regime characteristics and construction conditions.



*Fig 1. SNiP 2.01.01-82. Schematic map of climate zoning of the former USSR territory for construction . Central Asian part*

According to the climatic zoning adopted in 1982 (Fig 1), the regions of Uzbekistan were divided into **zones II-III-IV**, which were divided into **climate subareas IIv, IIIb, IVa, IVg**. The hottest period of summer is July, when the average monthly temperature is  $+12^{\circ}\text{C}$  to  $+21^{\circ}\text{C}$  in **zone IIv**,  $+21^{\circ}\text{C}$  to  $+25^{\circ}\text{C}$  in **zone IIIb**,  $+28^{\circ}\text{C}$  and more in **zone IVa**. And in **zone IVg** the temperature was obtained from  $+25^{\circ}\text{C}$  to  $+28^{\circ}\text{C}$  degrees. The winter months are January  $-14^{\circ}\text{C}$  to  $-3^{\circ}\text{C}$  in **zone IIv**,  $-5^{\circ}\text{C}$  to  $+2^{\circ}\text{C}$  in **zone IIIb**,  $-10^{\circ}\text{C}$  to  $+4^{\circ}\text{C}$  in **zone IVa** and  $-15^{\circ}\text{C}$  to  $0^{\circ}\text{C}$  in **zone IVg** average temperature was obtained.

During the years of independence, a number of measures have been taken to divide the territory of Uzbekistan into construction and climatic zones. Construction and climatic zones of the Republic of Uzbekistan are issued on the basis of 2 schematic maps according to KMK 2.01.01-94 (Figure 2).



a) Map of Construction and climate zoning similar to that adopted in SNiP 2.01.01-82.

b) Map of Construction and climate zoning for urban planning purposes

**Fig 2.** Schematic map of Construction and climate zoning of the Republic of Uzbekistan KMK 2.01.01-94

First, construction-climatic map is similar to the climatic zoning map adopted in 1982, in which the territory of Uzbekistan is divided into three climatic-construction zones **II**, **III**, **IV** and four climate subareas **II v**, **III b**, **IV a**, **IV g**, taking into account the average monthly temperature in July and January (Figure 2a).

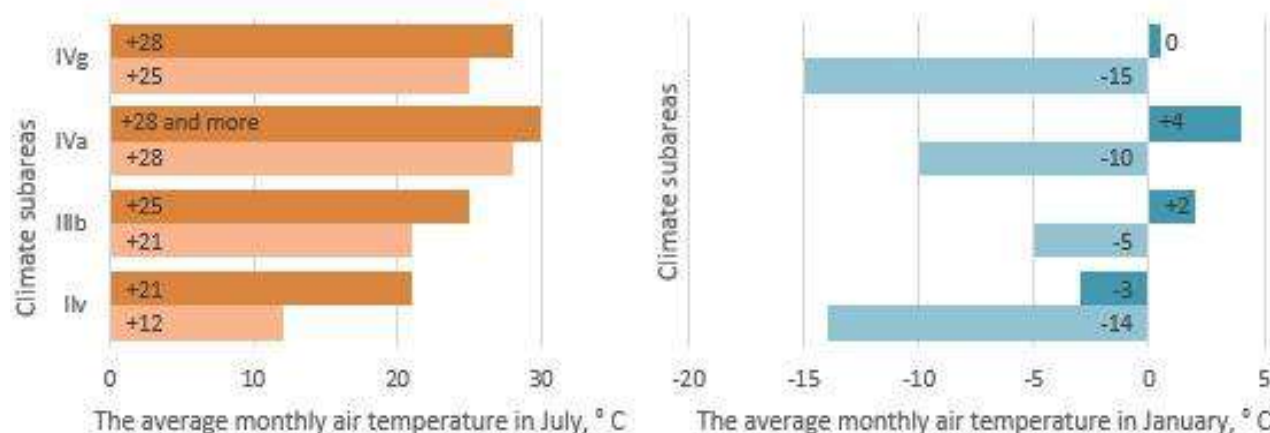
**Table 1 .** Map of Construction and climate zoning. Similar to that adopted in SNiP 2.01.01-82. Calculated indicators

Climatic regions	Climate subareas	The average monthly air temperature in July, ° C	The average monthly air temperature in January, ° C
<b>II</b>	II v	From +12°C to +21°C	From -14°C to -3°C
<b>III</b>	III b	From +21°C to +25°C	From -5°C to +2°C
<b>IV</b>	IV a	+28°C and more	From -10°C to +4°C
	IV g	From +25°C to +28°C	From -15 to 0°C

As can be seen from Table 1, in the **II v** zone, the average monthly temperature in July ranged from +12°C to +21°C, and the average monthly temperature in January ranged from -14°C to -3°C, including the mountainous regions of the country. **Zone III b** can be called foothills, **zone IV a** can be called a desert zone with its hottest days in July, and **zone IV d** can be called oasis zone (Table 1).

We can see from the map and temperature indicators that cities such as Nukus, Urgench, Uchkuduk, Zarafshan, Navoi, Bukhara, Shakhrisabz, Karshi, Termez are included in the high-temperature and dry climate-desert zone, Samarkand, Tashkent and Fergana can be entered into the oasis zone with a relatively moderate air temperature.





**Fig 3.** The average indicators monthly air temperature in July and January of Construction and climate zoning

The second “*Construction for Urban Planning - Climatic Zoning Map*” issued in KMK 2.01.01-94 is structured taking into account more climatic factors and provides more information (Figure 2b).

We can see that **zone IV a**, which was separated on map 1 and given in general, is now divided into 4 zones. It can be seen from this graph that the abundance of sunny days in zones **Ia and Ib** and the lack of winter cold period in itself indicate its hot zone, while the duration of hot and cold days in zones **Iv and Ig** is relatively moderate. The part of the country divided into **zones III** differs from other regions by the fact that there are a few cold days and no hot days.

From all the above data, we can say that one of the reasons for the peculiar formation of the climate of Uzbekistan is its geographical location and related solar radiation; atmospheric circulation; relief: the condition of the earth's surface (what the earth's surface is covered with), anthropogenic factors, and its distance from the oceans and seas.

**TABLE 2. KMK 2.01.01-94. CALCULATED INDICATORS OF CONSTRUCTION AND CLIMATE ZONING MAP FOR URBAN PLANNING PURPOSES**

Climatic regions	Climate subareas	The number of dusty days in a year	Continuation of scorching hot days	Continuation of the heating season
<b>I</b>	1a	More than 20	More than 60	Less than 160
	1b	Less than 20	More than 60	Less than 160
	1v	More than 20/5	40-60	Less than 160
	1g	Less than 20/5	40-60	More than 160
<b>II</b>	-	Less than 20	40-60	More than 160
<b>III</b>	-	Less than 20	0-60	More than 160

*In the denominator of the fraction is the dusty days of the Aral zone*

Under the influence of anthropogenic factors, oases have formed in parts of the barren, arid climatic plains. This has led to a change in the microclimate. Many cities of Uzbekistan were built within these oases.

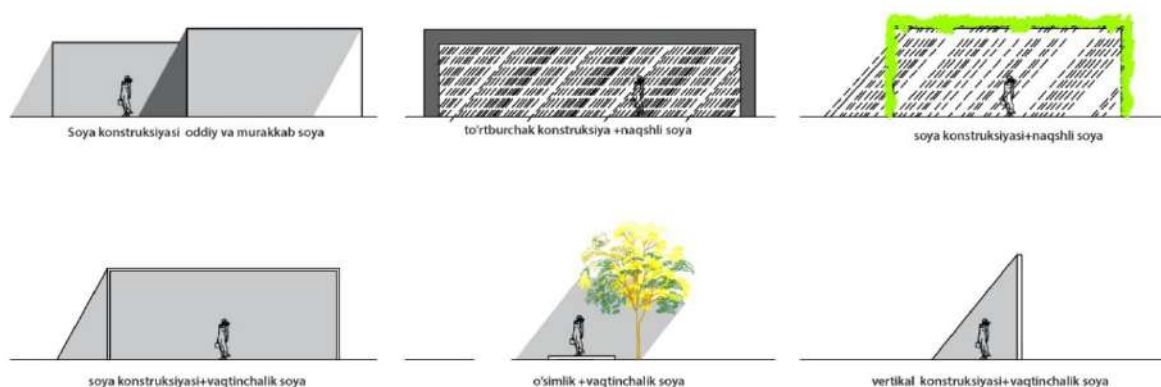


## Results

In the desert and oasis zones with hot and dry climates, it is necessary to create shade areas, cool the air temperature, organize light breezes, provide relative humidity. In this case, the role of landscape design elements is great. In this sense, plants, water, wind, shade, geothermal energy have a positive effect on the microclimate of the region, evoke a pleasant feeling of warmth, improve the condition of the person, a great hygienic and psychological impact on him. When these mechanisms are combined with each other, it is possible to design heat-friendly open spaces that can be used throughout the year. They control the heating regime of the area, have a positive effect on the composition and cleanliness of the air, are used in the fight against noise and air pollution, create the landscape attractiveness of the city.

### Microclimate control by shading

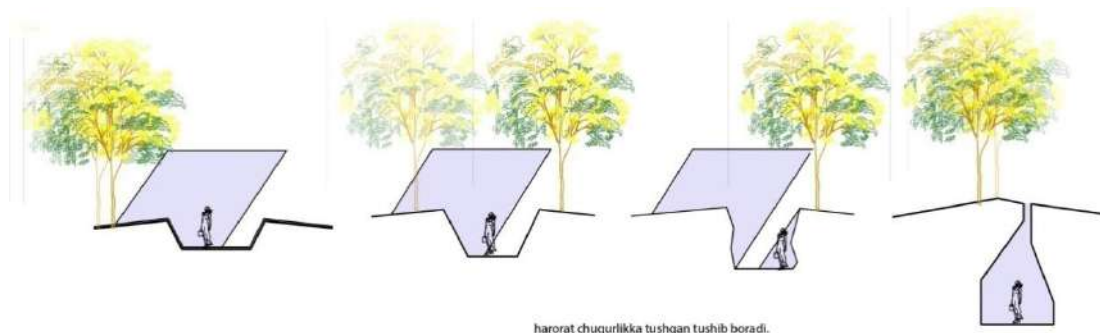
Solutions for shading in the open should include a combination of natural (trees, creeping plants growing on the pergola) and shade-protective structures (such as pergolas, fences, solid cubes).



*Fig 4. Microclimate control by shading*

### Microclimate control by geothermal energy

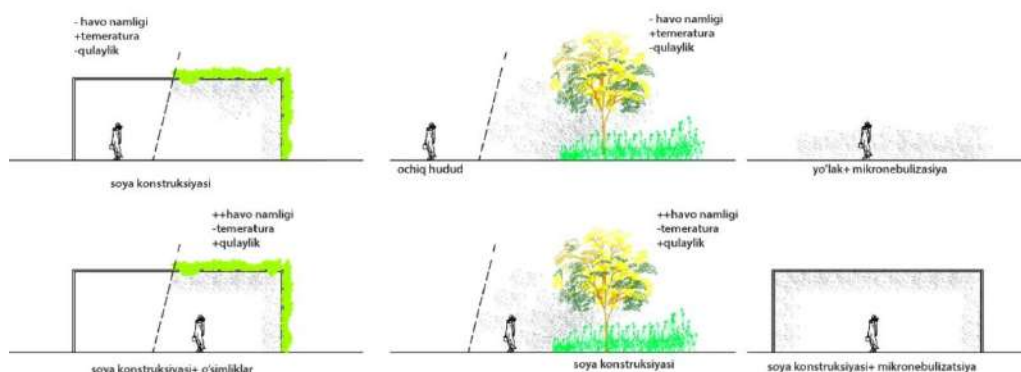
At depth, the indoor microclimate is cooler in summer and warmer in winter than the outdoor temperature, ensuring a stable, ie comfortable, heat regime throughout the year.



*Fig 5. Microclimate control by geothermal energy*

### Microclimate control by water

Due to the fact that water absorbs heat from the sun, they serve as natural conditioners in the open. Proper introduction of open water systems in the landscape improves the microclimate conditions and, consequently, the heating regime during the hot periods of the year. Microclimate conditions are favorable for humans at a relative humidity of 30-70%. Research in medical science has shown that an environment with an air temperature of 18-22 C and a relative humidity of 50-60% is comfortable for a human being. In dry weather (low relative humidity) cold air temperatures (-42) are more easily tolerated than in cold latitudes - 25 C0 cold. Plants have a large evaporative property, have a significant effect on humidity and air temperature, evoke a positive feeling of warmth. On the one hand, plants provide protection from sunlight with their shade, on the other hand, the transpiration of plants significantly reduces the outside air temperature.



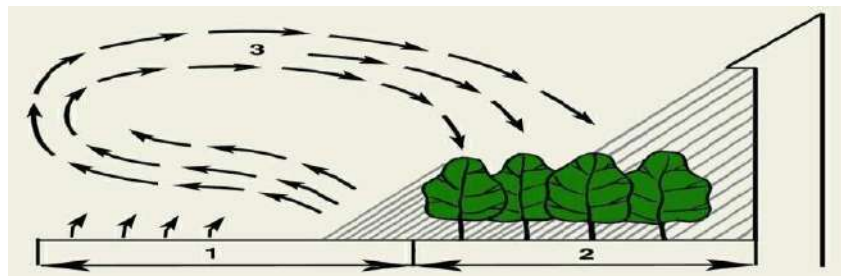
**Fig 6. Microclimate control by water**

Micronebulization is a method of cooling the air through water evaporation mechanisms that facilitate the climate in certain areas of the garden. Micronebulization systems create a mist with very small water droplets; The smaller these droplets are, the faster they absorb energy and evaporate, and the air temperature immediately drops. Many factors affect evaporative cooling, such as the effectiveness of the refreshing effect, the amount of air, the movement of air and air renewal, and the presence of shade in the area. Water evaporation systems are more effective in enclosed, air-guaranteed areas protected by shady structures.

#### **Microclimate control by wind / wind flow.**

Air movement is the most important factor determining the microclimate of an urban area, which has a significant impact on a person's perception of heat, especially in the summer when the environment is overheated. The wind regime that is comfortable for humans is calculated from 0.5m / s to 3m / s. Using trees and shrubs, it is possible to improve the ventilation of the entire city area or its individual parts, protect city buildings from unpleasant winds, regulate air movement - reduce and increase its speed of movement, change the direction of its flow. The exchange of green and open areas affects the speed and direction of the wind, increasing the air circulation of the area and creating a positive microclimate, which is especially important for cities located in southern climatic zones. Biological processes in plants have a significant effect on the cooling of the air, which occurs as a result of the exchange of the hot air layer below with the cooled air. As a result of differences in air temperature, there is a horizontal migration of air masses from the green massifs to the environment between green and open or indoor areas, i.e.

the heated air in the open areas tends upwards, resulting in its replacement by green massifs fills the colder air.



*Fig 7. Microclimate control by wind*

## CONCLUSION

In the normative and legal acts of urban planning and other normative documents developed for the territory of the Republic, in public buildings of desert and oasis zones with hot and dry climates, which occupy the main part of the country, the measures to be taken to reduce the negative effects of climate, methodological recommendations on issues such as landscaping, how to organize the area in a planned manner have not been given and are not adequately covered. In the current KMK 2.01.01-94, the regions are divided into construction-climatic zones only in terms of annual precipitation and annual high and low temperatures, the annual amount of winds. Analysis of the history of architecture and urban planning has shown that regional and national architectural styles and images, the appearance of solutions of objects (buildings) are formed under the influence of climatic factors of the region. Ancient architects, based on many experiences and mistakes, minimized the impact of adverse weather factors and at the same time developed constructive and methodological solutions using favorable climatic factors. The impact of climate design and building on human Although the production of special climatic norms for the construction industry began in the late nineteenth and early twentieth centuries.

In historical periods, the process of developing new lands in desert areas developed in other regions, sometimes at the same time. This is evidenced by the numerous monuments of ancient culture, archeological excavations, traces of ancient settlements, irrigation systems. Remains of ancient cities and castles abound in the south of Karakalpakstan, in the Kashkadarya and Surkhandarya regions. is of great interest to local and international tourism representatives. Ancient cities such as Bukhara, Khiva, Beruni appeared in the desert and continue to live.

Common problems are common to all desert cities: lack of water resources, unfavorable climatic conditions, and so on. A city without greenery in the desert, fresh water sources, the breadth of sand massifs and the same appearance, create unfavorable conditions for the life of the population. The oasis zones of Uzbekistan differ from the adjacent deserts by all components of nature.

Complex-planned organization of landscape design solutions in the areas of public buildings located in the hot and dry climates of deserts and oases, combining our national traditions on the basis of modern experience not only stabilizes the ecological environment of the city or improves the artistic and aesthetic image of the city, but also plays an important role in the rapid and balanced development of the economy of any country, in radically improving the living standards and quality of life of the urban population, as well as in the development of tourism.

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