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**VISION**

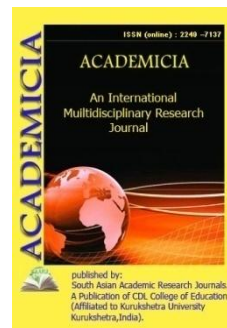
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# ACADEMICIA

## An International Multidisciplinary Research Journal

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101.	<b>DEMOGRAPHIC PROCESSES AND EMPLOYMENT IN UZBEKISTAN: A HISTORICAL PERSPECTIVE (ON THE EXAMPLE OF 1991-2019)</b>  F. A. Abdulbokiev	682-87	10.5958/2249-7137.2020.01177.5

102.	DEVELOPING INTEGRATING SKILLS OF STUDENTS WITH PHYSICAL DISABILITIES THROUGH DISTANCE LEARNING  Azimova Sitara Raximovna	688-92	10.5958/2249-7137.2020.01178.7
103.	COMEDY SKILLS OF ERKIN VOHIDOV  Boymurodov Alisher Rakhimberdi o'g'li	693-96	10.5958/2249-7137.2020.01179.9
104.	VARIANTS OF KARAKALPAK FEMALE NAMES  Jumanazaro Gulbadam Dosnazarovna	697-03	10.5958/2249-7137.2020.01181.7
105.	THE IMPACT OF THE COVID-19 PANDEMIC ON THE ECONOMIES OF THE MIDDLE EAST  Ibrohimova Nodira ZokirKizi	704-08	10.5958/2249-7137.2020.01182.9
106.	A COMPARISON OF BUSINESS COMMUNICATION BASED COMPETENCIES ACROSS INDIAN AND AMERICAN LEARNERS  Dr. Shelbee R. Nguyen	709-12	10.5958/2249-7137.2020.01193.3
107.	THE EFFECT OF SOCIAL MEDIA ON BRAND EQUITY FACTORS IN TERMS OF HOUSING INDUSTRY IN UZBEKISTAN  Kholmatova Nigina Rustamqizi	713-17	10.5958/2249-7137.2020.01183.0
108.	GLOBAL CRISIS OF THE IMPACT OF COVID-19 PANDEIMCS ON THE FOOD INDUSTRY OF UZBEKISTAN AND THE ROLE OF BANK-FINANCE SYSTEM TO SOLVE THE ISSUES  Murodova D.Ch, RakhmonkulovJ	718-23	10.5958/2249-7137.2020.01184.2
109.	TECHNOLOGIES FOR PRODUCING HIGH-STRENGTH GYPSUM FROM GYPSUM-CONTAINING WASTES OF SULFUR PRODUCTION - FLOTATION TAILINGS  Davlyatov Sh.M, Makhsudov B.A	724-28	10.5958/2249-7137.2020.01185.4
110.	ISSUES OF MANAGEMENT OF ENTERPRISES ON THE BASIS OF HORIZONTAL AND VERTICAL INTEGRATION  Hamrokulov Ulug'bek Abdurahmatovich	729-33	10.5958/2249-7137.2020.01186.6

111.	<b>THEORETICAL FOUNDATIONS OF THE “BRAND EQUITY” CONCEPT AND ITS FUNCTIONS</b> Kholmatova Nigina Rustamqizi	734-39	10.5958/2249-7137.2020.01187.8
112.	<b>IMPROVING THE ORGANIZATIONAL AND ECONOMIC MECHANISM OF AGROECO TOURISM DEVELOPMENT</b> Aslanova Dilbar Xasanovna, Khaydarov Oybek Zoirovich	740-45	10.5958/2249-7137.2020.01189.1
113.	<b>IMPROVING COMPETITIVENESS BY DIGITIZING THE ECONOMY IN THE SERVICE SECTOR</b> Turakhujaev Zayniddin	746-50	10.5958/2249-7137.2020.01190.8
114.	<b>FEATURES OF COVERING THE CONSUMED FOOD OF BULLS WITH A LIVING WEIGHT</b> Muzrobova M. N, Qurbonova Sh. E, Ruziyev A. I	751-54	10.5958/2249-7137.2020.01191.X
115.	<b>FORMATION AND DEVELOPMENT OF NAVOI CITY AS AN INDUSTRIAL CENTER</b> Rustamova Mokhiba Raxmatilloqizi	755-58	10.5958/2249-7137.2020.01192.1
116.	<b>ONLINE TEACHING –EDUCATION AMID THE PANDEMIC</b> Mrs. Preeti Yadav	759-62	10.5958/2249-7137.2020.01196.9
117.	<b>PARTIAL SELECTION METHOD AND ALGORITHM FOR DETERMINING GRAPH-BASED TRAFFIC ROUTES IN A REAL-TIME ENVIRONMENT</b> Djabbarov Shuhrat, Avazov Erkinboy, Omonov Ibratbek	763-70	10.5958/2249-7137.2020.01194.5
118.	<b>THE IMPORTANCE OF INFORMATIZATION OF EDUCATION SYSTEM</b> Saidova Nigora Komildjonovna	771-74	10.5958/2249-7137.2020.01195.7
119.	<b>PREVENTION OF ACCIDENTS DUE TO CHANGE OF SPEED WHEN USING VEHICLES</b> Choriev X. Sh, Toshtemirov I. M	775-79	10.5958/2249-7137.2020.01202.1



120.	<b>FROM IMAGE TO SPEECH</b> Nilufar Safarovna Akhmedova	780-85	10.5958/2249-7137.2020.01203.3
121.	<b>THE FIRST STAGE OF THE CONQUEST OF CENTRAL ASIA BY THE ARAB CALIPHATE - THE AUTHORITY OF THE OASIS AND THE COALITION OF TURKS</b> Azizbek Ungalov	786-91	10.5958/2249-7137.2020.01204.5
122.	<b>THE ROLE AND IMPORTANCE OF SOUND DEVICES IN THEATER AND CINEMA</b> Zakirjon Jumanazarovich Atabaev	792-97	10.5958/2249-7137.2020.01205.7
123.	<b>GIANT OF NON-FERROUS METALLURGY OF UZBEKISTAN AT THE THRESHOLD OF INDUSTRIAL PROCESSING OF RARE AND RARE METALS AND PRODUCTION OF COMPOSITE NANO MATERIALS</b> Ubaydulla Khalbayevich Ilmuratov	798-07	10.5958/2249-7137.2020.01206.9
124.	<b>MARKETING METRICS AN ESTIMATION OF COMPETITIVENESS OF THE MARKET OF RESTAURANT SERVICES OF UZBEKISTAN</b> Kamoliddin Mamatqulovich Ibodov	808-17	10.5958/2249-7137.2020.01197.0
125.	<b>REWARD SYSTEM AND EMPLOYEE MOTIVATION IN CEYLON ELECTRICITY BOARD JAFFNA</b> T. L. Vannarajah	818-25	10.5958/2249-7137.2020.01207.0
126.	<b>ROLE AND SIGNIFICANCE OF FOLKLER MUSIC IN THE UPBRINGING OF CHILDREN OF PRESCHOOL AGE</b> Nurullaev Farrukh Gaibulloevich, Nurullaev Bobirshokh Gaybulloevich, Nurullaeva Nodira Karimovna	826-30	10.5958/2249-7137.2020.01198.2
127.	<b>FORMATION OF STUDENTS 'COMPETENCE IN ART AND CULTURE</b> Ergasheva Saida Avazovna	831-33	10.5958/2249-7137.2020.01199.4
128.	<b>MODERN METHODS OF CONTRACUCE</b> Otajonova Dilfuza Otabek qizi	834-37	10.5958/2249-7137.2020.01200.8

129.	SOLVING APPLIED PROBLEMS INCREASES PROFESSIONAL COMPETENCE OF FUTURE CONSTRUCTION ENGINEER  Mamurova Feruza Islomovna	838-40	10.5958/2249-7137.2020.01201.X
130.	THE TRANSFORMATION OF GEOPOLITICAL CHALLENGE AND PROPAGANDA INTO THE MEANS OF GEOPOLITICAL INFLUENCE IN THE EARLY 21ST CENTURY  R. R. Rustamov, Toshboyev B. E	841-45	10.5958/2249-7137.2020.01211.2
131.	IMPROVING THE PRESENTATION OF NATIONAL ETHNOGRAPHIES IN UZBEK DICTIONARIES  Nurali Rashidovich Amonturdiyev	846-52	10.5958/2249-7137.2020.01208.2
132.	THE USING OF MEDIA EDUCATION IN THE SPIRITUAL UPBRINGING OF PRIMARY SCHOOL STUDENTS  Sheranova Maryam Bazarbaevna	853-55	10.5958/2249-7137.2020.01209.4
133.	THE MIRACLES OF THE EGYPTIAN TRIANGLE  Dekhqonov Botirjon	856-62	10.5958/2249-7137.2020.01210.0
134.	ISSUES AND CHALLENGES IN TEACHING GRAMMAR ONLINE AT SECONDARY SCHOOLS FOR UPPER GRADES  Feruza Erkulova, Misirov Sokhibjon Abdupattayevich	863-72	10.5958/2249-7137.2020.01180.5
135.	CENTRAL ASIA: STATE AND RELIGION IN THE INTERPRETATION OF ARAB RESEARCHERS  Ikromov Shavkat Iskandarovich, Tursunova Syria Minavvarovna	873-82	10.5958/2249-7137.2020.01212.4
136.	CLINICAL AND DEMOGRAPHIC QUALITY OF LIFE FOR PATIENTS WITH ISCHEMIC STROKE IN UZBEKISTAN  Kamalova Malika Ilkhomovna, Khaidarov Nodir Kadyrovich, Islamov Shavkat Eriyigitovich	883-89	10.5958/2249-7137.2020.01213.6

137.	<b>THE NIGERIAN ARMED FORCES IN PEACETIME DEPLOYMENT OF TROOPS TO CONGO, LIBERIA, MALI AND SIERRA LEONE, 1960-2015</b>  Bem Japhet Audu, Shuaibu Ibrahim, Maryam Hamza	890-99	10.5958/2249-7137.2020.01217.3
138.	<b>MULTIPLICITY OUTPUTTING OF HADRONS IN CC-INTERACTIONS AT THE MOMENTUM 4.2 A GEV/C WITH DIFFERENT COLLISION CENTRALITIES</b>  Raxmatilla Nurmurodovich Bekmirzaev, Mamadali Usanovich Sultanov, SHERZOD Habibullayevich Holbutaev Azizjon Alimjonovich Jonzakov, Botir Turdiboyevich Turakulov	900-07	10.5958/2249-7137.2020.01214.8
139.	<b>CLASSIFICATION OF GOVERNMENT POSITIONS IN YUSUF KHOS KHOJIB'S VIEWS</b>  Murod Sayidov	908-13	10.5958/2249-7137.2020.01215.X
140.	<b>RESOURCE SAVING TECHNOLOGIES IN COTTON GROWING</b>  Abdurahimov Nurali Normamatovich, Normamatova Mohinur	914-19	10.5958/2249-7137.2020.01216.1
141.	<b>DIAGNOSING PROBLEMS AND GROWTH PROSPECTS OF BUSINESS ACTIVITY OF A TRAVEL AGENCY</b>  Safarov B. Sh	920-25	10.5958/2249-7137.2020.01218.5
142.	<b>THE DEVELOPMENT OF THE SCIENTIFIC OUTLOOK OF STUDENTS IN THE STUDY PHYSICS COURSE</b>  Bekmirzayev Raxmatulla Nurmurodovich, Tugalov Farkhod Qarshiboyevich, Zokirov Mamajon, Qurbonov Anvar Razzoqovich, Saydayev Obid, Mustafoyeva Marjona	926-30	10.5958/2249-7137.2020.01219.7
143.	<b>EXPERIMENTAL STUDIES FOR STUDYING THE PROCESS OF WATER ABSORPTION OF APRICOT SEEDS</b>  Yamaletdinova Munira Faditovna, Narziyev Mirzo Saidovich, Hikmatov Doniyor Nematovich	931-38	10.5958/2249-7137.2020.01220.3

144.	<b>STUDY OF TRANSMISSION OF ELECTRIC ENERGY THROUGH AC AND DC CURRENTS AND THEIR ANALYSIS IN A SPECIALLY ASSEMBLED LAYOUT</b> Jamshid Kuldashevich Ergashev, Alisher Abdurashidovich Berkinov, Ismoil M Mo'minov, Kamol Djurakulovich Nurmatov, Jaxongir A Hotamov	939-43	10.5958/2249-7137.2020.01221.5
145.	<b>TPOLOGY OF MODERN AND MODERN IMAGES IN UZBEK CINEMA</b> Niyazova Xafiza Xakimovna	944-49	10.5958/2249-7137.2020.01222.7
146.	<b>DEVELOPMENT OF A REAL-TIME WEB-BASED EMPLOYEE ABUSE REPORTING SYSTEM</b> Nanwin, Domaka Nuka, Williams, Daniel Ofor	950-59	10.5958/2249-7137.2020.01226.4
147.	<b>AGRO AND ECO-TOURISM DEVELOPMENT IN RURAL AREAS OF UZBEKISTAN</b> Aslanova Dilbar Xasanovna, Xaydarov Oybek Zoirovich	960-65	10.5958/2249-7137.2020.01227.6
148.	<b>AUDIT OF EVENTS AFTER THE REPORTING DATE</b> Ismanov I.N, Mo'ydinov E.D	966-74	10.5958/2249-7137.2020.01228.8
149.	<b>"LIFE AND WORK OF UMAR KHAYYAM DURING THE SELJUK RULE"</b> Yulduz Urmanova	975-79	10.5958/2249-7137.2020.01229.X
150.	<b>WAYS TO IMPROVE PERSONNEL POLICY IN IMPROVING THE QUALITY OF FINANCIAL SERVICES PROVIDED BY FINANCIAL INSTITUTIONS</b> Musaev Rakhmat	980-84	10.5958/2249-7137.2020.01223.9
151.	<b>CONSOLIDATION FINANCIAL STATEMENTS FOR THE DEVELOPMENT OF INTEGRATION PROCESSES</b> Khodjaev Erkin Normatovich	985-88	10.5958/2249-7137.2020.01224.0



152.	<b>DEVELOPMENT OF TRADITIONS AND ITS DURATION OF WOODCARVING IN CENTRAL ASIA</b>  Sultanova Gulchehra Ozodovna, Mahkamova Gulnora Abilkasimovna	989-93	10.5958/2249-7137.2020.01225.2
153.	<b>ACTIVITIES OF DOCTORS IN THE FERGANA VALLEY (LATE 19TH - EARLY 20TH CENTURIES)</b>  Sanavar Bazarbaevna Shadmanova, Azizbek Abdumalikovich Badalov	994-99	10.5958/2249-7137.2020.01244.6
154.	<b>REMOVED DUE TO TECHNICAL REASONS</b>		
155.	<b>INFLUENCE OF SOWING TIME ON GROWTH, DEVELOPMENT, AND YIELD OF SOYBEAN IN THE CONDITIONS OF THE ARAL REGION</b>  Oserbayeva Tamarakhan, Abdalova Gulistan, Esboganov Rustem	1011-19	10.5958/2249-7137.2020.01230.6
156.	<b>CARDIAC STRUCTURE AND VASCULAR SYSTEM</b>  Abdullayeva Shahlo Otabekqizi	1020-24	10.5958/2249-7137.2020.01231.8
157.	<b>THE EFFECTIVENESS OF DRIP IRRIGATION WHEN GROWING FINE-FIBER COTTON IN VARIOUS MINERAL RATES FERTILIZERS</b>  Artikov Abdirashid Zoirovich, Boltaev Saydulla Makhsudovich	1025-29	10.5958/2249-7137.2020.01232.X
158.	<b>METHODS OF IMPLEMENTATION OF CONTINUOUS ENVIRONMENTAL EDUCATION</b>  Bekmirzayev Rakhmatullo Nurmurodovich, Sultonov Boymurod, Urozov Abdukholiq Nurmamatovich, Farmonov Utkir Mirzaqobilovich, Eshtukhtarova Orzigul Shonazarovna, Mustafoeva Marjona	1030-34	10.5958/2249-7137.2020.01233.1
159.	<b>THE INNOVATIONS IN EDUCATION: A WAY TO DEVELOP IN A GLOBAL CRISIS</b>  Komilov Dilshodbek Komilovich	1035-38	10.5958/2249-7137.2020.01234.3

160.	<b>HOW TO ASSESS IN TEACHING SPEAKING SKILL IN EFL CLASSES</b> Ikromova Muazzam Dilmurod kizi	1039-44	10.5958/2249-7137.2020.01235.5
161.	<b>EFFECT OF ORGANOMINERAL SUPPLEMENTS ON SOIL SALINITY AND COTTON YIELD</b> Boltaev Saydulla Maxsudovich, Mahmadaliev Akmal Abdushukurovich, Tungushova Dilbar Abdukayumovna	1045-48	10.5958/2249-7137.2020.01236.7
162.	<b>PHENOTYPICAL VARIABILITY OF COTTON BUSH DEPENDING ON THE LEVEL OF APPLIED AGROTECHNICS</b> Abdullayeva Maxsudaxon Tulanovna, Amirova Toiraxon Sheraliyevna, Gaybullayeva Madinaxon Furkatovna	1049-53	10.5958/2249-7137.2020.01237.9
163.	<b>STREET CHILDREN: AN EXPLORATION FROM THE STREETS OF GHAZIABAD</b> Shailendra Singh Rana	1054-60	10.5958/2249-7137.2020.01246.X
164.	<b>MUSICAL PEDAGOGICAL FUNDAMENTALS OF DOSTON ART</b> I. A. Kushaev	1061-67	10.5958/2249-7137.2020.01238.0
165.	<b>INFLUENCE OF PRODUCTION WASTE AS A MICROFILLER ON THE PROCESSES OF HYDRATION, CRYSTALLIZATION AND FORMATION OF STRUCTURES IN THE DISPERSIONS OF GYPSUM BINDERS IN THE REPUBLIC OF KARAKALPAKSTAN</b> Abilova A.J, Turemuratov Sh.N, Bekbosinova R.J, Khojametova B.K	1068-74	10.5958/2249-7137.2020.01239.2
166.	<b>SOCIO-HISTORICAL ROOTS OF APPLIED PHILOLOPHY</b> Akmal Akhmedovich Akhmedov, Laylo Sadriyevna Azizova	1075-82	10.5958/2249-7137.2020.01240.9
167.	<b>THE ROLE AND PRACTICAL IMPORTANCE OF GEOMETRIC LIVING ELEMENTS IN THE CREATION OF GIRIX PATTERN COMPOSITIONS</b> Tashkoziyev Bakhriddin Muhiddinovich, Narzulla Alikhanovich Muslimov, Yusupov Bakhrom Xurramovich	1083-88	10.5958/2249-7137.2020.01241.0

168.	<b>DEVELOPMENT OF FINE ARTS IN UZBEKISTAN AND THE CONCEPT OF COMPOSITION IN FINE ARTS</b> Khasanov Kholboy Khasanovich, Khaitov Zufar Asroraliyevich, Safarova Saodat Tursunbayevna	1089-92	10.5958/2249-7137.2020.01242.2
169.	<b>SOME BIOLOGICAL FEATURES OF ANIMALS OF DIFFERENT GENOTYPES</b> Mamatov Khurshid Abdirafievich, Narbaeva Mavlida Kasimovna	1093-96	10.5958/2249-7137.2020.01243.4
170.	<b>MACRO AND MICRO STRUCTURE OF THE ENCYCLOPEDIA OF PRESCHOOL CHILDREN</b> Zoira Rahmatova	1097-02	10.5958/2249-7137.2020.01247.1
171.	<b>THE ROLE OF SYNONYMS IN THE EXPRESSION OF THE LINGUISTIC FEATURE IN PUBLICISTIC TEXTS</b> Bobotaev Mirjalol Ibodullaevich	1103-08	10.5958/2249-7137.2020.01248.3
172.	<b>ANALYSIS OF SYMBOLIC MEANINGS USED IN NATIONAL CLOTHES OF BUKHARA, SAMARKAND AND NURATA</b> U. S. Rakhmatullaeva, D. S. Makhmitova, N. M. Mirfayazova	1109-16	10.5958/2249-7137.2020.01249.5
173.	<b>TRAJECTORY TOWARDS PEACE THROUGH THE LENS OF SPORTS AND SUSTAINABLE DEVELOPMENT GOALS</b> Kumari. S, Suraj, Kaur. A	1117-31	10.5958/2249-7137.2020.01255.0
174.	<b>THE PHILOSOPHY OF KNOWLEDGE IN THE WORKS OF ALISHER NAVOI</b> B.N.Turobov	1132-36	10.5958/2249-7137.2020.01256.2
175.	<b>PHYSIOLOGICAL INDICATORS OF LOCAL GOATS BREEDED IN THE REPUBLIC OF KARAKALPAKSTAN</b> Toreshova A.U, Masharipova X.K	1137-40	10.5958/2249-7137.2020.01250.1
176.	<b>SOCIO-PSYCHOLOGICAL ASPECTS OF COOPERATION OF COUPLE RELATIONS</b> Jabborov Ismoil Azimovich	1141-45	10.5958/2249-7137.2020.01251.3

177.	<b>SPORT AS A PART OF YOUTH LEISURE</b> Norkobilov Muhiddin Najimovich, Khodjanov Aziz Rakhimovich, Makhmudov Vohidjon Valijonovich	1146-49	10.5958/2249-7137.2020.01252.5
178.	<b>DIFFICULTIES ENCOUNTERED IN TEACHING SPEAKING SKILLS TO HIGH SCHOOL STUDENTS AND RECOMMENDED SOLUTIONS</b> Norpulatova Madina Alisherovna	1150-55	10.5958/2249-7137.2020.01253.7
179.	<b>EFFECT OF MINERAL NUTRITION ON OVERALL LEAF AREA AND YIELD OF STEVIA (STEVIA REBAUDIANA BERTONI)</b> Azizov B.M, Ulugboev A.Y, Kurbanov A.A, Khayrullaev S.Sh	1156-63	10.5958/2249-7137.2020.01257.4
180.	<b>RELIGION AND SOCIAL IDENTITY ANALYSIS IN VIRTUAL SPACE</b> Dono Usmandjanovna Kalandarova	1164-68	10.5958/2249-7137.2020.01258.6
181.	<b>THE IMPORTANCE OF FEEDING SILKWORMS UNDER POLYETHYLENE</b> E.K. Asronov, M.B. Soliyeva	1169-74	10.5958/2249-7137.2020.01259.8
182.	<b>STRATEGIES IN TEACHING READING</b> Gulnora Gulomovna Niyazova	1175-79	10.5958/2249-7137.2020.01260.4
183.	<b>ISSUES OF CLUSTERING AGRICULTURE IN UZBEKISTAN</b> Khamrakul Urdushev, Majid Mavlyanov Sirojiddin Eshankulov	1180-92	10.5958/2249-7137.2020.01261.6
184.	<b>A CLASSMA DENOTING "PERSON" IN AUXILIARY CONNECTIONS WITH "BILAN"</b> Mirzakarimova Z.D	1193-99	10.5958/2249-7137.2020.01262.8
185.	<b>RESTORATIVE JUSTICE- AN ISLAMIC PERSPECTIVE</b> Mohammad Haroon	1200-09	10.5958/2249-7137.2020.01290.2
186.	<b>DESIGN AND DEVELOPMENT OF AN AUTOMATIC SOLAR TRACKER</b> Rakhmatshoev Islomjon, Oshepkova Elvira	1210-17	10.5958/2249-7137.2020.01278.1

187.	<b>ARTISTIC EFFECTS AND NATIONAL IDENTITY IN RELATION TO COLORS IN POETRY</b> Abiljon Abdusamatovich Abdurakhmonov	1218-22	10.5958/2249-7137.2020.01279.3
188.	<b>INFLUENCE OF THE GOLDEN AGE OF ISLAM ON MODERN DIGITAL UZBEKISTAN</b> Yugay Evgeniya Viktorovna	1223-28	10.5958/2249-7137.2020.01280.X
189.	<b>MODERN TEACHING METHODS USING DIDACTIC TEACHING AIDS (ON THE EXAMPLE OF PRACTICAL AND LABORATORY CLASSES)</b> Shaxodjaev Mahmud Akhmedovich, Khamdamov Nozimjon Nurdinbekovich	1229-32	10.5958/2249-7137.2020.01281.1
190.	<b>MATERIALS PROCESSING IN THE SOLAR FURNACE</b> Paizullahanov Muhammad-Sultanhan, Sobirov Muslimjon Mukhsinjonugli, Xolmatov Abdurashid Abdurakhimugli	1233-37	10.5958/2249-7137.2020.01282.3
191.	<b>FACTORS OF PROFESSIONAL TRAINING IN THE SYSTEM OF VOCATIONAL EDUCATION (POWER ENGINEERING)</b> Shaxodjaev Mahmud Akhmedovich, Pozilov Sherzod Rafiqjonovich, Abdullaev Azizbek Abdukaharovich	1238-41	10.5958/2249-7137.2020.01283.5
192.	<b>PERSONALITY OF KHOJA AKHROR AND HIS FACTOR IN THE SOCIAL-SPIRITUAL LIFE</b> Nematullo Mukhamedov, Lazizakhon Alidjanova	1242-46	10.5958/2249-7137.2020.01263.X
193.	<b>THE PROBLEM OF MOTIVATION AND THE MEANING OF THE CONCEPT "MOTIV"</b> O. T. Bakhromov, A.T. Khasanov	1247-51	10.5958/2249-7137.2020.01264.1
194.	<b>INVESTIGATING THE LEARNING DIFFICULTIES OF PHYSICAL SCIENCE AT SECONDARY SCHOOL LEVEL</b> Ramdas. B, Dr. G. Yashoda	1252-63	10.5958/2249-7137.2020.01291.4

195.	THE IMPORTANCE OF USING MODERN INNOVATIVE SOUND RECORDING TECHNOLOGIES  Orif Rashidovich Rahimjanov	1264-69	10.5958/2249-7137.2020.01265.3
196.	THE ROLE OF INFORMATION AND COMMUNICATION MEDIA IN THE TEACHING OF SOUND DIRECTING SKILLS  Rustam Ergashalievich Talabbaev	1270-74	10.5958/2249-7137.2020.01266.5
197.	NEW DATA ON THE STUDY OF THE PECULIARITIES OF THE PRODUCTION OF SILVER COINS IN CENTRAL ASIA IN THE MIDDLE AGES  Sanat Hayitboyevich Khujamov	1275-78	10.5958/2249-7137.2020.01267.7
198.	THE DEVELOPMENT OF STORY OF THE XVI XVII CENTURY AND THE SPECIFIC STYLE OF PU SUNGLING'S WORK  Shakhzoda Abdujabborqizi Khasanova	1279-82	10.5958/2249-7137.2020.01268.9
199.	RESEARCH OF BACKGROUND RADIATION AND ITS POSSIBILITIES LIMITATIONS IN A SEMICONDUCTOR IONIZATION SYSTEM  Nishonova M.M	1283-86	10.5958/2249-7137.2020.01284.7
200.	IR-IMAGE CONVERTER BASED ON GaAs AND ITS POSSIBLE MODIFICATIONS  Axmedov Sherzod Sodiqjonovich	1287-89	10.5958/2249-7137.2020.01285.9
201.	SPECIFIC FEATURES OF THE IONIZATION SYSTEM OPERATION WITH A PLATINUM-DOPED SILICON RECEIVER  Mamatov Olmosbek Maxammatdovidovich	1290-93	10.5958/2249-7137.2020.01286.0
202.	REACTIVE POWER COMPENSATION IN THE CHEMICAL INDUSTRY  Kamolov Nosir Kamolovich, Nurgozhaeva Nargiza Nasyrovna	1294-98	10.5958/2249-7137.2020.01287.2
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## TRANSACTION PROCESSING MONITORS ON REAL-TIME DATABASES

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### ABSTRACT

*The development of distributed database systems has given rise to the transfer of data from one connected terminal to another. During the transmission of the data among various connected terminals, data can be corrupted, infrastructures can fail, hardware can malfunction and network can disconnect; all of these can cause failure in data transmission. This research focuses on Transaction Processing Monitor (TPM) on a real-time database and the standard middleware applications it provides for use in different e-commerce systems from large enterprises to medium and small businesses available on the internet to monitor the transfer of data between multiple terminals. The researchers reviewed many articles that provided detailed information on TPM because of the significant growth and popularity that it has gained. The paper also reviewed various concepts of Transaction Processing Monitors on real-time databases, different areas of TPM functionalities and transactional properties as well as the architectures of Transaction Processing Monitors. This paper also recommended high-end benchmark platform for Transaction Processing Monitor which is very vital to meet the high performance needs of online transactions and to determine their operational status either for success or failure*

**KEYWORDS:** *Data Transfer, Distributed Database, Transaction Processing Monitor, Network and Terminals.*

## INTRODUCTION

In real-time databases, a transaction is a program that manages the collection of database operations executed as a logical unit of data processing. The operations performed in a transaction include one or more of database operations like insert, delete, update or retrieve data. Real-time databases are traditional databases that use an extension to give the additional power to yield reliable responses. They use timing constraints that represent a certain range of values for which the data are valid. This range is called temporal validity. A conventional database cannot work under these circumstances because the inconsistencies between the real world objects and the data that represents them are too severe for simple modifications. Bauchman, (2005). An effective system needs to be able to handle time-sensitive queries, return only temporally valid data, and support priority scheduling. To enter the data in the records, often a sensor or an input device monitors the state of the physical system and updates the database with new information to reflect the physical system more accurately. When designing a real-time database system, one should consider how to represent valid time, how facts are associated with real-time system. Also, consider how to represent attribute values in the database so that process transactions and data consistency have no violations.

When designing a system, it is important to consider what the system should do when deadlines are not met. For example, an air-traffic control system constantly monitors hundreds of aircraft and makes decisions about incoming flight paths and determines the order in which aircraft should land based on data such as fuel, altitude, and speed. If any of this information is late, the result could be devastating. To address issues of obsolete data, the timestamp can support transactions by providing clear time references. To ensure the success of various operations in a real time distributed database, a transaction processing monitor was integrated so that all underlying operation in a real-time databases can be determined for success or failure. Laura, et al (2005).

## TRANSACTION PROCESSING MONITOR (TPM) IN A REAL-TIME DISTRIBUTED DATABASE

“A Transaction Processing Monitor or TP Monitor also known as ‘teleprocessing monitor is a control program that monitors the transfer of data between multiple local and remote terminals to ensure that the transaction processes succeeds or, if an error occurs, the application takes appropriate actions. A Transaction Processing Monitor allows building a common interface to several applications while maintaining or adding transactional properties. Example of applications that has common interface that runs across them includes CICS, Tuxedo, Encina. A Transaction Processing monitor extends the transactional capabilities of a database beyond the database domain. It provides the mechanisms and tools necessary to build applications in which transactional guarantees are provided. TP-Monitors are, perhaps, the best, oldest, and most complex example of middleware. Some even try to act as distributed operating systems providing file systems, communications, security controls, etc

The term Transaction Processing monitor is frequently used in mainframe-based wide area networks, where TP monitors manage the transfer of data between several clients making

requests to a server. TP monitors will control and manage the data smoothly to available servers by detecting hardware failures and switching to another node.”

Teleprocessing monitors were originally developed to allow several clients to connect to one server. However, they developed to what are now known as transaction processing monitors (TPMs). A TPM breaks down applications or code into transactions and ensures that all databases are updated in a single transaction. This is useful for airline reservations, car rentals, hotel accommodations, ATM transactions or other high volume transaction locations. TP monitors ensure that transactions are not lost or destroyed. Sometimes they are referred to as middleware, because the client sends the data for query or processing to the server database and then it is sent back to the user terminal. This can be accomplished remotely and by multiple users simultaneously. TP monitors are easily scalable allowing for increase in users and data processed.”

“Laura, et al (2005) gave the examples of Transaction Processing Monitors, they include the CICS (Customer Information Control System) for IBM mainframes introduced in July 1969, which can process thousands of transactions per second; IBM Information Management System (IMS, more specifically its IMS TM, also known as IMS DC, component); Transarc Encina and Oracle Tuxedo are major TP monitors in the Unix client/server environment. Laura, et al (2005).”

## PROBLEM STATEMENT

Real-time distributed database manages or coordinates big data at regular intervals. Components of the database are shared across various servers that manage the transactions in the database. A Transaction Processing Monitor or TP Monitor also known is required to monitor the transfer of data between multiple local and remote terminals to ensure that the transaction processes succeeds or, if an error occurs, the application takes appropriate actions. This research work will improve the management of the Transaction Processing Systems in various organizations that use the real-time distributed database to support their operations. It will support system analyst, IT specialist, software developers, data scientist and others in various organizations using Information Technology to drive its process. This is an improved research on Transaction Processing monitor in a real-time distributed database.

## RELATED LITERATURE

“Philip Bernstein (1990) defined transaction processing (TP) monitor as a program that performs an administrative function by accessing a shared database on behalf of an on-line user. A TP system is an integrated set of products that supports TP applications. These products include both hardware, such as processors, memories, disks and communications controllers, and software such as operating systems (Oss), database management systems (DBMSs), computer networks and TP monitors. Much of the integration of these products is provided by TP monitors which coordinate the flow of transaction request between terminals that issue requests and TP applications that can process them. In this paper we looked further into TPM as an integration into real-time database systems that monitors the operations and processes carried out in real-time database and provide required report on the development around the process.”

Thomas and Mark, (2007) represented transaction processing monitors in a real time database as the execution of an application that performs an administrative function by accessing a shared

database.”Within transaction processing, processing monitors provide the software "glue" that ties together many software components into a transaction processing system solution. A typical transaction processing application involves interaction with many terminal users by means of a presentation manager or forms system to collect user requests. Information gathered by the presentation manager is then used to query or update one or more databases that reflect the current state of the business.”A characteristic of transaction processing systems and applications is many users performing a small number of similar functions against a common database. A transaction processing monitor is a system environment that supports the efficient development, execution, and management of such applications.”

“Processing monitors are usually built on top of or as extensions to the operating system and other products such as database systems and presentation services.”By so doing, additional components can be integrated into a system and can fill "holes" by providing functions that are specifically needed by transaction processing applications.“ Thomas and Mark presented some examples of these functions as application control and management, transaction-processing-specific execution environments, and transaction-processing-specific programming interfaces.”

When addressing the issues around data transmission between terminals, Puntti Tanya, (2007) presented that transaction processing monitor handles the control, transmission of data in a real-time database and determine if the transaction was successful or not. Where the transaction is not successful, Tanya said the middleware application creates a report of failure to notify the database of the process failure so that appropriate action cannot be taken to avoid uncontrollable situation. In his research they suggested that effective database infrastructures should be put in place to avoid possible failure during database transaction.

However, this paper recommended a distributed database environment using the real-time emulation capabilities and virtualization capabilities of the Transaction Processing Monitor in a real-time distributed database. This is to ensure that physical system is provided that have the characteristics and behavior of a real network where a transaction processing operations are carried out.

## **FUNCTIONALITIES OF TRANSACTION PROCESSING MONITORS**

Transaction Processing Monitors appeared because operating systems are not suited for transactional processing. Transaction Processing Monitors are built as operating systems on top of operating systems. As a result, TP-Monitor functionality is not well defined and very much system dependent. A TP-Monitor tries to cover the deficiencies of existing all purpose systems. What it does is determined by the systems it tries to improve. A TP-Monitor is basically an integration tool. It allows system designers to tie together heterogeneous system components using a number of utilities that can be mixed and matched depending on the particular characteristics of each case using the tools provided by the TP-Monitor, the integration effort becomes more straightforward as most of the needed functionality is directly supported by the TP-Monitor. A TP-Monitor addresses the problems of sharing data from heterogeneous, distributed sources, providing clean interfaces and ensuring ACID properties.”

A TP-Monitor extrapolates the functions of a transaction manager (locking, scheduling, logging, recovery) and controls the distributed execution. As such, TP-Monitor functionality is at the core of the integration efforts of many software producers (databases, workflow systems, CORBA providers.



“A TP-Monitor also controls and manages distributed computations. It performs load balancing, monitoring of components, starting and finishing components as needed, routing of requests, recovery of components, logging of all operations, assignment of priorities, scheduling, etc. In many cases it has its own transactional file system, becoming almost indistinguishable from a distributed operating system.”

### TRANSACTIONAL PROPERTIES

The TP-monitor tries to encapsulate the services provided within transactional brackets. This implies Remote Procedure Call (RPC) augmented with:”

**Atomicity:** A service that produces modifications in several components should be executed entirely and correctly in each component or should not be executed at all (in any of the components).”

**Isolation:** if several clients request the same service at the same time and access the same data, the overall result will be as if they were alone in the system.”

**Consistency:** a service is correct when executed in its entirety. It does not introduce false or incorrect data into the component database.”

**Durability:** The system keeps track of what has been done and it's capable of redoing and undoing failures in case of failures. Figure 1 presents the architecture of a transaction processing system in a real time database. It also shows how processes are managed by the TPM to ensure success and where a failure occurs; the application generates a report and sends the instant report to the initiator or the administrator to determine the status of the transaction in the real-time distributed database.

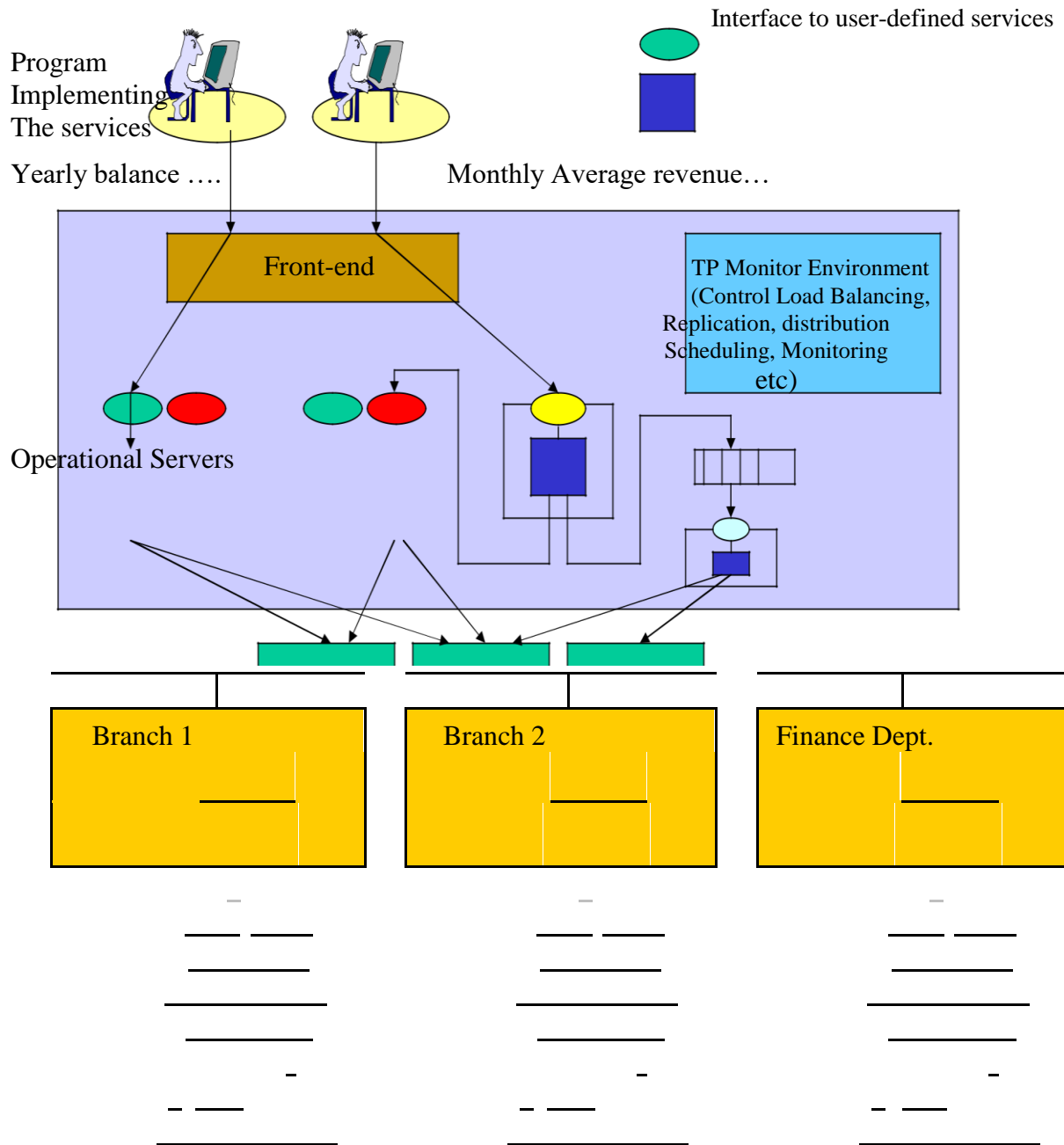


Figure 1: Generic Architecture of Transaction Processing Monitor. Gustavo and Zurich (2010).

## TASK OF A TRANSACTION PROCESSING MONITOR

- Core services

Transactional Remote Procedure Call: Implements RPC and enforces transactional semantics, scheduling operations accordingly

Transaction manager: runs 2PC and takes care of recovery operations

Log manager: records all changes done by transactions so that a consistent version of the system can be reconstructed in case of failures”

“Lock manager: a generic mechanism to regulate access to shared data outside the resource managers

- Additional services”

Server monitoring and administration: starting, stopping and monitoring servers; load balancing.”

Authentication and authorization: checking that a user can invoke a given service from a given terminal, at a given time, on a given object and with a given set of parameters (the OS does not do this)”

Data storage: in the form of a transactional file system”

Transactional queues: for asynchronous interaction between components

Bootting, system recovery, and other administrative chores

### **STRUCTURE OF TRANSACTION PROCESSING MONITORS**

TP-Monitors try in many aspects to replace the operating system so as to provide more efficient transactional properties. Depending what type of operating system they try to replace.”

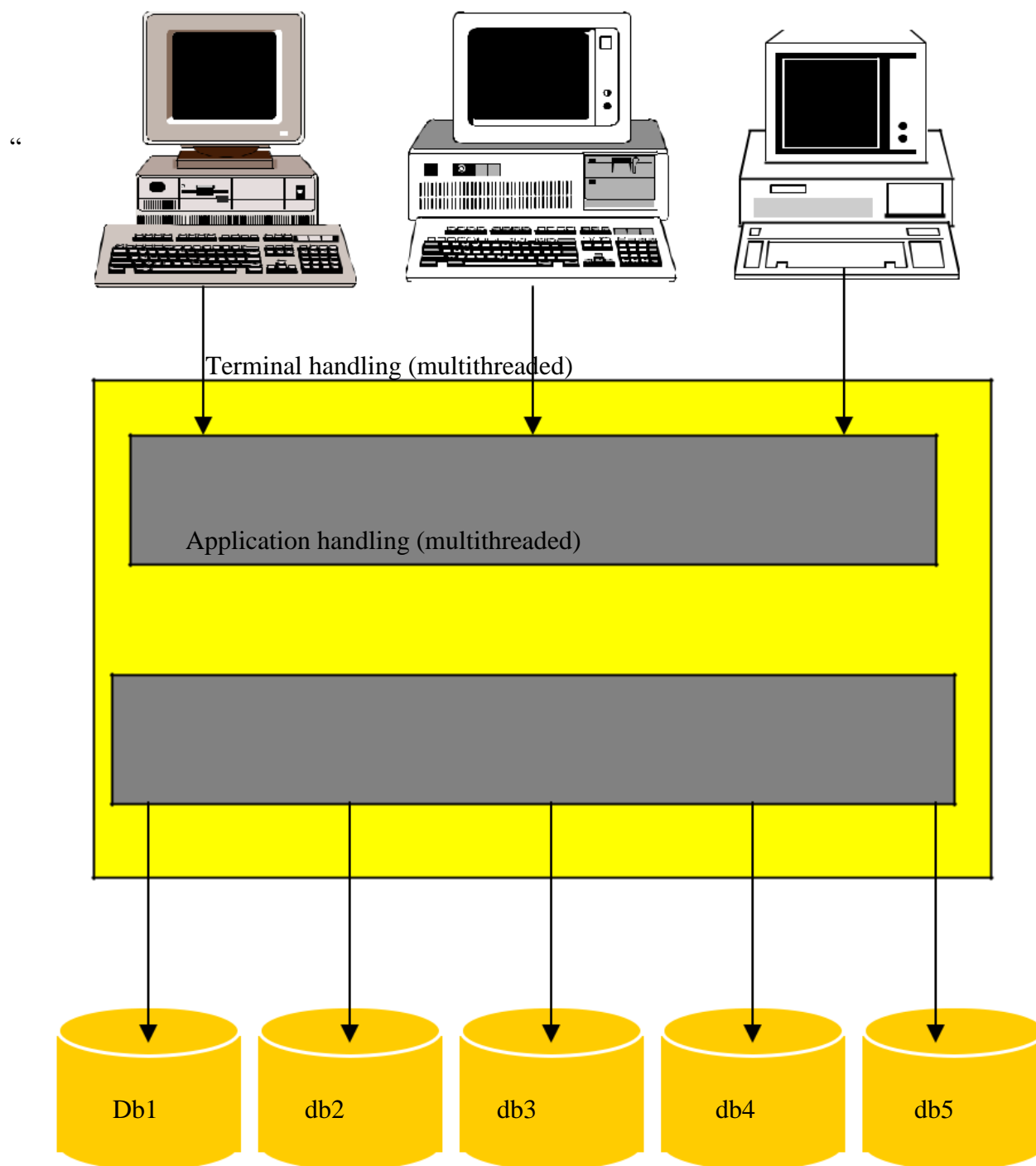
They have a different structure:

- a. Monolithic: all the functionality of the TP-monitor is implemented within one single process. The design is simpler (the process can control everything) but restrictive (single point failure) must support all possible protocols in one single place
- b. Layered: the functionality is divided in two layers. One for terminal handling and several processes for interaction with the resource managers. The design is simple but provides better performance and resilience
- c. Multiprocessor: the functionality is divided among many independent distributed processes.”

#### **Others include:**

Queue manager handles incoming messages: Some queue managers provide persistent or durable message queuing contents of queue are safe even if systems fail.”

Durable queuing of outgoing messages is important: application server writes message to durable queue as part of a transaction. Once the transaction commits, the TP monitor guarantees message is eventually delivered, regardless of crashes. ACID properties are thus provided even for messages sent outside the database. Many TP monitors provide locking, logging and recovery services, to enable application servers to implement ACID properties by themselves.”Figure2 and figure 2 shows the relationship between the Transaction Processing Monitor and the hardware infrastructures that delivers the services. The terminals (servers) are the first multithreaded approach while the application handling is stored and managed by the terminals.



“Figure 2: Monolithic Structure of Transaction Processing Monitor. Gustavo and Zurich, (2010)

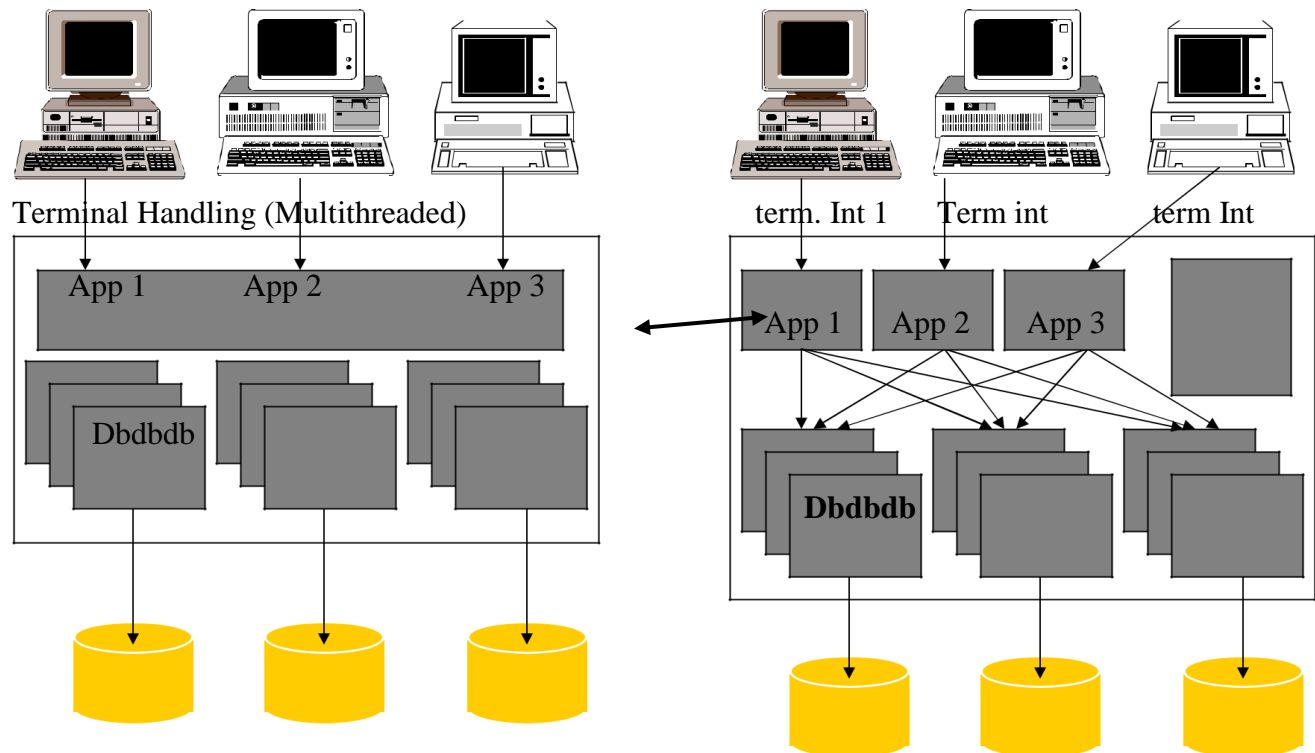


Figure 3: Multiprocessor Structure of Transaction Processing Monitor. Gustavo and Zurich, (2010).

## COMPONENTS OF TRANSACTION PROCESSING MONITOR

The current trend is towards a “family of products” instead of a single system. Each element can be used by itself (reduced footprint) and, in some cases, can be used completely independent of the TP-Monitor.”

**Monitor:** execution environment providing integrity, availability, security, fast response time and high throughput. It includes tools for administration and installation of components and the development environment.”

**Communication services:** protocols and mechanisms for persistent messages and peer to peer communication.”

**Transactional RPC:** basic interaction mechanism

**Transactional services:** supporting concurrency control, recovery, logging and transactional programming. Behavior of the system can be tailored (advances transaction models, selective logging, ad-hoc recovery ...)”

## APPLICATION COORDINATION USING TP MONITORS:

A Transaction Processing monitor treats each subsystem as a resource manager that provides transactional access to some set of resources. The interface between the TP monitor and the resource manager is defined by a set of transaction primitives. The resource manager interface is defined by the X/Open Distributed Transaction Processing standard. TP monitor systems provide

a transactional remote procedure call (transactional RPC) interface to their service. Transactional RPC provides calls to enclose a series of RPC calls within a transaction. Updates performed by an RPC are carried out within the scope of the transaction, and can be rolled back if there is any failure.”

Examples of commonly used TP Monitors include:

- Customer Information Control System, or CICS in short. Mostly found in IBM environments
- Tuxedo Monitor for the Unix environment
- Application Servers using the Java Two Enterprise Edition for the Unix environment
- Encina for Unix
- Microsoft Transaction Server, or MTS. Now superseded by ComPlus which is also used in DotNet environments.
- IbmImms”

The following Software Products are probably not classified as Transaction Processing Monitors

- ComPlus provides an environment and services to support a Transaction Processing Monitor, but should not be viewed as a Transaction Processing Monitor, which is a software product. A closer match would probably be the MTS component within a Windows 2000 Server.
- A Web Server such as Internet Information Server (IIS). A closer match would be the IIS server(s) running under the management services provided by a product such as Microsoft Application Center..

## **ADVANTAGES OF TRANSACTION PROCESSING MONITORS**

Transaction Processing Monitors are a development and run-time platform for distributed applications. The separation between the monitor and the transaction manager was a practical consideration but turned out to be a significant advantage as many of the features provided by the monitor are as valuable as transactions. The move towards more modular architectures prepared TP-Monitors for changes that had not been foreseen but turned be quite advantageous:”

The web as the main interface to applications: the presentation services included an interface so that requests could be channeled through a web server queuing as a form of middleware in itself (Message Oriented Middleware, MOM): once the queuing service was an internal resource manager, it was not too difficult to adapt the interface so that the TP-Monitor could talk with other queuing systems. Distributed object systems (e.g., CORBA) required only a small syntactic layer in the development tools and the presentation services so that services will appear as objects and TRPC would become a method invocation to those objects.””

## **OBJECTIVES OF TRANSACTION PROCESSING**

### **i. Sharing of resources**

“The first objective of a Transaction Processing Monitor is to enable sharing of resources and the optimum use of those resources by the application.”

“This point is quite a key point. For a longer explanation, just consider some application that runs a fat client on the client workstation and owns its dedicated link to the database. This kind of



application is generally referred to as a two tier application: one tier being the application and the other tier the database. In this kind of model:"

- You can run an application on a LAN with a limited number of users (up to several hundred),
- You will need a big database machine with a lot of processes that are commonly doing nothing but wait for the user rollback buffers to commit,"
- You can have programmers that will forget to commit or rollback transactions and so organize the possibility to lock for long periods of time some data in the database,
- You cannot scale very properly because you will reach a limit where the database machine cannot accept more database connections while guaranteeing correct response times."""

The main idea of the TPM (on Unix-like platforms) is to introduce a layer of processes between the client side application and the database. Each TPM process will own one database connection. This process will be in charge of executing application code for a particular transaction or set of transactions."That means that the "TPM process" is made of two parts: "one part being the monitor stack (TPM libraries) and the other being the application code linked together by the application developer. The link can build a process with one or several transactions in it. Unix-like TPM usually support programming in Cee Language, Cobol Language or CeePlusPlus."

The flow will be different in that model than in the two tier application model:""

- "The client side application invokes a "service" with data marshaled in the appropriate "format; that means that the client application has some knowledge of:"
- The TPM remote invocation language (probably a client middleware stack embedded into the client application),"
- Or the knowledge of a "generic" way to call the TPM services through "standard" protocols (such as LU6.2, RPC, RMI/IIOP, proprietary formats, WSDL, etc.);""
- The TPM chooses (commonly some kind of intelligent TPM agent) what process will handle the query"(based on certain criteria such as addressing or load balancing concerns);
- The TPM processes the message and calls back the application code;"
- The application code does its stuff in the database and possibly commit or rollback the transaction;"
- The TPM process can commit or rollback the transaction as well (when the TPM is configured to handle the database resource manager, the TPM commits or rollbacks);"
- The answer is wrapped back in the appropriate format and sent back the client application."

Right after the answer, the same TPM process can:"

- Process another transaction (note that the TPM process is not supposed to "remember" something about the previous transaction - so the model is basically stateless);"
- Get a clean context for the application code to run again."""

## OTHER TPM SERVICES

There are several other potential services provided by the TPM:"

- Coordination of resource managers (typically a database engine, a transactional file engine, a queue system, coordinated one by one or all together in XA standard, etc.);"
- Load-balancing and spawning of new TPM processes in case they are needed (dynamic workload management, process restart in case of core dump),"
- Security access to services,"
- Routing services (very often, the notion of "domain" is used),
- Wrapping and unwrapping respectively data messages into messages and the messages into data structures,"
- Monitoring for operations,"
- Protocol stack management,"
- Quite often "Queue to queue" guaranteed delivery services,
- Error handling (such as process restart)."""

Some specific TPM can provide advanced services such as:

- Hot failover (even under high traffic) running in multi-nodes contexts,
- Secured and audit-able transaction journal (for applications where one single transaction shall not be lost)."

## DESIGN CONSIDERATIONS

A Transaction Processing Monitor usually provides a kind of development framework for coders. This framework is usually quite restrictive both in the design of transactions (imposed callbacks, use of certain TPM APIs mandatory, restrictions in memory management, etc.) and in the building of the executables (requirement to build and link with the TPM libraries with some conventions). This usually makes the application specifically designed for a specific TPM."

"In terms of transaction design, you may want to read the Transaction Design page."

## CONCLUSION

A Transaction Processing Monitor is a subsystem that groups together sets of related database updates and submits them together to a relational database. The result is that the database server does not need to do all of the work of managing the consistency/correctness of the database; the **TP Monitor** makes sure that groups of updates take place together or not at all. The advantages of this include increased system robustness as well as throughput. This also supports the four transaction processing ACID requirements which include:

- **Atomicity:**

All transactions are either performed completely - *committed*, or are not done at all; a partial transaction that is aborted must be *rolled back*.

- **Consistency**

The effects of a transaction must preserve required system properties. For instance, if funds are transferred between accounts, a deposit and withdrawal must *both* be committed to the database, so that the accounting system does not fall out of balance.”

“In double-entry accounting, the "staying in balance" property is usually not overly difficult to maintain. The more thorny issue comes when the property is something like Cash Balance Cannot Drop below Zero, or we cannot ship out inventory we do not have. In such cases, if you have two transactions being submitted concurrently, it could be that *either* could be accepted, but not *both*. If one of the transactions would cause balance requirements to be violated, the TP monitor therefore needs to reject one of the transactions.”

- **Isolation**

Intermediate stages must not be made visible to other transactions. Thus, in the case of a transfer of funds between accounts, both sides of the double-entry bookkeeping system must change together for each transaction. This means that transactions appear to execute serially (*e.g.* in order) even if some of the work is done concurrently.

- **Durability**

Once a transaction is committed, the change must persist, except in the face of a truly *catastrophic* failure.”

If Mongol hordes ride through and lay waste to your server room, you cannot expect the TP monitor to help keep transactions persistent! But it should be resistant to reasonably traumatic sorts of system failures such as a network link breaking down or perhaps even a disk drive malfunctioning.

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## TRENDS IN THE DEVELOPMENT OF THE BALLAD GENRE IN NEW CULTURAL AND HISTORICAL CONDITIONS (90S)

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### ABSTRACT

*The article describes the historical fate of the Uzbek ballad of the last decade of the last century and highlights the most important features of poetics in the development trends of the genre at the present stage. The author draws attention to the national-historical features of literary texts in the works of modern Uzbek ballad poets, which determine the genre.*

**KEYWORDS:** *Ballad Genre, Poetics Of Uzbek Ballad, Genre, Development Trend, Stages Of Development, Nationally Specific, Genre-Forming Features.*

### INTRODUCTION

In the ballet art of the 90s of the last century, we can see the desire of ballad poets to create new forms of ballads, to enrich the genre with new artistic and aesthetic content and spirit. A number of other poets have different approaches to the traditional features of ballad poetics and its content. In particular, based on the author's individual style and artistic-aesthetic position, a modification of the genre is observed, and the update is carried out taking into account changes in the value criteria of society.

This situation is explained by the fact that the authors have a unique creative style, as well as the tasks facing them, stemming from the philosophical and artistic needs of the new era, the traditional genre of ballad is not accepted by some poets as a strategic genre. Therefore, exploring ballads from the 90s. so far, we have turned to the ballad creativity of active participants in the literary process of that time, famous Uzbek poets Rauf Parpi, Chori Avaz, Yuldosh Eshbek, Aziz Said, Bakhrom Ruzimhammad, Khalim Akhmedov, Fakhriyor, Rustam Musurmon, whose works are completely in some others degrees corresponded to artistic and theoretical requirements. The absence of a genre index in a particular lyrical-epic work or the

rarity of the predominance of the lyrical principle may have predetermined the “unique” title of M. Bollieva’s scientific work “Development of Uzbek lyrical genres and ballet poetics” (“Development of Genres and Poetry Ballad of the Uzbek Lyric Poet”). The publication is devoted to the analysis of the ballad genre, but the author's interpretation from the point of view of the theory about the genres of poetry in Uzbek and foreign literary criticism, as well as from the point of view of scientific stylistics, seems to us to be erroneous. One of the two articles by M. Bollieva, which we met in different sources, is devoted to the analysis of the work of U. Azim “The Ballad of Rain”. The article is called “The depiction of feelings in a ballad” and, by its name and theoretical setting, casts doubt on the age-old scientific concepts of genre-defining canons developed by scientists. The title of the second article, “The Eastern Sample of the Western Genre,” immediately “solves” the problem of the genesis and history of the genre in national literature, or at least seriously hints at its “solution” (1).

### **The Main Findings and Results**

At the end of the 90s and later, Usman Azim in his ballad works, using metaphors and other tropes, having strengthened the content-semantic side of the works, reaches the strengthening of the energy of the text; this became the defining characteristic of the ballad genre of this period. Azim Suyun also continued to create ballads. They contain events related to historical figures (Bodioldoi Samarkandi Samarkand runner, Fast as the Wind, faithful servant of the folk hero Abu Muslim), folk legends (“The Legend of Teshiktash, or One Truth about Shame”), national traditions (“Teacher and student”) And social events (“The Ballad of Office, Desk and Death”). They are dominated by the pathos of a pronounced national identity, the rise of folk heroes.

Ballads written in the 90s, “At the Gate of Wolves”, “I am on the way” by Agzam Uktam, “Old Legend”, “Unfulfilled Dream” by Kh. Khudoiberdiyeva, “An unfinished canvas or a ballad about an artist's love”, “To the poet” by Chari Avaza, lyric-epic poems “Beloved”, “Pain”, “Told”, “Frontier Guard Sadyk” by Usman Shukurov, “Ballad about a mouse and a man who lives in his hole”, “Ballad of immortality” by Iqbal Mirza, “Ballad” H. Rustamova, several symbolic and plot works included in “Proverbs” by Bakhrom Ruzimhammad, written in the spirit of modernism, can be characterized as national samples of lyric-epic poetry and the history of the ballad genre in the period under study.

When studying the artistic discoveries in the content and form of the ballad genre in modern Uzbek poetry, it can be noted that a number of works are mainly devoted to artistic style, literary trends, style, problems of poetic language and others. Emphasizing the important role of such studies, it is necessary to note the paucity of monographic works in scientific and theoretical literary criticism and in criticism devoted to the history and theory of individual genres. The reason for this is not the lack of attention and interest of young researchers and scientists, but the many works created in recent decades. Their authors improve the content, not the content: it focuses on the different development of images and poetic emotional and intellectual perception. Therefore, the thematic classification of poetic works of the type: “intimate”, “mystical-Sufi” (definitions of Ulugbek Hamdam) is quite reasonable. It was even observed when the poet published in a journal a plot lyric-epic poem with a genre index “ballad” under the influence of judgments about this work of an experienced, well-known literary critic, but then removed the genre index when compiling a collection of poems (2).



Ballads, with or without genre, are rare in poetry collections published in the early 1990s and later. It seems very interesting to analyze new works and new names, along with the work of several poets. They are Sayar, Safar Barnoev, Khurshed Davron, Shavkat Rakhmon, Tursunbai Adashbayev, Nurilla Oston - they occupied a worthy place in the literary process of the era, but despite this, their work did not attract the attention of researchers. That is why a number of highly artistic ballad works of these poets were analyzed along with typical ballads and other lyric-epic works of such poets as Muhammad Yusuf, Sirojiddin Sayyid, Iqbal Mirzo, Tursun Ali, Bahrom Ruzimuhammad, Khalima Akhmedov, Aziz Sa'yor, Akhmad, Usman Bek, Nemat Dushaev, Arif Tukhtash. It is on them that in the analysis of the poetics of the ballad genre, in its form and content, the scientific validity of the concept of *new names and new works* from a scientific and theoretical point of view is based (3).

In the late 90s, in literary theory, the term "lost texts" has been introduced into scientific use (4). Conditionally called "lost" texts are "forgotten" or omitted from works for various reasons (political, cultural-philosophical, etc.), and the urgency of their study is necessitated by the need to restore scientific justice. Such can be considered the ballads of Sayar "About my mother, about me, about my sister", "The Legend of Gurlan", "Alus", "The Ballad of the Captive", Safar Barnoev's "Ballad of the Sea", "Ballad of the Oath", "Ballad of two friends", "The Ballad of the Lost News", which are included in the collection of poems under the significant title "Faces. Poems and ballads" (5). Such ballads and lyric-epic poems that meet all the canons of this genre, awaiting their explorer, are found in the works of Aydin Khodzhieva ("Ballad"), Khurshid Davron ("Ballad of the Traitor", "Ballad of the Blockade, Bread and Brothers", "The Legend of the Poet"), Shavkat Rakhmon ("The Tales of Akyn Smet", "The village of Khorezm", "The Legend of the Sun and the Sun's Rays", "The Wanderer", "Unexpected Gifts"), Tursunbai Adashbayev ("The Ballad of Fate") and others.

During the period of Independence, along with such famous People's poets as Muhammad Yusuf, Sirojiddin Sayyid, Iqbol Mirzo, next to such famous poets as Tursun Ali, Bahrom Ruzimuhammad, Khalima Akhmedova, Aziz Said, Abdikayum Yuldoshev, Ahmad Khoja, names appeared: Safar Allayar, Usman Bek, Nemat Dushaev, Arif Tukhtash and others. They create ballads that reflect the general patterns of the development of the genre in Uzbek poetry in new socio-philosophical and cultural-historical conditions.

## CONCLUSION

The scientific results of the study can be summarized as follows:

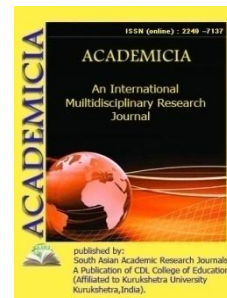
1. The problems of history and theoretical poetics of genres in modern Uzbek poetry, which is a topical problem of literary criticism, are a reflection of the renewal taking place in the artistic consciousness of the period.
2. The ballad genre, which is in constant development in modern Uzbek poetry, while preserving the classical traditional artistic-historical poetics, acquires a number of features. In particular, the emergence of forms of the genre of a new type is observed - from small, fragmentary ballads to large ballad cycles, poems consisting of several ballads and ballads with a very large volume of text, turning into megatext.
3. Writing ballads in the 90s, along with the famous ballad poets Usmon Azim, Azim Suyun, with recognized People's Poets Shavkat Rakhmon, Khurshid Davron, Khalima Khudoyberdiyeva, Muhammad Yusuf, Sirojiddin Sayyid, Iqbal Mirzo, famous poets Tursun

Ali, Baxrom Ruzimuhammad, Khalima Akhmedova, Aziz Said, the young ones who take part in the works of the Uzbek poet, Ahmad Khoja literature of this period.

4. In modern poetry, from the second half of the twentieth century to the present, there are enough facts to conclude that the priority for the Uzbek ballad is the striving for deep and in-depth illumination in the spiritual world of a person, and not just a simple expression of attitude to social life, which then a call, a political motto. This is evidenced by the renewal of the form of the genre in ballad in modern poetry, the creation of miniature patterns, the emergence of tendencies to express new, religious and spiritual content, as well as the desire to parody the genre. In our opinion, all this proves the interest of masters of words in the ballad and its sustainable evolutionary development, including Uzbek poetry.

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## WHY “BAD JOURNALISM” FORMULA IS USED?

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### ABSTRACT

*The article deals with the discussions about one of the problems of the global media, "bad journalism". Western experts cite an example of "bad journalism" by American media magnate William Randolph Hearst in journalism in 1898. This is an example of a British journalist, former editor of the London-based "Observer", taken from "Universal Journalist" by David Rendall for the journalists from Central Asia. The article includes a publication and the forces behind it, including February 17: "The enemy has a hand in destroying a war ship", February 18: "The whole country is in a military malaria," February 20: "Havana residents are insulting the memories of those who died in "Maine", February 23: "Maine's treacherous demolition", February 26: "The Journal urged its readers to write a letter to congressmen of their choice", March 22: "War is the only way out of crisis!", March 28: "War or shame?" April 1: "War!", April 6: "The war is not so long"; April 13: "Congress is about to announce war!". All of the above mentioned materials can prove the actions committed in order to attract the population to the war, to make the leaders of Spain worried about the case and to disturb the US military. For the formula of "bad journalism" by the author of the article, D. Rendall, he suggests to exemplify a one-on-one review of the events of May 13, 2005 in Andijan, Uzbekistan. First of all, the court found that foreign journalists had visited Andijan three days ago. Hearst also sent his reporter three days in advance. The BBC and other Western media were misinformed, and worst of all, other countries' media outlets blindly copied. It is the first of its consequences for the world community that false information is being spread as truth. The author compares the first news released to the "unexpected shock" in the American-Japanese conflict and its effectiveness. Even after the Uzbek authorities reported that the intruders had killed the border guards, soldiers and officers, and then raided the city with the help of international terrorists before taking over the Andijan region, it was not recognized as truth. Instead of correcting information, new charges*

*have been filed, such as those in the Hearst case. More than one hundred sailors died in the 1898 US shipwreck. Blood shed. The indictment: "The Spanish government did this." There was bloodshed in Andijan as well. The charge is the same – "The Uzbek government did this." The BBC did not say, "It would not have happened if there had not been an international terrorist attack". The author simply answers the question of "why?" by saying that their purpose was different.*

**KEYWORDS:** *Advanced Journalism, Bad Journalism, News, Democratic Society, Objectivity, Accurate Journalism, Fake News, Print Media, Journalism Problems, Effectiveness.*

## INTRODUCTION

Scientists studying the problems of world journalism began to call its peculiarities in different terms. For example, "progressive journalism", "effective journalism", and "good journalism", "bad journalism" ... In this article we want to reflect on the last of the above categories of journalism. Why the government of a democratic society has to do a lot of work to spread the true, objective information.

### Main part

Western scholars (researchers) in journalistic science consider the example of "bad journalism" as a self-serving, intentional, malicious, nourishing enmity and hatred movement carried out by the American media magnate William Randolph Hearst. His summary of David Randall's words is as follows:

"However, nothing characterizes the attitude of Hearst, like many other owners, towards journalism better than a few telegrams of 1898. Hearst, for personal political reasons and for the sake of increasing circulation, was interested in the war between Spain and America over Cuba. His main newspaper, The New York Journal, published false, cheers-patriotic articles with flashy headlines: "Prisoners were fed by sharks," "The War with Spain for the Killed Americans," and "The Greatest Insult to the United States for All their history" (about a letter from the Spanish ambassador criticizing the President). At the direction of Hearst, his subordinates went into all seriousness to find evidence of the "cruelty" of the Spaniards. Those who are more honest did not find anything (and this had a bad effect on their career), others gave vent to imagination. Among these latter was a certain artist named Frederick Remington. Finding that everything was calm, and that there was no smell of bloodshed, he telegraphed to Hearst:

"Everything is quiet. Nothing terrible happens. There will be no war. I would like to return."

Hearst sent an answer:

"Please stay. Provide illustrations. I will provide the war."

As far as one newspaper can organize a war, it is understood how much Hearst will keep his word. A few weeks later, the American battleship "Maine" exploded on the coasts of Havana and this explosion claimed 260 lives. And Hearst began to publish leading articles that this is a diversion of the Spaniards. While two large groups revealed the true causes of the explosion, the Hearst newspaper, without showing any evidence, continued to blame the Spaniards. These articles, calling people to war, are still cited as visual aids covering the truth. Pay attention to the

preparation date and headings of the articles related to the Maine incident published in the Journal:

“February 17: “Destruction of a warship is the work of the enemy”. Under the heading – a drawing that took seven columns – the image of the ship and mines under its bottom, connected by wires to a Spanish fortress on the shore – pure fiction.

February 18: "The whole country is trembling in war fever." This headline appeared on the day when the Spanish and Cuban authorities held a state funeral for the victims of the explosion, transferring the cemetery to eternal possession of the United States. About this "Journal", whose circulation for the first time exceeded a million, not a word was said.

February 20: “The population of Havana offends the memory of victims from the Maine. The Journal devoted an average of eight and a half pages a day to all this misinformation.

February 23: "The treacherous destruction of "Maine". A new lie about the death of the ship, and in addition - the rules of the card game "War with Spain" for four players.

February 26: Journal encourages readers to write to congressmen with letters requiring war. And this despite the President’s statement that Maine was damaged due to an accidental explosion of gunpowder cellars on board. (An official investigation never revealed the true cause of the explosion.)

Over the next few weeks, Hearst concentrated all efforts on whipping up war fever and publishing materials about the harassment of Cubans by the Spanish authorities. Finding these materials or simply inflating them was not difficult. But the Journal added lies about Maine. On March 11, the newspaper said: "The investigation found that the Maine were blown up by representatives of the Spanish authorities." This untruth served Hearst as a fuel for the release of additional circulations and large headlines.

March 22: “War is the only way out of the crisis!”

March 28: “War or dishonor?” The next day, the Journal spoke about creating a regiment of American sports champions and sending him to Cuba to defeat the Spaniards.

April 1: “War!” Nothing of the kind.

April 6th: “War is just around the corner!” Journalist reporters scoured across the country in search of the families of the victims on Maine, typing out their appeals for revenge. On such issues of the newspaper now usually flaunted the image of the American flag.

April 13th: "Congress is about to declare war!"

The final decision of Congress on April 25 was probably a terrible disappointment for Hearst (“I will ensure the war”). However, he did not calm down<sup>1</sup>.

This quote is taken from the book “Universal Journalist”, published for “Central Asian Journalists,” English journalist David Randall, former deputy editor-in-chief of the London newspaper “Observer”.

Naturally, the aforementioned tricks of Hearst (note: 1898), his activities in the book (textbook) are criticized as “bad journalism”. This event called many people to war, confused their



imagination, stole the peace of Spanish government leaders, in a word, not to count the harm of false information.

Now, in order, compare the formula of “bad journalism” proposed by D. Randall with the Andijan events of May 13, 2005 in Uzbekistan.

First of all, as revealed in the trial of the participants in the event, foreign journalists arrived in Andijan in three days. Convicts confirmed that foreign media representatives participated in these events.

The author of this article with his friends, journalists from Uzbekistan, when the event occurred, or rather, on May 14 was in Shanghai (China). We don't know Chinese. In this regard, the Shanghai Daily newspaper, published in Shanghai, was found at the airport. There was an article about the events in Uzbekistan. But in the newspaper they saw only the article “Up to 50 Uzbek dead”<sup>2</sup> (“50 Uzbeks died”) of the Associated Press news agency (USA). In it, the observer used a new term – “Muslim Entrepreneurs.” And yet, we, experts from Central Asia, knew that this term did not appear from nowhere. But, what's others' view? In the evening, in a Beijing hotel, while watching BBC television news, the term was again used. Most interestingly, other mass media channels of other states began to repeat the information.

At such a moment, you clearly understand how important the disseminated first information is (if it is prestigious television, radio channels, news agencies).

In US-Japanese events, the “unexpected blow” and its effect were tested during the war. As a result of such attacks, many people died on the unexpected side, and the second side, naturally, achieved goals. Films have even been made about this.

And the information blow gave the same result. First of all, among the world public, the false information was spread as if it were true.

A day later, based on a statement by the head of Uzbekistan, a correspondent for Xinhua News Agency (China) distributed completely different information<sup>3</sup>. But, “BBC” instead of apologizing to the audience, each time relied on the opinions of some “international observers”, “non-governmental organizations”, continuing their “politics”.

Many observers said that the reason for this was that Uzbekistan disseminated its own information late. But it took time to analyze events, identify true information...

As it became known, these innocuous “Muslim entrepreneurs”, before seizing the khoimiyat (municipal office) of Andijan region, with the assistance of international terrorists, won a militarized checkpoint, killing soldiers and officers of the military unit, took possession of their weapons.

## RESULTS AND DISCUSSIONS

This was not recognized even when the media in Uzbekistan disseminated truthful information. That is, instead of correcting the information that “the weapon was actually captured, an attack was committed”, like Hearst's tricks, new charges began to be brought. As you read above, after a while more than a hundred sailors died as a result of the explosion of a US-owned ship. Bloodshed committed. The charge is “the work of the Spanish government.” And in Andijan, bloodshed was committed. The charge is similar – “it was committed by government forces.”



The formula is the same. If you noticed, the BBC did not confirm that the bloodshed was committed as a result of a terrorist attack; on the contrary, it indicted the government forces. It did not convey that "if it had not been for the raid by international terrorists, this event would not have happened." The question "why" can be answered, "their goal" was different.

In order to say so, there is every reason. First, how can you understand the fact that after not accepting the BBC information, British Foreign Secretary Jack Straw, for some reason meeting with US officials, demanded pressure on the Uzbek government? Why is the English minister not interested in eliminating the bloody war in the African continent interested in Uzbekistan? In fact, does the competence of the Minister of Foreign Affairs include confirmation of the information of the so-called radio channel? Perhaps, the Foreign Minister was angry because the color revolution did not happen in Uzbekistan? And in the fulfillment of the color revolution, their interest is clear.

We will not list these interests one by one, but turn to the article "Anglis va Turkiston"<sup>4</sup> written in 1918 by one of the great and ambitious Jadids of Turkestan

Abdurauf Fitrat, who lived and worked at the beginning of the last century. Consonance with Fitrat's thoughts can be traced in the article of another advocate of enlightenment Said Ahrori, "The Last Hope of the British,"<sup>5</sup> written at that time.

Footnote: "No country's diplomats could "play" successful roles and "melt" the coolness of British politicians ... With the help of the power of their money, they are trying to "enter" the territory of Turkestan with the "feet" of Afghanistan and Bukhara. And we can say that they began to advance. In the last days, the five English ambassadors arrived in Bukhara, at the direction of the emir; they were not welcomed by the courtier, which has sufficient evidence of our claim. If necessary, frankly, they are not ambassadors, but "merchants of conscience". Turkestan may not be accessible to the British, but they wisely send their "germs", who skillfully bribe several ignorant "ignoramus" who sell their conscience and honor...

The British, for the sake of their political interests, deceiving Afghanistan and Bukhara, want to sacrifice us as well. Their dirty tricks had an impact and exacerbated the already precarious situation of Turkestan, so it is likely to remain "under the hooves"...

Each of us, after all this, having met the one who promoted the British, without avoiding him, let them remind him of the troubles that he has done to the Muslims to this day ...

In the future, now anticipating such actions by the British, we know that this is our national task – the defense of the Fatherland. Therefore, we publicly invite the whole people of Turkestan to "open their eyes" to this. For, you always need to remember that such a lack of intelligence can cause the destruction of the homeland".

As you can see, the actions and intentions of British Foreign Secretary Jack Straw have a historical foundation. If you say, do not panic like the BBC, at least give the following thought of the former leader of this state, Winston Churchill: "England has neither friend nor enemy. The country has only interests! "

## CONCLUSION

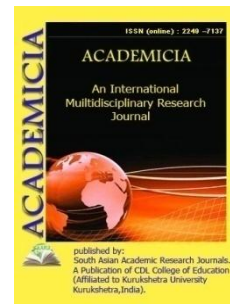
The events in Andijan and the information raids around them prompt several conclusions.

First of all, there really are different threats to the independence of Uzbekistan. We must explain to the population the need to protect, protect it, explain where and how threats can arise, the essence of organized informational lies or different interpretations that arise during periods of geopolitical games, false discoveries, linking them with news that appears during such events. For example, why the criminals who organized the Andijan events that participated in them, turned into artificial defectors in violation of international standards, were transported from Kyrgyzstan to Romania. Five months later, the existence of secret prisons of the Central Undressing Administration of the United States became clear<sup>6</sup>. Why then did the US Secretary of State, Condoleezza Rice visit Romania?<sup>7</sup>

The above gives conclusions that, firstly, it is necessary to carry out a number of works and, if possible, to quickly (first) disseminate information. It is very important to respond promptly, promptly, if necessary in foreign languages, to information invasions.

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**TRUTH, GOOD AND BEAUTY EXPRESSED BY THE HEROES OF THE NOVELS (IN THE EXAMPLE OF “ARROWSMITH” BY S.LEWIS AND “THE THREE ROOTS” BY P.KODIROV)**

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**ABSTRACT**

*The article is dedicated to the typological-comparative analyses of the twentieth century of American and Uzbek realistic novels —“Arrowsmith” and “Three roots”. Comparative literature is specialized in identifying common and unique features of national literatures. There are some similarities in the artistic creation of the novelists like Sinclair Lewis and Pirmkul Kodirov. Lewis was the first American writer who got the Nobel prize for literature. As for P. Kodirov, he made an immense contribution in the development of Uzbek prose. The article analyses and explains the common and diverse features of the two novels. Both writers depict their ideals about a contemporary intellectual man and the ethical worldview of men in science. The conflict between a man and society is given through the fate and the outlook of the characters. Despite the social differences, S. Lewis and P. Kodirov apply similar techniques to put moral qualities against various social ailments. The artistic concept and the art of character creation show common features in the authors’ prose.*

**KEYWORDS:** Truth, Beauty, Good, Artistic Concept, Conflict, Character, Protagonist, Ideal Hero, Typological Similarity.

**INTRODUCTION**

In his novel *Arrowsmith* (1925), the writer Sinclair Lewis embodies his ideals about a faithful scientist, a truly intelligent person. The protagonist of the novel, Martin Arrowsmith, is a bacteriologist, and the events of the work artistically reflect the young scientist's hard work on the way to maturity, his bitter professional experience. The novel was written in a realistic method and for the first time in American literature described the world of science, the spiritual

world of scientists, the relationship between students and professors on a large scale. It is well known that at the beginning of the last century, medicine, like all fields in American society, was rapidly commercialized. The bourgeois ideology was penetrating into the most valuable asset of mankind— medicine. The dominance of materialistic values in this sphere can lead to unprecedented social tragedies. Seriously aware of this fact, the novelist expresses his idealistic views on dedicated medical workers, scientists, through the protagonists of the work. Gotlieb, Sandelius, Martin Arrowsmith embody the author's ideals about the truth, good and beauty.

In the novel *The Three Roots* (1958), in the image of Mahkam, Akbarov, Toshev and Karamatov, Pirmkul Kodirov embodies his ideas about a courageous historian. In particular, the image of historians Toshev and Akbarov carry the author's views on objective and realistic evaluation of the history. In the portrait of Toshev P. Kodirov emphasizes clarity of observation and the ability to think globally. In Akbarov's character displays the respect for the national history, his poetic eloquence, and his passion for educating the younger generation are stressed.

## MATERIALS AND METHODS

The main message of the article is that the heroes of the novels are described as an image that vividly reflects the creative aesthetic views of the author. The idea put forward in the study is that the image of the ideal hero reflects the author's views on truth, goodness and beauty. The purpose of the research is to identify the techniques and the ways of transmitting aesthetic ideals into an artistic image. Comparative-historical, comparative-typological methods were used in the study. It also provides some analytical information on the biographies of the authors.

The characteristic feature in the realism of both writers, which is most evident in the novels "Arrowsmith" and "The Three Roots" is seen in the synthesis of realistic and romantic styles in depiction of the protagonists. While the two novels meet all the requirements of the creative method of realism, there are characteristic features of the romantic direction.

The reasons for this synthesis are the following: the influence of predecessors (G. Toro for S. Lewis; A. Kadiriy for P. Kodirov); an inclination for poetry; the artistic concept of novels (both novels glorify humanistic values, altruism, idealism); the historical period (the 1950s, P. Kodirov).

In the works, the plot events move forward through the similar motif; the actions of the protagonists are closely connected with the motif of the quest of the truth. The motive of searching for the truth has a certain function as a motif-action (Putilov) in the plot construction of the two novels. As the analysis of this motif required a consistent observation of the plot of the work, more emphasis was placed on the description of events in this chapter.

It has been acknowledged by many researchers that one of the central ideas in Sinclair Lewis's novel *Arrowsmith* is the young scientist's struggle to find his own truth. T. K. Whipple states that *Arrowsmith* is "the story of any scientist, or any seeker for the truth— chemist, economist, historian, philosopher, theologian". [1.] Mark Schorer who wrote a more complete bibliography of the author states that "Not only was Arrowsmith based on a "spiritual idea"—selfless dedication to truth-seeking— it also permitted its chief character to realize his "spiritual" ambitions, to transcend the strain and sordid struggle that, in *Main Street* and *Babbitt*, had defeated the chief characters. [2.] In the analysis of the works, attention was paid to the fact that the motif of the quest of the truth moved the plot as a semantic-functional repetition. The protagonists of the two

novels appear in the image of an enlightened seeker of the truth. The motif of searching for the truth, as the driving force of the plot of the works, is repeated in different layers of events, as if arranging them in a literary unity. It is also through this motif that the psychological dynamics of the protagonist are revealed. The conflicts that drive the novel's plot also stem primarily from the conflict between the truth of Martin Arrowsmith and the truth of other characters such as Gotlieb, Pickerbough, Angus Duer.

The confrontation of the poles is also intense in the novel *The Three Roots*. Later, the protagonist's attitude becomes more mature toward his surrounding. As a result of a fierce internal struggle at the Faculty of History, serious qualitative changes appear in the character of Mahkam and his comrade Ochil. They have become broad-minded individuals who look at the life more deeply, who can mobilize all their strength for the benefit of society. The fates of such scholars as Akbarov and Toshev confirm that no matter how many obstacles goodness and justice face, the victory will always prevail.

Thus, the commonalities in the characters of the novels are that the protagonists Martin Arrowsmith and Mahkam are caught between two paths, they commit a fierce struggle to find out the truth, and that they find their way in the process of the plot events. In the works, the vivid reflection of the struggle between the two poles - good and evil - is similar to the clash of romantic novels.

In the analyzed works, the ideal heroes serve as a means of glorifying a high spirituality, humanistic ideals. Sinclair Lewis and Pirmkul Kadirov mobilize heroes who fight for the promotion of good ideas. Their protagonists rise above the worries of daily routine. In S. Lewis's and P. Kodirov's works, the glorification of civic duty and a sense of social involvement can be found in several novels. In particular, the novels *Arrowsmith* and *The Three Roots* are dominated by these ideas. In the novels *Arrowsmith* and *The Three Roots*, professional ethics is also glorified as a high moral value. In the article "The Professional Ethics of Individualism and Tragedy in Martin Arrowsmith's Expedition to St Hubert" by American researcher Thomas Shaffer [3] the novel *Arrowsmith* is interpreted by the point of view of professional ethics. In Shaffer's view, S. Lewis artistically portrayed individualism as a high virtue in his work. S. Lewis's protagonist appears a lonely hero in a series of events. Shaffer concludes that the writer advocates the advantages of individualism. In our view, by saying individualism Shaffer stresses individual freedom. According to S. Lewis, social relationships, even family relationships, should not chain the creator. At the end of the discussion with his wife, Martin says:

*The answer is that very few ever do, under any condition, willingly leave a soft bed for a shanty bunk in order to be pure, as you very properly call it, and those of us that are pioneers — Oh, this debate could go on forever! We could prove that I'm a hero or a fool or a deserter or anything you like, but the fact is I've suddenly seen I must go! I want my freedom to work, and I herewith quit whining about it and grab it. (p.462).*

One of the central themes of the novel *The Three Roots* is a literary objection to the biased interpretation of the history. The biggest question of the work is who can perform such an honorable task and in what way? The message that the author wants to convey to the reader is that such a task can and should be performed by dedicated specialists, dedicated citizens. Such people have courage to resist any pressure in order to keep historical truth intact.



The protagonists of both novels appear to the writers as beautiful individuals. We know that beauty is an aesthetic whole phenomenon, the composition of which consists of various elements such as harmony, charm, elegance. The main means of perceiving these elements of beauty is to look at the object with the eye of love. That is, beauty is manifested through love. The beauty of the characters of the two novels is realized through love: in the novel *Arrowsmith* the images of Martin and Gottlieb are reflected in scientific research, in the novel *The Three Roots* Mahkam, Akbarov, Toshev's passion for history is reflected as a strong belief. The heroes of *Arrowsmith*

*"sink blissfully into the laboratory"* (p270), for them the laboratory stands for "perfect world" (p.295). In *Arrowsmith* the ethos of science is described as a divine madness,..., as Plato phrased it (Phaedrus, 244-256). [4]. According to the scientist, the mental image of Martin, who was exposed to a "principle X" that destroys living bacteria, is a clear example of this. In fact, the discovery completely changes Martin's lifestyle:

*He was completely fagged; he was, like a surgeon after a battle, like a reporter during an earthquake, perhaps a little insane; but sleepy he was not. (chapt 28); He made a checking list of the favorite neurasthenic fears: agoraphobia, claustrophobia, pyrophobia, anthropophobia, and the rest, ending with what he asserted to be "the most fool, pretentious, witch-doctor term of the whole bloomin' lot," namely, siderodromophobia, the fear of a railway journey.*

From the passage above, it is clear that Martin broke away from a healthy lifestyle after the discovery and plunged into the world of ideas. S. Lewis skillfully reveals hero's mental dynamics surrounding the discovery of the bacteriophage. Martin, who is awake at night in the laboratory before the discovery, loses his mental balance when a bacteriophage is found. As Martin examines himself, he remembers an incident that corresponds to each type of fear listed. In our view, this episode served to show the boundaries of Martin's passion in the novel. In the line of Gottlieb, too, the writer presents his involvement in the world of ideas as beauty. In fact, Martin equates Gottlieb's work in the lab at night with a prayer.

P. Kodirov in the images of Mahkam, Akbarov and Toshev, embodied the devotion to the science of history, the superiority of devotion to this science over personal interests, and these ideas are woven in the artistic layers of the work. In the personification of these heroes, P. Kodirov portrayed a selfless man who considered his actions to be of the highest value. In the image of Toshev, the love of history resembles the passion of S. Lewis's characters.

*When Toshev taught history, he searched through his archives and searched for something, but he could not be called to lunch or on the phone. To Gavhar's questions "Would you answer yourself", "Will you have dinner?", "Won't you?" He said "Yes" and didn't move. Then Gavhar's mother would come and threaten to take the ladder away. (110).*

The charm of the protagonists of the two writers is manifested in their immense passion for a particular interest, and, if possible, in their insane pursuit of that passion. The insane passion (divine madness) for his work in the images of scientists reflected in order to show a high level of love. This approach has provided a great charm to the protagonists of both novels. However, in the novel *The Three Roots* such passion is manifested only in the image of Toshev, while in *Arrowsmith* Martin, Gottlieb, Sandelius reflect this feature vividly. It is also significant that in the novel "Three Roots" the characters of Mahkam and Ochil were purified under the influence of love and grew up as a beautiful person in the eyes of the reader. The novel reflects an artistic expression of the power of love, which traditionally elevates and humanizes the person. P.

Kodirov expressed the love between a young man and a girl with delicate emotional details as an integral part of a person's self-awareness. We know that ideas about a noble, spiritually mature man ("komil inson" in Uzbek language) in Eastern literature has long been understood in close connection with love and is reflected in Uzbek national-literary traditions. The novel *The Three Roots* depicts different aspects of love in the line of images of Mahkam and Gavhar, Ochil and Zamira, Zokir and Farida. The beauty in Ochil's character is vividly revealed through the sufferings of love. His "I", who grew up to be very emotional, does not want to be a slave to anything, even to the feeling of love. While he loves Zamira, he ignores the girl's presence. He quarrels with her and writes poems in grief. P. Kodirov uses the theme of "a love triangle" to reveal the character of this hero. If we follow the course of events in the work, we can see that Ochil turned from a sentimental teenager into a pure-loving, strong-willed young man.

Hence, the ideal hero expresses the author's aesthetic views. In particular, the commonalities of the ideal heroes in the novels under analysis are in the reflection of the creators' ideas of truth, goodness, and beauty by means of characters.

## CONCLUSION

In the image of the ideal hero, the author's aesthetic views on truth, goodness and beauty are embodied. The honest nature of the character arose through the motif of seeking truth, which is repeated in the text of both novels. This motif served as the driving force behind the plot events in the play. It is also through this motif that the mental dynamics of the protagonist are revealed.

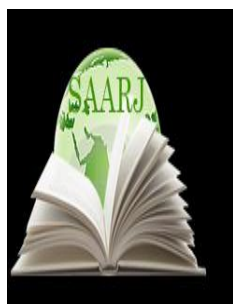
In the protagonists of the analyzed works, beauty is reflected through the theme of love. In both works, the attitude to his work in the images of the scientist is reflected as a strong passion, and the same passion is beautiful in the eyes of the author. Unlike Arrowsmith, *The Three Roots* explores the beauty of the protagonists through the theme of interpersonal love. P. Kodirov's innovation is that he puts a social meaning on such a noble feeling as love. The writer's view is that through love, qualities such as social responsibility, duty, and involvement are formed in the individual. The novel emphasizes the theme of love as means by which the protagonists become mature.

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## FACTORS OF FORMATION OF PHRASEOLOGICAL UNITS

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### ABSTRACT

*This article discusses the relationship between language and culture, the understanding of national mentality, and the need for an in-depth and scientific study of the nature of language, its communicative function. Both are characterized by active application in speech. The variant phrases in our language that do not fit into the skin and do not fit into the body also express the emotional-expressive state of a person.*

**KEYWORDS:** *Cognitive Linguistics, Pragmatic Linguistics, Psycholinguistics, Linguoculturology, Ethnolinguistics, Language Corpus, Semantic-Thematic Group.*

### INTRODUCTION

In world linguistics, national languages are studied in terms of cognitive linguistics, pragmatic linguistics, psycholinguistics, linguoculturalism, ethnolinguistics, the creation of the language corpus, the linguistic landscape of the world. The field of linguoculturology is rapidly developing in world linguistics. In the process and as a result of the linguoculturological study of language units, their essence is fully revealed, their practical significance increases.

For phraseological units related to a person, the personality sign becomes an integral sign, and modeling them can be the basis for dividing them into semantic-thematic groups.

Categorical meaning occupies the highest stage in the semantic hierarchical structure of phraseologies. The categorical meaning of phraseologies has a high degree of abstraction, which includes the sign of belonging to which grammatical category of phraseologies. Phraseologisms with the same categorical meaning are grouped under a larger paradigm, indicating that the phraseologies belong to certain word families.

### The Main Part

Phraseologisms have their own synonymous series and variants. The peculiarity of phraseological synonyms is that they play an important role in distinguishing the emotional-

expressive possibilities of this or that phraseology. The reason is that synonymous phraseologies differ from each other by semantic edges or by stylistic coloring. For example, in the Uzbek language, the phraseology of uplifting and uplifting differs from the first in its emotional and figurative expression of meaning. It is well known that the phenomenon of synonymy is peculiar to phraseologies. In order for two phraseologies to be synonymous, they must have the same meaning, without which it is difficult to speak of the phenomenon of synonymy. By phraseological semantics we mean the expression of the same meaning and close meaning. Each semantic phraseology has its own set of semantic edges from the meaning of these synonymous lines.

Verb phraseology is used in the sense of joy, gladness that escaped the whims of the mouth. At the same time, the phraseology of our language "the strings of the lips have escaped" also expresses the state of joy and happiness of people. This phraseology is considered a lexical variant of the phraseology of the word *tanobi* escaped. Under the condition of a multivariate expression, a variant is a base variant, and the variant variant can be used in the same way as the base variant is used in the language. So they are also a linguistic phenomenon. According to Sh. Rakhmatullaev, variants are divided into two main groups: a) lexical variants; b) grammatical variants. It is self-evident that lexical variants occur on the basis of the mixing of word components in a phraseology into another word, the addition of a word, or the omission of a word. Grammatical variants, on the other hand, arise due to grammatical changes in the structure of fraeologism. It is also possible to have both lexical and grammatical changes within a phraseology at the same time, which is called a lexical-grammatical variant in linguistics. Most of the phraseological structure of the modern Uzbek literary language are lexical variants. We have seen that both phraseologies, which are considered lexical variants, are used almost identically in speech.

The phrases in our language, head to toe and head to toe, are synonymous and express the emotional state of people's joy. Both are characterized by active application in speech. The variant phrases in our language that do not fit into the skin and do not fit into the body also express the emotional-expressive state of a person. In this case, the lexical variant of the phraseology is formed on the basis of the use of the word component exchange of the basic phraseology. Although these phraseologies are used in the same way in speech, they differ from each other in terms of semantic aspects, emotional and figurative level: the chest rises like a mountain - the heart rises like a mountain.

The meanings of a number of synonymous phraseologies are realized in the spoken text. For example, such phrases as heartbreak, heartbreak, heartbreak can express in the text a sign of joy, happiness, as well as a sign of fear.

Phraseologisms in our language that do not fit into joy and do not fit into joy also express meanings such as joy, pleasure in people. These phraseologies are considered lexical similarities to each other.

The phraseologisms of throwing the doppi into the sky, throwing the doppi into the sky, and throwing the doppi into the sky are also synonymous, and in speech they express the emotional states of people, such as joy and happiness.

Or the phraseologisms of open-hearted, open-hearted are also used a lot in our language to express the emotional state of people enjoying, rejoicing. As we have seen, semantic phraseologies differ from each other in their stylistic coloring.

The authors express their inner experiences through figurative phraseology, not in simple words, through phraseological compounds that express the emotional states of the person. This increases the artistic value of the text as a whole, of the event being described.

The structure, grammatical characteristics of the mentioned phraseologies show that they are considered verb phraseologies according to their structure. The main feature of verb hypotheses is their participation as a basic component of the verb. The basic component represents the way in which the action is performed on the whole phraseology. This type of phraseology therefore represents situations related to the behavior of people.

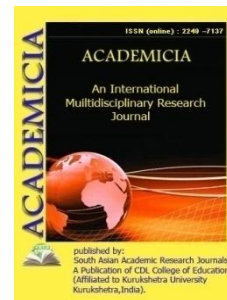
The phenomenon of gradation, which is present in phraseology, reinforces the meaning. For example: to be amazed-to be amazed-to be stunned.

## CONCLUSION

In conclusion, it should be noted that the study of human activity and the emotional-expressive state of his qualities in the form of an anthropocentric paradigm is gaining popularity. The manifestation of the spiritual values, national way of thinking and customs of each nation, first of all, in the language of this people requires the enrichment and expansion of the scope of traditional linguistics in new directions.

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## ARTISTIC MASTERY OF ALI SAFI KASHIFI HIRAWI (ON THE EXAMPLE OF “RASHAKHOT”)

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### ABSTRACT

*This article is about the scientific and literary heritage of Fakhruddin Ali Safi ibn Husayn Waz Kashifi Hirawi (1463–1533), a mature manaqibnavis and tazkiranavis scholar who lived in the 16th century and left a rich scientific legacy, in particular, on the example of his work “Rashakhhot aynu-l-hayat” (Drops of the spring of life) dedicated to Hoja Ubaydullah Ahror, which is devoted to the study of the author’s mastery of the application of literary sciences in the example of the work.*

**KEYWORDS:** “Rashakhhot Aynu-L-Hayot”, *Manoqib, Poetic Genres, Poetic And Artistic Arts, Husn-I Talil, Literary Sciences, Narrative Science, Tashbih, Satirical Tashbih, Muharaza Science.*

### INTRODUCTION

Classical literature of the East is an elegant literature with its own art, deep meaning, great enlightenment, strong influence. Almost all the masterpieces of this literature, first of all, healthy faith, chastity, good manners, as a high result of high human qualities, the great talents compete with each other in a non-discriminatory, positive way and resulting from the effects. For this reason, the interest in our classical literature and its priceless works has been growing in the last century, and they are being studied. One of our ancestors who made a great contribution to the development of world culture and science with his creativity was Fakhruddin Ali Safi bin Husayn Waz Kashifi (d. 939/1533). His work is notable for its coverage of various fields of secular and religious sciences. Fakhruddin Ali Safi's works, in particular, in his work “Rashakhhot

aynu-l-hayot” (“Drops of the spring of life” It is then given in the form of Rashakhot) through which the ideas of broad thought and reasoning, the promotion of pure morality, have found expression. From this point of view, it is important to reveal how the poet and scientist covered the mystical subject, on what sources, on the basis of his artistic and religious works, what formed the basis of his faith, his inner world. Mature *manaqibnavis*, “Khojagon tariqati naqbandiyya-ahroriyya suluki tazkirachisi” [1. 353], described as Mawlana Fakhruddin Ali Safi, is, in fact, one of the most mature scholars of his time, one of the representatives of classical literature. Fakhruddin Ali Safi Hiravi’s world-famous work is his work “Rashakhot”.

### Artistic Expression and Interpretation in “Rashakhot”

“Rashakhot” was written in the genre of *manaqib* (Arabic - منافب) and was written in 909 AH (1503-1504 AD). Although the work is dedicated to Hoja Ubaydullah AhrorWali (1404-1490), we see in it the life, activities and words of more than three hundred Mashayiks belonging to the Khojagon sect. “Rashakhot” is a truly unique and unique work, despite the fact that the rules and regulations of the Khojagon sect are perfectly described. For centuries, this work has served as a guide for those who set themselves the goal of learning the basics of the Khojagon sect. According to the preface of the work, Ali Safi called his work “Rashakhoti aynu-l-hayat” (“Rashakhoti aynu-hayat”) in order to awaken the *qasawat-i qalb* (those who have a hardened heart, those who are stubborn) from the sleep of ignorance or to revive the souls of the dead who are deprived of high human qualities. arabic - رشحات - called “drops of the spring of life.” At the end of the work the rubai, which begins with “*Omad “Rashakhot”i mo kasiyru-l-barakot, Chun ob-i Xizr munfajir az ob-i hayot...*”(Our work “Rashakhot”, which is full of blessings, was the water of Hizr flowing from the spring of life....) is a clear indication of this.

For this purpose, Ali Safi collected important information about the supreme sect, that is, the path of Khojagon, and managed to write an independent, holistic, unique encyclopedic work about the Khojagon dynasty.

Prior to Rashakhot, Mawlana Abdurahman Jami (d. 898/1492), a contemporary and compatriot of Ali Safi, wrote a book on the life and work of the sheikhs of the sect in Persian, *Nafohatu-l-uns min hadaroti-l-quds*, Alisher Navoi (d. 907/1501) wrote “*Nasoyimu-l-mahabba min shamoiiyi-l-futuvva*”(Breezes of love that radiate the fragrances of greatness) in the Turkish language. “*Nafohatu-l-uns*” is an Arabic and Ajam mashayikh tazkira, and “*Nasoyimu-l-mahabba*” is mainly a Turkish tazkirah. “Rashakhot” is the only work that fills the gap of Khojagon mashayik *manaqibi*. It is true that many works were written in the genre of *manaqib* before “Rashakhot”, such as “*Manoqib-i Hoja Yusuf Hamadoni*”, “*Manoqib-i Hoja Abdulkhalik*”, “*Manoqib-i Hoja Bahauddin*”, but they are all characterized by the fact that they are devoted to the life and work of one person, that is, one sheikh.

It is known that the work “Rashakhot” - although the author says that the work consists of *fehrest* (content) part “*Introduction*” (preface, introduction), “*Article*” part and “*Three Goals*” (three major chapters) and “*conclusion*” in, but the work actually consists of six parts.

The first part consisted of “*Introduction*”. In it, the author first introduces himself after the traditional expressions of praise (praise be to Allaah) and *salaat-u-salam* (peace and blessings of Allaah be upon him), then explains why and for how long he wrote Rashakhot, and finally the contents of the work. He finished the preface of “Rashakhot” with a statement.



The second part is called “Article”. This section contains important information about the dhikr of the ancestors of Hoja Ubaydullah Ahror. This section also contains valuable information about the life and activities of the sheikhs who spread in Khorasan, Transoxiana and Turkestan.

The third part is called “*Maqsad-i Awwal*” (The First Purpose, ie the First Chapter), the fourth part is called “*Maqsad-i Duvvum*” (The Second Purpose, ie the Second Chapter), and the fifth part is called “*Maqsad-i Sevvum*” (The Third Purpose, ie the Third). chapter). These three sections mainly deal with important information about the life, activities, prophecies, and praiseworthy morals of Hoja Ubaydullah Ahror.

The sixth part is called “conclusion” and this part is about the death of Hoja Ubaydullah Ahror.

Through the preface to Ali Safi’s work and the three major chapters in it, he described in great detail the invaluable information about more than three hundred historical figures - the righteous. In this regard, the work “Rashakhot” is an encyclopedic scientific and literary source, a prose work with a unique use of poetic genres, one of the mature examples of the genre of *manoqib*.

### Poetic Genres in “Rashakhot”

The work “Rashakhot” deserves recognition as a mature example of the prose of our classical literature. However, the poetic genres and arts in it have not been studied as a separate research topic. As a talented poet, Ali Safi effectively used poetic genres and arts to enrich the form and content of his work.

The “Introduction” section contains a 6-byte poem of the Masnavi genre. The “Article” section consists of 106 poems of various genres, totaling 212 bytes.

The “Introduction” contains 3 bytes (6 lines) written by the author, which is written in the genre of masnavi. The “Article” section contains a total of 107 poems, of which 4 are ghazals, 3 are poems, and the rest are poems written in continental and rubai genres. The number of poems in the first chapter (i.e., the first chapter), entitled “*Maqsad-i avval*”, was 7, and the number of bytes was 13, for a total of 26 verses. In this section we see rubai-poems dedicated to the death of more than a dozen people. They are called “history”. If the last sentence or phrase of the last verse of these “history” poems, or the last word, is converted to abjad (that is, if the Arabic letter is converted to a specific number that represents it), the resulting number represents the date of that person’s death.

The “histories” quoted by Ali Safi in “Rashakhot” are wonderful examples of the history of this genre. For example, we see that the date of Abdurahman Jami’s death was “History” with a verse from the Qur’an: “...*Va man daxalahu kona ominan!*” (The meaning of the verse: Whoever enters it, that is, the Ka’bah, the Masjid al-Haram, then he is safe from any danger). If this Arabic expression is calculated in alphabetical order, it will be 1492. This is the date of death of Abdurahman Jami.

The second chapter, entitled “*Maqsad-i duvvum*”, contains a total of 47 poems, consisting of 94 bytes. 6 of these poems belong to the genre of fard (one-line poem), the rest are poems written in continental and rubai genres. One verse can express the meaning of a great poem. We see that Hoja Ubaydullah Ahror often expresses his views and opinions about a person by saying fard, and by expressing his views and opinions on this or that event in fard. The purpose of this is to



express his personal attitude and opinions to the people around him in one word. For example, “*Na’ra kamtar zan, ki nazdik ast Yor*” (Meaning: Cry less, for Allah is near, that is, Allah is not far from you. He is very close to you spiritually. He is even closer to you than your jugular vein - your jugular vein!).

Finally, in the “Conclusion” section of “Rashakhot” there were 2 poems in total. The first of them is a large poem dedicated to the death of Mawlana Abdurahman Jami on the death of Hoja Ubaydullah Ahror Wali. The second poem is “history” (rubai) by Ali Safi, in which the completion of “Rashakhot” is expressed in alphabetical order.

As a *manoqibnavis* and poet, Ali Safi in the text of “Rashakhot” paid special attention not only to the content, but also to art, especially poetic perfection. It is not surprising that the fact that the work was written in a long period of time, that is, completed in a period of seventeen years, also served to ensure such success. In prose, he was able to use the methods of maturity and eloquence in their place and moderation, and in poetry, he skillfully used the elements of weight, rhyme, *radif*, as well as beautiful artistic forms and arts:

*Omad “Rashakhot”i mo kasiyru-l-barakot,*

*Chun ob-i Xizr munfajir az ob-i hayot.*

*Yoband muhosibon-i sanjiyda sifot,*

*Ta’rix-i tamomash az huruf-i رشحات (Rashakhot).*

(Our work “Rashakhot”, full of blessings,

It was the water of Hizr that gushed forth from the spring of life.

Accountants with pleasant qualities,

Its writing date is found in the letters رشحات.)

These verses, along with his poetic talent, testify to his unique ability to write history through *abjad* (the science of expressing numbers in Arabic letters). The fact that the title of the work (رشحات) indicates the date on which the work was completed, that is, 909 AH, is indeed a testament to the uniqueness of the creative ability. It is worth noting that, first of all, Ali Safi, like his father Hussein Waz Kashifi, wrote “history” in almost all of his works, which deserves praise and recognition in alphabetical order. Secondly, this artist, who has a deep knowledge of puberty and eloquence, shows that he was a leader among his contemporaries and successors in writing poetry in the genre of “history”. In this regard, we have given examples from the work “Rashakhot” above. Therefore, in this work “Rashakhot” can be divided into two groups (the following groups):

1. Both spiritual and verbal poetic arts, which are characteristic of the work of Ali Safi, are fully reflected in the work “*Rashakhot*”;
2. It is the appropriate use of the arts (*husn-it talil*, *jam'* and *taqsim*, *laff-u nashr*, *nido*, *iktibos*, etc.) that are directly aimed at more vividly expressing the scientific content of the work “*Rashakhot*”.

### The Arts Used in the Work

In the preface to Rashakhot, Ali Safi skillfully used the art of براعة الإستهلال ("baroat-i istihlol"), first of all. That is, the creator began his work with skill, eloquence. Of great importance in this was the fact that he composed mature sentences that attracted the attention of the addressee (interlocutor, reader) from the very beginning, aroused interest in the word (word, sentence) and the work in general. After all, the best of the beginning is the word (sentence) that has "baroat-i istihlol."

To understand what Husni Talil is, we need to pay attention to the following information. Atoullah Husseini narrated the following story in his book "Badoyi'u-s-sanoyi" "Abu Muqatil Zarir entered the presence of Doi Alawi, the ruler of that time, on the first day of Mehrjan (ie, a day similar to Navruz, the Feast of Harvest), the day when the sun passed to Mezan, and recited the following verse to him:

لا تقل بشرى و لكن بشریان عزة الداعى و يوم المهرجان

Meaning: Say, "One gospel!", But two gospels:

The day when the doi is saint and the day of mehrjon (the arrival of).

Doi took a bad omen from the poet's words and said, "O blind! Does Mehrjon start his day with such words?" he said. Some say that he ordered the poet to be taken out and beaten with fifty sticks, and said: "Etiquette (inserting his mind, i.e. punishing) is better than rewarding him"[2. 253-254].

It is well known that there is a purpose to saying a word. If the speaker begins his speech in accordance with this purpose, he is considered to have used the art of "*baroat-i istihlol*." In Arabic puberty, it is emphasized that in one type of art, the goal is expressed through subtle gestures, rather than directly stated [3. 94]. "This type of "*Baroat-i Istihlol*" is called "husn-i talil" or "husn-i ibtido sanati" by foreign scholars. [2. 252]

In fact, this is an art form, that is, the style of the Qur'an. Because at the beginning of the Qur'an there is a reference to its general purpose. For example, we all know that the Qur'an begins with Surat al-Fatihah, and in this blessed surah there is a call first to Islam, that is, to monotheism, and then to the themes of the Qur'an (the stories of the prophets and the verses of the Qur'an). There is a subtle reference to all the hundreds of verses of Tawheed, rulings and narrations in the Qur'an in Surat al-Fatiha.

Accordingly, a person who begins his speech with Surat al-Fatiha will have started his speech with the Qur'an. This is because Surat al-Fatihah contains hadiths about the "mother, the foundation of the Qur'an." Since it is called the "Fatiha" because it is a great surah, it is also the beginning of the Qur'an, the revealer. [4]

The fact that Rashakhot begins with basmala and hamd, that is, "Bi-smillah ..." and "al-hamdu lillah ..." is from the art of "*baroat-i istihlol*", in other words, from the art of "*husn-i talil*":

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ الحمد لمن رش رشحات الحقائق و الحكم على قلوب العارفين بفيضه الاقدس الاقدم و الصلوة على المظهر الاتم---

(Translation: ar-Rahman ar-Rahim In the name of Allah. Praise be to Allah, Who, by His holy and ancient grace, has poured drops of wisdom and truth on the hearts of His servants....)

Not only in Rashakhhot, but in the beginning of all his other works, Ali Safi skillfully used “*husn-i talil*” more than the arts. However, the *husn-i talil* at the beginning of Rashakhhot is as unique as the *husn-i talil* used at the beginning of Abdurahman Jami’s works. So, it can be concluded from this that Ali Safi entered a creative competition with the leading teachers of the Herat Scientific and Literary School - masters of eloquence Abdurahman Jami, Alisher Navoi, Hussein Voiz Kashifi and others, and as a result achieved good results.

### The Science of Narration in Rashakhhot

*Narrative science* is another thing that gives a special charm to poetry and prose, determines the creativity and literature of the author of the work, and proves that the owner of the pen has a unique ability and style. If the creator can make effective use of the types of narrative science, he will achieve such success.

In the work “Rashakhhot” one can see that the creator used such forms of narrative science as *tashbih*, *majoz*, *istiora*, *kinoya*.

**تشبيه** *Tashbih*. The shortest definition of *tashbih* in science, which is the first type of narrative science, is to liken one thing to another. [5. 47]

We see that Ali Safi used the art of *tashbih* in the preface of “Rashakhhot” in a very beautiful and unique style. For example, he wrote so “*I would be happy to hear the meaningful words that I had the honor of hearing from Hazrat Hoja Ubaydullah, and I would keep and take care of them in the Quva-i hafizah (memory) “Ka-amsoli-l-lu’lii-l-maknun” (Surat al-Waqi’a, 22).* (that is, it is memorized from time to time so as not to be forgotten). It is known that in the verse, the hurras of Paradise are likened to pearls, that is, the hurras of Paradise are an example of pearl necklaces that have not been touched by sunlight or even seen by strangers. Ali Safi likens the words of Hoja Ubaydullah Ahror to a pearl. This analogy is in a very mature and eloquent style. That is, to apply a new style in *tashbih*.

**تشبيه الكناية – تشبيه كناية** *allusion tashbih*. According to Atoullah Husseini, one of the teachers of puberty, the definition of this *tashbih* is as follows: “The speaker makes an analogy with something in his heart and does not quote the custom of *tashbih* (that is, something like that) in the word and interprets the word *mushabbah* with the word *mushabbah bih* (something to imitate)”. [2. 213] His shortest description is as follows: in the *tashbih*, nothing resembling analogy and resemblance is mentioned. [3. 155-156] In Rashakhhot we see that in the 130th byte the allegorical element of the allegory is used:

**Byte.** *Bar oston-i irodat, ki sar nanihod kas-e,*

*Ki lutf-i do’st ba ro’yash darichash nakushud.* [6. 350]

(Contents: If a person does not step on the threshold of will, the grace of a friend will not open a window in his face.)

### Literary Sciences in “Rashakhhot”

The author of “Rashakhhot” in his work had twelve types of literary sciences: **dictionary** (absolute aspect of a word in language) science, **sarf** (word change) science, **ishtiqoq** (word formation) science, **nahv** (rules of content of words in sentences) science, the science of **ma’noiy** (maturity and eloquence), the science of **narration** (styles such as allegory, allegory, allegory,

satire), **aruz** (verse weights) science, rhyme (rules of harmonious ending of verses) science, **essay** (rules of writing various letters, pamphlets, documents), **poetry fard** (science of poetry evaluation, criticism, evaluation science), **muharaza** (the science of using historical events and narrations, the words and literary works of the salaf in their proper place) and the **picture-letter** (the art of writing, knowledge of letter forms and spelling).

There are hundreds of passages in the play that testify to **muharaza** (the science of making wise use of historical events and legends, the words and literary works of the salaf in their place). Undoubtedly, the most perfect of these is the Wasiyatnoma-i Khoja Abdulkhaliq.

There are also manuscripts of “Wasiyatnoma-i Khoja Abdulkholiq” in Turkish manuscript collections.

The pamphlet “Wasiyatnoma-i Khoja Abdulkholiq” was translated and published under the title “Abdülhalık-ı Gücdüvanı Hazretlerinin Nasihatları”. [7. 166] It turned out that the publication was translated not only on the basis of copies in the Istanbul Manuscripts, but also on the basis of the text “Rashakhot” “Wasiyatnoma-i Khoja Abdulkholiq dar Odob-i tariqat.” The work was published by Doctor of Theology, prof. M.A. Joshan translated into modern Turkish, which was republished by Dr. N. Yilmaz in Turkey in 2009 [7. 147-152]. The number of wills in this translation text was 36.

If we compare the text of the “Wasiyatnoma-i Khoja Abdulkhaliq dar Odob-i tariqat” in Rashakhot with the text of the Iranian manuscript and the text of the Turkish edition, there are significant differences in the beginning and end of the work, in words and phrases. But these three testaments are the same in meaning and substance.

For example, in the Turkish edition, the translation of the pamphlet “Wasiyatnoma-i Khoja Abdulkhaliq” began as follows:

Abdülhalık-ı Gücdüvanı Hazretlerinin Nasihatları

*Bu risale şeyhler şeyhi, pırlar sultanı, veliler kutbu, ulu makamlar, yuksek kerametler, gayb aleminden gelen varidat ve kutsiy keşifler sahibi, Hacı Abdülhalık Gücdüvanı kaddesa-llahu ruhahu-l-aziz tarafından, özlü sözler halinde, tarikat mensuplarından bir müride emir buyurulmuş nasihatlerini ihtiva eder. Bahis konusu müridin, Hacı Evliya-ı Kelan olduğu nakledilir.*

*İ.Ey ogulcagızım! Sana vasiyet ederim ki takvayı kendine şiar edinesin! İbadet cinsinden vazifelerine sınıksız sarılesin! Ahvalını kontrol edesin. Daima, hatalarından korku halinde olasın!.. [7. 147]*

The text of “Rashaho” begins with “Wasiyatnoma-i Khoja Abdulkholiq dar Odob-i tariqat” as follows:

*“(Page 15b). Hazrat (Khoja Abdulkhaliq) sent a “Testament” on the etiquette of the sect to his spiritual children (beloved disciple) Khoja Awliya-i Kabir - may the grave of Allah shine brighter! - they wrote, these testaments contain many benefits, from which there are many benefits to all taxpayers and murids. We also bring some of them here in the hope of achieving rewards and blessings.*

*Rashha. They said: Oh, my boy! I bequeath to you knowledge, manners, and piety in all circumstances. You will always follow the sunnah mutahhara, you will be a circumcision and public man.*

*Oh, my boy! I bequeath to you knowledge, manners, and piety in all circumstances. You will always follow the sunnah mutahhara, you will be a circumcision and public man. If you study jurisprudence and hadith, you will never go near ignorant Sufis, you will stay away from them. You always perform the prayer in congregation. As long as you are not an imam or a muezzin..."*

When these two texts were compared, it became clear that the Turkish edition of "Wasiyatnoma-i Hoja Abdulkhaliq" was not translated from the pamphlet contained in Rashakhot. The order of the wills in the Turkish translation of the Will is reminiscent of the Iranian version and the sequence of the wills in the Ramzi Kabuli's Will, and is similar to their free translation. The Turkish translation of the will differs from the pamphlet contained in "Rashakhot".

The results of the textological comparison of the copies of the pamphlet show that the Rashakhot's وصیت نامه در آداب طریقت ("Wasiyatnoma-i Hoja Abdulkhaliq dar Odob-i tariqat") differs in size and wording and even in meaning from the Iranian version, the manuscripts of Ramzi Kabuli's "Will" and the Turkish edition. In our opinion, Ali Safi tried and succeeded in compiling the "Will" in a unique way and transforming it into a new product of art.

In general, we see that this "Wasiyatnoma-i Khoja Abdulkhaliq" is quoted in the "Rashakhot" as a story within a story, and in the chapter "The statement of the remembrance of Khoja Abdulkhaliq Gijduvani" it expresses the formative content. In this way, Ali Safi was able to explain the etiquette of the Khojagan sect of Khoja Abdulkhaliq Gijduvani in a very short, but clear, vivid way, when referring to the "Wasiyatnoma-i Khoja Abdulkhaliq", it is clear that for centuries the version of this "Will" in the "Rashakhot" has been widely used, and the quotations are taken from the version of Ali Safi. All this means that all these cases were reorganized under the editorship of Ali Safi, and the regulated "Will" was born as a new product.

Thus, Ali Safi included "Wasiyatnoma-i Khoja Abdulkhaliq" in his work "Rashakhot" and called it "Wasiyatnoma-i Khoja Abdulkhaliq dar Odob-i tariqat". He focused on revealing the content of the "Will" and was able to express it in a unique artistic style.

The language of Rashakhot is also a high example of Arabic, Persian and Tajik literary languages. From this it is clear that the author of "Rashakhot" paid attention to every detail of his work, for example, to every word, that is, the phonetic aspect of the word, its pronunciation. Academician A. According to Rustami, only a scholar who has mastered the sciences of etiquette, that is, the sciences of etiquette, is called an "adib". Fakhruddin Ali Safi, who in his works, in particular, in his work "Rashakhot", has a unique application of literary sciences and arts, is, in fact, a mature writer of the Herat scientific-literary school of the XVI century, a master of the Khojagan sect.

## CONCLUSION

In conclusion, it is worth mentioning that Ali Safi realized this example of creativity in the traditional manoqib genre with his creativity and ability to create innovation. Although the main purpose of his work was to write a perfect work on the life and work of the Khojagan sect, in particular, Khoja Ubaydullah Ahror, but for those who are devoted to this sect, he managed to



write a unique encyclopedia, if necessary, a comprehensive guide to the mystical issues of the Naqshbandi series.

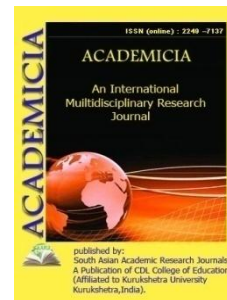
As mentioned above, the protagonist of this work, which consists of three major chapters, is the author himself and his language is carefully crafted. It can be seen that the creator effectively used the possibilities of creation to fully reveal the content of the subject. This, in turn, indicates that the artist has fulfilled the task set for him in the play, that his mystical-enlightenment, artistic-aesthetic goal has been achieved. The play contains a reliable account of the life and work of Khojagan Mashayik, especially Khoja Ubaydullah Ahror, in close connection with the verses, hadiths, rubais, qitas, and verses from the Qur'an. As a result, the reader receives spiritual nourishment from the wisdom of the sheikhs of Khojagon, which is expressed in detail through rashas. The work "Rashakhot" has its own inner tone, a unique rhythm, which reflects the uniqueness of the creative work of the talented artist, who is able to reflect a series of thoughts and feelings. Rashhas served the emergence of a work in the true mystical-moral and enlightened spirit. This is the most important factor in determining the goal of Ali Safi in the play.

Among the works in the history of our classical literature in the Sufi direction - mystical commentaries and manaqibs, Ali Safi's work "Rashakhot" is distinguished by its holistic theme, the accuracy of its scientific theme; at the same time, no other large-scale biographical work of an integrated mystical-enlightenment, educational nature, dedicated to the Naqshbandi and Yassavi leeches of the Khojagon sect, is known.

Ali Safi's style of narration, typical of the manaqib genre in this work, laid the foundation for his ideological maturity, the correct and unbiased coverage of the information given in "Rashakhot" in terms of purpose. The enlightenment, moral and educational views in the work are expressed primarily on the basis of the desire to be a perfect human being, purity of heart, sincerity, tolerance, humanity and kindness.

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## IT COMPANIES: TRANSITIONING FROM PHYSICAL TO VIRTUAL WORKPLACES

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### ABSTRACT

*With the advent of COVID-19 crisis, most of the world has navigated towards remote working conditions. This has led to the rapid acceptance of the Work from Home process as the best defensive strategy. This case helps in bringing about a clear understanding of how these organizations have evolved and with the help of the appropriate tools has been able to revive their productivity which has got sabotaged by the pandemic. With the help of a Fishbone Diagram, various factors have been highlighted which has an influence on the efficiency of the firms while bouncing from physical to virtual workplaces. Creation of virtual workplaces have turned up into the latest trend in the corporate world as it assists the workforces for focusing on conveying time-bound tasks. Still there are certain factors that are affecting the Work Life Balance and the efficiency of the employees. This has been clearly depicted through the Cause and Effect Method. The million dollar question was – To what extent has this Work from Home strategy been able to act as a strategic sword for the organization during this crisis situation?*

**KEYWORDS:** Digital Platform, Pandemic, Strategic Sword, Virtual Workplace, Work From Home.



## 1. INTRODUCTION

A virtual working environment isn't some theoretical future objective. It's a serious need at this moment, and will be a sign of pliant organizations throughout the coming years for a half-decade. Organizations that grasp the virtual workforce progress and make it part of their drawn out culture will be at a preferred position—presently and well after physical workplaces resume. One can consider it as anything: The business at distance or the Post-COVID world. None can deny the fact that having the option to work with virtual groups will be fundamental to versatility in 2020 and past. It will address your deftness, yet in addition your validity. The legend that virtual groups are less beneficial is as of now being negated. Organizations that can't uphold a far off workforce or attempt to restore every one of their kin to desk areas could fall off inhumane and withdrawn, gambling by and large out of date quality.

Presently, the workforce is working either completely or incompletely in a remote mode, contingent upon ones industry and the idea of the work. The corporate world needed to consider various logistics like:

- Video conferencing for virtual gatherings
- Technical support from far off areas
- Cloud capacities and relocations of exclusive data
- Supplanting face to face business and occasions
- Terms of arrangement for physical spaces (i.e., office leases)

## 2. IT AND WORK FROM HOME

By focusing on employee benefits and company profit, maximum Software companies' employee work from home during this lockdown. Lots of companies are thinking to continue on this Work from Home concept on a long-term basis.

Now Tata Consulting Services has declared that it will move 75% workforce to WFH permanently by 2025. To work securely, it is operating all of their work by the help of SBWS (Secure borderless work spaces) operating model. As a result of which it will reduce their infrastructural facilities, maintenance changes inside the company.

In Wipro, On April 15, 2020, 93% of their employees were allowed to work from home and them also working on different projects globally where they are engaging their clients through video conference. They provide a flexible work schedule to their employees who are dealing with costumers directly like Customer Relationship Management activities, sales & marketing department etc. Wipro said all the employees to work from home, depending upon their feasibility, availability.

Infosys also follows this WFH strategic for their productivity; around 93% of employees were working from home since April 15, 2020.

In Capgemini, 90-95% of the employees are allowed to work from their home. As we know, it is one of the best IT companies; still it is facing some issues by providing Work from Home facilities to its employees. So, a group of IT professionals ensured to provide good bandwidth to employees so that they can work smoothly from their home, certain setup has been made, known as "War Room" as a result 95% of their employees able to work from their home in India.

Pesto Tech, is also working remotely. Cisco has already reduced their offices and is following WFH system from the last two years.

It shows that, over 90% of Employees work from home in top IT firms of India. When you look at different industries, they are also working smoothly with this strategy in their respective field.

### 3. Factors Affecting The Work Life Balance During The Work From Home Strategy

Work Life Balance is a great challenge for the employees that are keeping a balance between their personal and professional life. Failing to which you may either end up being a Workaholic or a Casual worker. A Workaholic person is going to sacrifice his personal life for the stake of his job role and a Casual worker would find his personal life, his distractions and temptations to be more important and further neglecting his professional responsibilities. In both the cases in a long run the efficiency of the workers would get reduced, further affecting the productivity of the organizations.

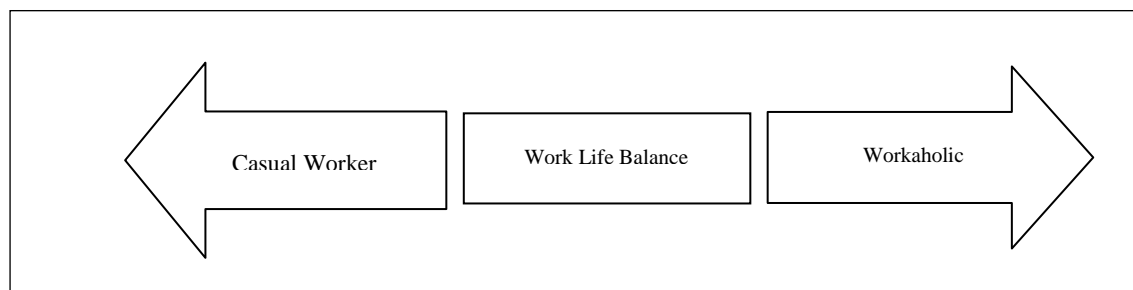


Figure 1: Work Life Balance Continuum

Fishbone diagram (otherwise called Ishikawa model) was made with the objective of distinguishing and gathering the causes which produce a quality issue. Progressively, the strategy has been utilized additionally to aggregate in classifications the reasons for different sorts of issues which an association stands up to with. (Ciocoiu, Carmen & ILIE, Gheorghe, 2010)

Along with the benefits that have been incurred from the Work from Home Strategy, there are also certain factors that affect the efficiency of the workforce. There are many factors acts as a barriers and hurdles in achieving efficiency during the Work from Home. When the employees work at home, they always face a role conflict between their personal Life and professional life. The role shift from personal to professional and vice versa turns out to be quite cumbersome for many of the employees especially the female workforce, for whom taking care of the household chores and the professional liabilities becomes very difficult.

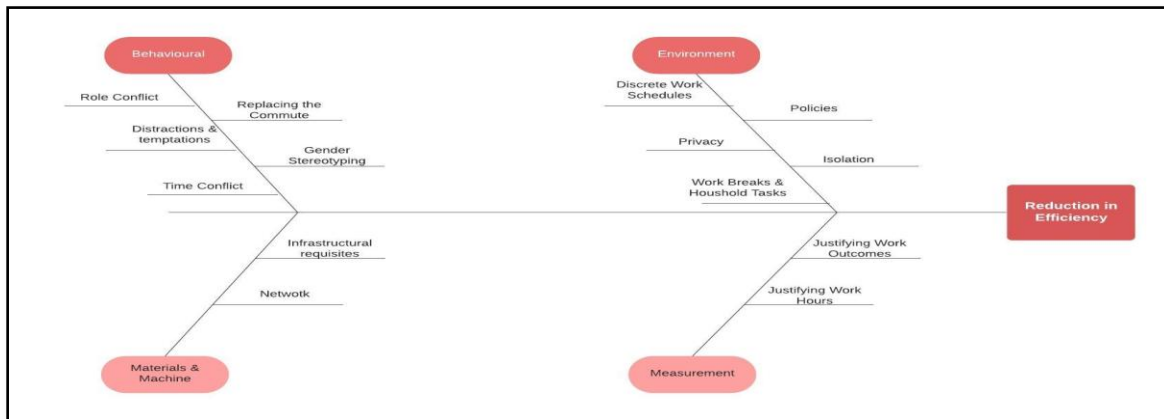


Figure2: Fishbone Diagram: Cause and Effect Diagram showing the factors that led to Effect – Reduction in Efficiency

These factors that act as a barrier to the efficiency of the Workforce during the Work from Home Period has been clearly explained through the Ishikawa's Fishbone Diagram based on the Cause and Effect concept. Here in the figure 2, it has been clearly depicted that the problem or the effect we are talking about during the Work from Home is the reduction of efficiency which is due to the major categories of the Causes which are as follows:

1. Behavioural Aspect
2. Environmental Aspect
3. Materials and Machine Requisites
4. Measurement Aspects

### BEHAVIOURAL ASPECT:

This category explains all the factors that are related to the behavioural aspects of the workforce. These comprise of:

### TIME CONFLICT:

This occurs when there is a tussle between the role obligations (Personal vs Professional) which is because of the time constraints and rigid work schedules. Due to this one may suffer from role overload which occurs at an instance when the total time demanded from both the roles exceeds the time available to the employees.

### ROLE CONFLICT:

Many a times even if employees have time, but the work pattern turns out to be strenuous either physically or psychologically that one is unable to fulfil all the obligations expected.

### GENDER STEREOTYPING:

Managing a full time work at home may be Hercules task for the employees but the extent of propensity of the females is far more than compared to males. In our society, it's the perception that if a working female is at home, it is assumed that she would be doing all the household

chores, would be the one taking care of the kids and all other household obligations would be her responsibilities. This is something which is mostly not found in the case of men. Many men resent from doing these household tasks as they may feel that this may affect their masculinity and they assume that these are the tasks meant for the women, even if the woman is also the breadwinner.

#### **REPLACING THE COMMUTE:**

In case of Working from Home, many scholars have identified that not dressing up for the work and not commuting helps in saving a great lot of time and energy and this may help the employees from the Role Overload. But, few scholars have interpreted this in a different way, stating that the time one spends while commuting is the time an individual receives to transform its role that is from Personal life to Professional and then vice versa.

#### **DISTRACTIONS AND TEMPTATIONS:**

In absence of a close monitoring and supervision system, many employees fall under the prey of distractions and temptations which may greatly affect the productivity.

#### **ENVIRONMENTAL ASPECTS:**

This category explains all the factors that either externally or internally affects the working pattern of the employees

#### **DISCRETE WORK SCHEDULES:**

Even though the employees working away from office may have a rigid time schedule but due to presence of different household obligations, this may greatly affect your continuous work patterns and result in reduction of your efficiency

#### **ISOLATION:**

While working at office, many a times the colleagues or co-workers can provide a great support in achieving once tasks and this is something which lacks during Work from Home strategy. While there are certain categories of personalities whose performances greatly increases in such environment and they really find isolation to be a great performance enhancers.

#### **PRIVACY:**

In many organizations, the employees are involved with many projects and tasks where privacy may be strictly maintained. This turns out to be quite difficult in case of working at home.

#### **GOVERNMENT AND ORGANIZATIONAL POLICIES:**

Both government and organizations may play a vital role in framing several policies required for the functioning of various organizations. But while working from home, it's difficult for the workers to abide by all the rules and regulations formulated.

**WORK BREAKS AND HOUSEHOLD TASKS:**

While working at office, work breaks meant proper breaks where, one could rest their eyes or have a quick chit chat with their colleagues and most of the employees have agreed that this is of great help to them and these breaks have indirectly affected their work focus in a positive way. But at home, breaks means getting involved in household tasks which cannot be considered as a proper resting break for the employees and hence may have negative effect on their work focus.

**MATERIALS AND MACHINE REQUISITES:**

This category explains about the factors that are necessary at the infrastructural level for making the tasks of the employees comfortable

Infrastructural requisites: In order to work comfortably it's essential for the workers to have proper comfortable working layouts and spaces. For this many organizations have actually spent a good lot of money to create an ergonomic working layout. This is something which a particular worker may miss while working at home and in due course may affect one's efficiency.

**NETWORK:**

In order to work from home, network facility is something which is of great need and for which the employees are greatly dependent on the telecommunication companies. But, even after spending good lot of money on getting the best network facilities, still the efficiency which the workers were able to create while working from office is difficult to achieve while working from home.

**MEASUREMENT ASPECTS:**

This category deals with the factors that are related to monitoring and supervision, which again a gruesome task for the authorities of the organization.

**JUSTIFYING WORK OUTCOMES:**

During Work from Office, the efforts and hard work is visible, which is not in case of Work from Home. While working from home, it all depends on the trust of the supervisors on their employees and they can only predict the outcomes through concrete quantifiable outcomes.

**JUSTIFYING WORK HOURS:**

In this case also, it totally depends on the relationship and trust of the employers and the employees as you do not have any concrete face to face supervision to check whether the employees have abided strictly to the working hours or not.

**4. CONCLUSION**

Today, a huge number of individuals around the globe are using the strategy of work from home as their cities are under lockdown to forestall the spread of COVID-19. Creation of virtual workplaces have turned up into the latest trend in the corporate world as it assists the workforces for focusing on conveying time-bound tasks with negligible distractions and with a reasonable work-life balance it leads to better wellness of individuals. Notwithstanding, as indicated by an ongoing report, 20% of telecommuters feel that associating and teaming up with partners is the

greatest challenge one faces while working from dispersed areas. Further, 18% of respondents guarantee, they feel separated while working distantly.

The COVID-19 pandemic has put an exceptional strain on the capacity of associations to keep their workforce connected with during these occasions as they face anxiety and stress given the vulnerability encompassing the circumstance.

Firms are developing and are coming up with new activities meant for employee engagement as additionally making sense of approaches to gauge their commitment viability. From facilitating virtual espresso meetings to group snacks, administrators are utilizing a few methods to associate with their colleagues they not, at this point meet face to face each day.

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## **A SYSTEM FOR TEACHING FUTURE PRIMARY SCHOOL TEACHERS TO DESIGN TRAINING CLUSTERS**

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### **ABSTRACT**

*The article substantiates the urgency of the problem of preparing future primary school teachers for organizing the design of educational clusters. The role of the educational cluster in the innovative development of the region is shown. The need for the development of regional educational clusters as an important competitive advantage of the modern economy is proved. The issues affecting the efficiency of educational clusters in compliance with the requirements of professional standards are considered. The priority directions of increasing the efficiency of educational clusters are highlighted.*

**KEYWORDS:** *Preparation; Preparation Of Future Teachers; Activity; Extracurricular Activities; Primary Education; Project; Project Activities; Designing Educational Clusters.*

### **INTRODUCTION**

Modern economic conditions have determined the need for a critical assessment of the compliance of the vocational education system with the requirements of regional and international labor markets. The traditional model of educational programs was mainly focused on general issues and economic processes that existed in a particular industry. Many professional educational institutions centrally trained personnel exclusively for a specific sector of the national economy. The emergence of new realities in the educational sphere, such as the abolition of compulsory employment of graduates or the reorganization of rigid vertical structures, led to a number of contradictions between regional structures and individual components of the vocational education system.

Practice has shown that these contradictions can be resolved when forming regional educational clusters. An educational cluster is a collection of interconnected vocational education institutions



united by industry based on partnerships with regional enterprises of the chosen industry. In the broad sense of the word, it is a system of training, peer learning and self-learning tools in the innovation chain "science - technology - business", based mainly on horizontal links within the chain [4]. The development of regional educational clusters is an important competitive advantage of the modern economy, which provides a real synergistic effect.

The educational cluster helps to solve the problem of uniting, as a rule, a territorial zone, fundamental scientific and scientific-practical developments, educational projects, new technologies and methods, design and production of intellectual products. In this case, the educational cluster becomes very attractive for employers who determine for themselves the areas of priority investments, since it appears to them as a producer of practice-oriented knowledge. One of the main tasks of the university in this case is the production of an innovative product. Therefore, research universities actively participate in the formation of a specialist, in accordance with the needs and development prospects of their regions. Educational clusters make it possible to activate the creative potential of students, both in scientific and innovative activities. All of the above contributes to a change in the qualities of the innovative economy as a system: flexibility, dynamism, variability, adaptability, stability and predictability, continuity, integrity [1].

The wide interest in this topic is also explained by the numerous positive experience of clustering the regional economy of the developed countries of the world, which in practice have proven the effectiveness of using network structures to increase the competitiveness of the economy of both the country as a whole and its individual regions. An analysis of foreign experience in clustering the regional economy shows that the policy of cluster formation is carried out over a long period. For example, in Denmark already in 1992, 40% of all firms in the country, which provided 60% of all exports, participated in clusters. The main motives for creating modern economic clusters are the desire to raise the level of regional economies, develop high-tech industries, increase the economic activity of depressed regions and organize the training of highly qualified specialists [3]. All these motives, to one degree or another, can also be applied to educational clusters.

Due to the exceptional relevance of the topic under consideration, it is necessary to consider some issues that affect the efficiency of educational clusters.

The first area of activity is associated with the relative novelty of this phenomenon in Russian reality. The main characteristic feature of the activity of the educational cluster is its orientation towards the constant development of an innovative orientation and the quality of scientific and educational activities. The introduction of cluster education in the process of training specialists requires the development of new pedagogical, organizational, technological and economic conditions for the implementation of professional educational programs.

Speaking about the pedagogical conditions for the implementation of educational programs, the primary task is to train the teaching staff capable of producing innovative goods. For this, it is advisable to develop and implement new additional educational programs for advanced training and professional retraining, developed on the basis of professional standards with the obligatory involvement of practitioners who are well aware of the content of this professional activity [5].

To achieve this goal, it is necessary to radically change the existing system of advanced training of the teaching staff of most educational institutions, moving away from unified additional

professional educational programs in general pedagogical or industry-wide areas, focusing on programs that correspond to the profile of the teaching activity of teachers. This becomes not only a wish, but also a necessity if we turn to the professional standard "Teacher of vocational training, vocational education and additional vocational education", which in the near future will have to be applied by employers in the formation of personnel policy and in personnel management, in the organization of training and certification of workers, the conclusion of employment contracts, the development of job descriptions and the establishment of remuneration systems [6].

In accordance with this professional standard, the requirements for the education and training of an assistant, teacher, senior teacher and associate professor are higher education (specialty and higher), the focus (profile) of which, as a rule, corresponds to the taught curriculum, discipline (module). If the profile of education does not match, the employee needs to have additional professional education based on higher education - professional retraining, the focus (profile) of which, as a rule, corresponds to the taught course, discipline (module). The professional standard also recommends training in additional professional programs in the profile of pedagogical activity at least once every three years.

Organizational issues are primarily related to the organization of the educational process in such a way as to make learning practice-oriented.

A review of publications and information and analytical materials on the topic under consideration showed that at the moment there is a fairly large number of works devoted to the problem of both clusters in general and educational clusters in particular. Despite a sufficient number of theoretical developments containing the patterns and principles of the development of educational clusters in modern conditions, and practical reviews devoted to highlighting the experience of the development of innovative educational clusters in different regions, the question of the methodology for testing the effectiveness of the formation of a competent graduate of an educational cluster has not been properly developed.

To confirm the relevance of the existence and development of educational clusters, such an experimental test is needed not only in individual clusters, but also in comparison with the effectiveness of forming a competitive graduate of a classical university.

The next important question is dictated by the fact that the effectiveness of educational clusters is possible only if there is a strong social partnership, and this is possible if certain conditions are met.

Firstly, within the framework of one cluster, it is necessary to create a successive subordination of all levels of education in one industry. In modern conditions of integration of educational institutions, there is a long overdue need for the development and implementation of mutually agreed educational programs. Multilevel professional education should be implemented by the participants of the educational cluster, which ensure continuity, interconnection of different levels of education, as well as organizational and subject unity. A number of authors indicate the principles on which multilevel professional education should be based - continuity, openness, completeness and integrity [2]. The continuity of educational programs at different levels allows you to optimally shorten the training period, thereby ensuring the right of a student or listener to study according to an individual curriculum of accelerated learning, within the studied educational program in accordance with Article 34 of the Law on Education. Compliance with

this condition also helps to minimize the adaptation time of the student during the transition from one level of education to another, as well as the graduate in the workplace. Based on the research of psychologists, the minimum period of adaptation of a young specialist to a new workplace, sufficient for an employee to be capable of both promptly solving standard tasks and participating in the adoption of strategic tasks, is 6-7 months. Compliance with the continuity within the educational cluster will reduce this period to 3-4 months.

Secondly, the educational programs of the participants of the educational cluster must be developed strictly in accordance with the requirements of professional standards. At the same time, programs of different levels of education should be coordinated in their structure and agreed in content.

Third, the principle of corporatism in the interaction of enterprises and teams of educational clusters. Compliance with this principle will avoid the repetition of the content of read disciplines. According to research data, in the implementation of certain basic educational programs of full-time education and programs of additional professional education, the average percentage of conjugation of these programs reaches 83% [8]. The time that is freed up due to the observance of the principle of corporatism is proposed to be spent on filling gaps in the education of students and (or) on better training of future personnel for a specific industry, by introducing courses developed jointly with potential employers.

In accordance with the above and in order to increase the efficiency of educational clusters as a resource for innovative development of the region, it is now necessary to highlight priority areas of development, such as: development of a methodology for assessing the effectiveness of educational clusters; ensuring the effective organization of the environment of the educational cluster by creating conditions that will ensure healthy competition of cluster members not only with other educational clusters, but also with each other; providing conditions for the sustainable development of existing cluster education initiatives and stimulating the emergence of new initiatives; formation of a system of training and retraining of qualified teaching staff for regional educational clusters; stimulating the attraction of businesses to co-finance innovative educational projects; development of public-private partnerships with the aim of more intensive involvement of private business in the process of choosing directions for educational, innovative and scientific activities of educational clusters; improvement of legal regulation in the field of cluster education.

At the moment, it is indisputable that in the modern conditions of globalization, those regions that maximally show their innovative activity have a competitive advantage [7]. A regional educational cluster can play a significant role in regional innovative development. A properly built model of an educational cluster allows us to take into account the constantly changing needs of the regional labor market and creates conditions for the training of a competitive and competent specialist. This is achieved due to the independence of educational clusters in the choice of professional educational programs and the implementation of cross-cutting curricula that cover the main areas of training for a particular region.

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## THE IMPORTANCE OF RELATIONSHIPS IN STABILIZING A HEALTHY SPIRITUAL ENVIRONMENT IN THE FAMILY

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### ABSTRACT

*Article shows that the role of the family in the child's life immeasurably high in importance. All his life must pass in the family. A child living in a family going through a whole range of emotions and relationships in it. This leaves a mark on his soul. The family is responsible not only for laying the foundation of the so-called human building, but also until its last brick is laid. The formation and upbringing of a full-fledged citizen of society is an important task of the modern family. The development of intelligence and creativity, cognitive forces and primary work experience, moral and aesthetic principles, emotional culture and physical health of children - all this depends on the family, on the parents, and all this is the main goal of family education.*

**KEYWORDS:** *Family; Child; Education; Development; Personality; Love; Stability.*

### INTRODUCTION

The upbringing of a harmoniously developed generation is one of the most pressing issues for society at the level of public policy. The full development of the child can be achieved by maintaining his health in all respects, both mental and physical. The concept of mental health is important for educators and psychologists, as it reflects the emotional and cognitive health of the child, the development of character and personality, the neuropsychological state of the child. But sometimes the emergence of bad habits in the behavior of children as a result of the decline of the educational function of the family and the lack of advocacy work is a matter of concern. Always “problematic”, “uneducated”, “disobedient”, “careless”, “neglected” children are the result of misunderstandings in the family and the unmet needs of the child. The world experience



of providing psychological support to children and their parents shows that if the atmosphere of positive communication in the family is created, then even the most serious problems with children can be solved.

Russian psychologists (L.S. Vygotsky, S.L. Rubinstein, P.Ya. Galperin, L.I. Bojovich, V. S. Mukhina, etc.) consider the spiritual values that a child acquires throughout his childhood as a key aspect of personality development. and see the social experience. In the process of mastering this experience, children not only acquire specific knowledge and skills, but also in the process of developing their abilities, personal formation takes place. The coherence of family relationships is important for the child's personal development.

The mental, physical, moral, aesthetic upbringing of children is based on the family. The family is responsible not only for laying the foundation of the so-called human building, but also until its last brick is laid. The formation and upbringing of a full-fledged citizen of society is an important task of the modern family. Through family upbringing, a person is instilled with a certain political and ideological outlook, moral norms and patterns of behavior, physical qualities. As a result of the process of socialization that takes place in the family, the person assimilates social norms and values, enters social life.

The process of raising children in different categories of the family has its own characteristics. Therefore, it is important to study the important factors of the educational process, to determine the general interrelationships of this process.

At all stages of a child's development in the family, both he and his parents are constantly influenced by various factors of the social environment. Some of them improve the educational functions of the family, while others have a negative impact, creating various problems for the family, its members and the environment.

Knowing these factors will allow children to fully or partially correct the inconveniences in family communication, improve their microenvironment. V.S. Torokhtiy distinguishes the following from the general factors:

The "mindset" in the family. It reflects the socio-psychological aspects of family life and has its own characteristics. First, the system of all values, attitudes, motives, and needs in the family must be geared toward the real possibilities of sustaining his or her life. The way of thinking in the family is largely determined by living conditions. Second, over time, the family has developed the ability to adapt goals, attitudes, value orientations to the realities of external life that affect the psyche of each of its members. Third is the willingness of both spouses to make changes in their careers and lives.

The "communication style" in the family. It reflects the socio-psychological aspects of family life. It also has its own characteristics: First, interpersonal communication, which is of particular importance due to the important personal nature of communication. Second, family communication is the openness of life to the social environment, the expression of the family's own interests. Third is the informality of relationships between family members. Fourth, the development of mechanisms such as empathy, identification, pedagogical reflection. Fifth, the special importance of the relationship with parents.

The relationship of the social environment with the family. These relationships are ambiguous and are often characterized by conflicting, sometimes inadequate, demands and expectations.



Nation, area (place) traditions where the family lives. In a multi-ethnic country like Uzbekistan, family members have to deal with the culture, morals, customs, language, and dialects of different nations and peoples. The family, the traditions of the region (place) where the family lives, are assimilated in the form of ideas about universal values, rules and norms of behavior. Parents and children, while preserving the general qualities of their nation, the culture of their people, also partially assimilate the values of the national social environment.

Family traditions. Norms and rules of behavior are manifested as one of the means of formation of high moral qualities of children, expressing cultural heritage.

The intellectual level of the school, group, class in which the child is studying.

Knowing the general factors mentioned above will help to restore the pedagogical environment of child rearing in the family.

Conditions that arise as a result of the interaction of important factors for upbringing are created by the educator. One of the main tasks of the family is its educational function. That is, it is the parents' responsibility to bring up the child properly. These functions are understood not only as a certain relationship between parents and their children, but also their basis, that is, a certain way of life of the family and the interaction between its members. Parents' ignorance of upbringing, the use of incorrect forms of upbringing complicate family relationships and negatively affect the child's personal development.

One of the wrong forms of family upbringing is conflicting upbringing. At the same time, each member of the family uses different parenting methods for one child, for example, the father is very strict, the mother is very kind, or the parents are very controlful of the child's behavior and take responsibility for his moral upbringing, while the grandmothers caress him. E. Eidemiller, V. Justitsky, N. Lengard studied such unstable methods of upbringing and proved that as a result the child develops negative character traits, such as stubbornness, misjudgment of the pressure of authority figures. While parents imagine the consequences of instability in parenting, they do not know how to prevent it. Often the thought that these are childhood traits reassures them. Most parents take the wrong parenting path even for fear of losing or disappointing their child. Therefore, family upbringing is a very complex process in which parents must be psychologically prepared in advance.

There are a number of peculiarities that distinguish family upbringing from social upbringing. Family upbringing, by its very nature, is based on emotions. If there is not enough emotional harmony in the family, if the family environment is unhealthy, the development of the child in such a family becomes difficult, family upbringing becomes a negative factor in the formation of personality.

Some mistakes made in the relationship with the child during the upbringing process can become serious problems in the child's future life as he or she grows up. Some problems, difficulties, and misunderstandings can also arise as a result of the shallowness of parents' perceptions of child rearing. The fact is that parents often do not take into account the specific characteristics of the child, his abilities, inclinations and desires in the process of upbringing. They often carry out the upbringing of the child in the direction in which they think, adapting it to a certain "pattern" and with a certain outcome in mind. In our view, the task of the parent is to accept the positive and negative aspects of the child, as well as to encourage the child's strengths. In many cases, we

witness a process of parenting that “breaks down and rebuilds” the child. Before our child grows up, we make clear plans about where he will work, live, and so on. The process of upbringing, in turn, becomes a difficult way to adapt the child to this imagination. This creates a number of inconveniences not only for the parent but also for the child. As a result, there is a “chasm” between the parent and the child, the child goes against the instructions of adults, is closer to others than the parent. Another basis of these problems is that parents and children are representatives of different eras. In this sense, the difficulties in the relationship between parents and children can also be called disagreements between representatives of the two eras. We adults often evaluate our children with our views shaped by the spirit of our time.

Often a person's attitude and outlook on life also creates specific problems in the process of upbringing. Changing our attitude to life means rebuilding our methods of upbringing. For example, instead of talking about a child's bad behavior, it is better to give the child a positive direction.

In short, discipline is a set of relationships that are pursued toward a well-intentioned goal. In carrying out this relationship, parents are required to have patience, perseverance, and an objective view of everything.

Upbringing is a process that requires certain knowledge, life experience, skills, sincerity from parents. The development of a child into a mature person in all respects depends on this process of upbringing in many ways.

Parents, family, and childhood have a huge impact on human development. In the family, the first years of a person's life usually pass, which are decisive for the formation, development and formation. Jan Amos Kamensky reasoned: “If parents teach their children to eat, drink, walk, talk, adorn themselves with clothes, then all the more they should take care of imparting wisdom to children.” And in “wisdom” the most important is, firstly, the knowledge of the real world, and secondly, “the ability to carefully and reasonably manage oneself.” The family largely determines the range of his interests and needs, views and value orientations. Moral and social qualities are laid in the family. The future of the child depends on the educational influence of the family, on what qualities will be developed and formed.

The goal and motive of raising a child is a happy, fulfilling, creative, useful life for this child. [2] The task of family education is the formation of such qualities and personality traits that will help to adequately overcome the difficulties and obstacles encountered on the path of life. After all, life is full of surprises. The development of intelligence and creativity, cognitive forces and primary work experience, moral and aesthetic principles, emotional culture and physical health of children - all this depends on the family, on the parents, and all this is the main goal of family education.

Everyone has a certain pedagogical experience, since the experience acquired from childhood from their parents and grandparents is transferred to the upbringing of their own children. All the most important processes of primary education take place in the family - it all starts from early childhood. According to Z. Freud and A. Freud, the mother acts for the child, on the one hand, as the first and most important source of pleasure, as the first object of libido, and on the other, as the first legislator and “controller”.

Currently, there are many studies that analyze various aspects of the influence of the family on the child. Many authors identify as the leading factor influencing the development of the child's personality, intrafamily relations, any serious deviation from the norm of which means the inferiority, and often the crisis of the given family, its educational capabilities. V. Ya. Titarenko writes that internal family relations have unique characteristics that make family education the most adequate form of education. They play a special role at an early age, as they act in the form of interpersonal relationships that take place in the process of direct communication.

The theory of classical psychoanalysis made an enormous contribution to the development of ideas about the specifics of the relationship between children and parents. As you know, psychoanalysis was the first theory in which the relationship between the child and the parent was considered as the main factor in child development.

Family education begins, first of all, with love for the child. Pedagogically appropriate parental love is love for a child in the name of his future, as opposed to love for the sake of satisfying his own momentary parental feelings. It is very important for a child that he grows and even "blooms" in an atmosphere of benevolence and kindness. Upbringing should be an inspiration, a child should be inspired by recognition, sympathy and empathy, sympathy, a smile, admiration and encouragement, approval and praise [1]. "Difficult" children are the result of family traumas: conflicts in the family, lack of parental love, parental cruelty, and inconsistency in upbringing. Children often learn not only positive, but also negative behavior patterns of parents, if the elders in the family call for honesty, and they themselves lie, for restraint, and they themselves are hot-tempered and aggressive, then the child will have to make a choice, and in these conditions he will always protest against requirements to behave in an exemplary manner, if the parents themselves do not [4].

Observations from the personal experience of a primary school teacher show that a child in a dysfunctional family environment reduces academic performance, becomes irritable, conflicted, and confused. His self-esteem decreases, he becomes emotionally unstable.

The peculiarities of the child's interaction with the parents, the degree of their responsiveness, the presence of emotional ties and attachment relationships have an impact throughout the entire period of childhood, and in later life, are their own about a different standard of building his relationships with other people. Therefore, it is so important that every child has a father and mother.

But if there is only one parent in the family? What are the socio-psychological consequences of the educational influence of such a family on the formation of the child's personality? As a rule, there are no fathers in single-parent families. The lack of male influence in single-parent families is manifested in the form: violations of the development of the intellectual sphere (the analytical and spatial abilities of the child suffer due to the development of verbal); insufficiently clear implementation of the process of gender identification of boys and girls; difficulties in teaching adolescents to communicate with members of the opposite sex; the formation of excessive, pathological attachment to the mother.

For the full development of a child's intellect, it is very important that both types of thinking, both male and female, meet in his environment starting from early childhood. The absence of a father in the family, whatever it may be associated with, has a negative effect on the development of intellectual abilities, both boys and girls.

The family is also a factor in upbringing because it is the organizer of various types of activities for children. From birth, a child, unlike many representatives of the animal world, does not possess the skills that will ensure his independent life. His interaction with the world is organized by his parents and other family members. This has a great pedagogical meaning, because even a child who is lucky enough to be born in a favorable environment will not be able to fully develop if he is limited or deprived of active interaction with it. The fact is that by itself he does not master the means of mastering, assimilating and appropriating those cultural achievements with which he is surrounded. In the family, the child begins to familiarize himself with various types of activities: cognitive, subject, play, work, educational, and also communication activities. Initially, adults work together with the child, stimulating and reinforcing his activity. But as the child masters individual actions, it becomes possible to organize his activity as jointly shared with the adult.

The upbringing process in the family has no boundaries, beginning or end. Parents for children are an ideal of life, not protected by anything from the child's gaze. In the family, the efforts of all participants in the educational process are coordinated: schools, teachers, friends. The family creates for the child the model of life in which he is included. There are many good families who are aware of this high parental mission. The influence of parents on their own children should ensure their physical perfection and moral purity. Each child involuntarily and unconsciously repeats his parents, imitates fathers and mothers, grandmothers and grandfathers. It is children who carry the charge of the social environment in which the family lives [3].

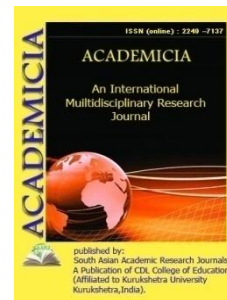
The Law "On Education" has put in the first place such a dual task for the family and the school, as the development of the child's personality, the preservation and strengthening of his physical and moral health. This problem should be solved daily, hourly, every minute. Therefore, it is very important to convince parents that family upbringing is not morality and notations, but the whole way of life of parents' thoughts, it is constant communication with children of the swarm, provided that universal human morality, rules of behavior and communication are observed [5].

Thus, we can conclude that in the process of upbringing and development of the child's personality, the family plays the leading role. What the child will be like, happy or not, depends on the parents.

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## THE ROLE OF NATIONAL AND SPIRITUAL VALUES IN THE PROCESS OF EDUCATION OF YOUTH

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### ABSTRACT

*This article is devoted to the specifics of the formation of national, spiritual and religious values, and provides information on the importance of national and universal values in the process of educating young people. An established scientific fact can be considered that the cultural values of religion, which determined the features of the upbringing and education of the younger generations, lie at the source of the culture of any nation. In this regard, the views of great thinkers on improving the efficiency of the educational process, the views on the education of the perfect man and spiritual-enlightenment, educational-moral, religious education are widely expressed in his works from the scientific-artistic, pedagogical-psychological point of view.*

**KEYWORDS:** Family, Child, Education, National, Spiritual, Tradition, Value, Respect, Universal, Community.

### INTRODUCTION

Today, the ongoing reforms in the field of education in our country create ample opportunities for young people to get an education, learn a language and choose their future profession, as well as become mature professionals. It is important that we harmonize our spiritual, religious values and national traditions in the process of educating our youth.

Our national values, spiritual and enlightenment culture, science, as well as pedagogical science, which have reached us, began to develop again thanks to independence. It is known from the history of social and cultural life that the role and importance of folk pedagogy in the development of spiritual, enlightened and harmoniously developed youth in education was great. Formed and developed over thousands of years, folk pedagogy has been the basis of the history of national pedagogy. [2]



Resolution of the Council of the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan No. 484-II of May 30, 2012 "Approved by the Resolution of the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan No. 453-II of March 5, 2012, in addition to the main activities of the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan for 2012 on measures to increase efficiency" sets tasks to increase the effectiveness of spiritual and educational work to educate young people in the spirit of national and universal values.[1]

National values are a set of spiritual ideals of representatives of certain ethnic communities, which reflect their historical originality. They act as social and normative-cultural axioms for the behavior of people of the same ethnicity [6].

Hence, the most important role in the upbringing of the younger generations is played by values, which, being socio-historical in nature, are a means of introducing an individual to a family, thereby making it possible to overcome the temporality of individual existence. The value-semantic content is the most important moment in the formation of the "choice of a fulcrum", that is, worldview guidelines.

In the pedagogical literature of the 1990s. as such a fulcrum was proposed self-determination of the individual exclusively around universal human values; opinions were expressed, according to which there is no reason to delve into the study of traditional spiritual values, it is enough to rely on the so-called universal. This requires clarification of the scientific position of this study.

General human values, the significance of which can neither be diminished nor exaggerated, can only set a context, which, in turn, must be filled with a certain content arising from the dialectic of the relationship between the universal and the national in education.

In terms of this study, it is important to pay attention to the importance in the pedagogical process of not so much universal human values as traditional national values. An established scientific fact can be considered that the cultural values of religion, which determined the features of the upbringing and education of the younger generations, lie at the source of the culture of any nation. These values were an important component of the national culture, which played a primary role as a regulator of public morality. It should be recognized that modern pedagogical education does not sufficiently take into account the factor of changing the religious situation in the country as a whole, associated with the intensification of the activity of traditional spiritual institutions, which are represented by world religions - Christianity, Islam and Buddhism, firstly, as well as changes in the situation in school classes, where at the desks sit children who identify themselves with one or another confession, and secondly. Each of these confessions, in accordance with its traditional culture, has a powerful arsenal of influence on the processes of education, and this must be known and taken into account.

In a crisis that has engulfed all spheres of life, when society is in a state of impulsive and turbulent ideological fermentation, the idea of turning to the field of spiritual culture, the core of which is traditional spiritual values, is increasingly being put forward at the forefront of not only pedagogical but also social life. This sets the situation for the need to refer specifically to traditional values, due to which the common human values will be filled with a deeper and more specific content, which causes an increase in their role and significance in education.

The essential characteristics of traditional spiritual values include: “firstly, primordial - initially accepted values that have become a historical choice, shaped the culture and traditions of the ethnos as a whole; secondly, values of a culture-forming nature, which for a long time have an influence on the development of the state, people, and culture; thirdly, the values that formed the basis of the people's daily lifestyle, entered their language, customs, became the archetypes of their worldview; fourthly, original values that make the national culture different from the cultures of other countries and peoples ”[8].

Basic national values (family, labor, religion, nature, state, art, etc.) are revealed and deepened in the system of moral ideas of traditional confessions about the spiritual world of a person, patriotism, native land, justice, mercy, solidarity, honor, dignity, freedom, trust in people, state institutions, tolerance, formed on the basis of interfaith dialogue.

Thus, modern education is faced with the task of forming a system of values that is based on the historical continuity of generations, preserves and develops the traditions of the state. The relevance of the appeal to the cultural meanings of traditional spiritual values is evidenced by the fact that over the past decade, formational transformations and democratization of all spheres of life have led to the growth of national, ethnocultural and religious identity. The understanding is affirmed that “religious values are an important component of national culture, they play an essential role as a regulator of public morality” [9]. Proceeding from the essential understanding of religion as a certain system of ideological views [10], the point of view is recognized that it serves as a source of cultural and historical development, since it lies at the basis of the core of any national culture.

At the same time, it must be emphasized that the use of traditional spiritual values, including for the formation of trust and consent among young people, requires a correct attitude: the emphasis should be placed not on religious dogma, but on cultural and worldview meanings and values.

In the process of educating students in general secondary schools in our country, it is necessary to strengthen the educational activities of students, to develop the views of our thinkers on history, universal values, to teach respect for our national values in the family, to study our national customs and traditions. Not only in educational institutions, but also in family education, it is necessary to inculcate in the minds of young people national values and traditions, religious education, to educate young people in the spirit of harmony of national and universal values. In this regard, the views of great thinkers on improving the efficiency of the educational process, the views on the education of the perfect man and spiritual-enlightenment, educational-moral, religious education are widely expressed in his works from the scientific-artistic, pedagogical-psychological point of view.

The scientific and philosophical foundations of spiritual and cultural values are also reflected in the works of great scholars. It is not only the importance of education in the family and what to pay attention to in the upbringing of a child, but also the spiritual, moral and religious upbringing of young people. , but also influences the composition of good or bad aspects of his behavior, so that in every family parents are very careful in their upbringing of their children.

To do this, to create an aesthetically rich worldview in young people, to form in them a high spirituality, culture and creative thinking, to integrate with national history, folk traditions and customs, to preserve and enrich national culture, to consider education as an important factor of national development. The interdependence of this process is aimed at the formation of a fully

developed person, educational and scientific and cultural knowledge, spiritual and moral qualities based on national and universal values, work skills, creative thinking and conscious attitude to the environment and career choice. it is necessary to use effective forms and methods of moral education and enlightenment, to ensure the fight against various information threats, to form in students a rich aesthetic worldview, to teach them to form high spirituality, culture and creative thinking.

In conclusion, the works of great scholars are an invaluable cultural and educational heritage, a way to educate young people as perfect human beings, devotion to the Motherland, love for family, respect for the nation, faith, morality and self-awareness. Therefore, it is necessary to teach the younger generation to respect national and universal values in the comprehensive development of the family, based on the formation of a healthy environment in families and the correct organization of children's relationships in families.

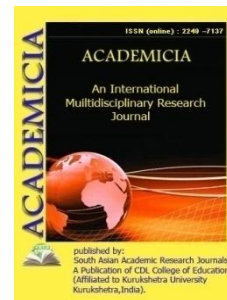
The spirit of national and universal values, moral and educational work carried out to improve the efficiency of the youth organization of leisure time in national history and cultural heritage, as well as young readers and parents with museums, theaters, cultural and recreational activities, to direct the formation of spiritual culture too plays an important role.

Training students and young people in the process of self-education, self-development, spiritual maturity, patriotism, strive to improve their respect for the values, legal knowledge, parents and all the partners (self-governing bodies (local), non-governmental organizations, human rights - law enforcement agencies, secondary special, vocational education institutions). To this end, we need to improve the cooperation of educational institutions with parents and the community, jointly organize national values, traditions and national holidays, and teach young people to respect national values.

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## METHODS AND TECHNIQUES OF DEVELOPING COGNITIVE ACTIVITIES OF PRIMARY SCHOOL PUPILS

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### ABSTRACT

*The article analyzes the opportunities to develop the process of acquiring knowledge of pupils in primary education, making foundations for the further stages of education and the role of pupils as the main subject of educational process. Elementary students will not have mastered the methods of activity needed to interpret facts and events. Therefore, they make assumptions that provide a solution to a particular problematic situation. The task of the game in the learning process is to give students emotional uplift in the restoration of acquired knowledge. Games have a strong effect on students' mood by making it easier for them to master the learning materials.*

**KEYWORDS:** *Primary Education, The Process Of Student's Cognition, Pedagogical Technologies, Subject, The Process Of Education, The Opportunities Of Knowledge Academic Situation, Didaktik Approach, Psychological Approach, Psychological And Pedagogical Peculiarities.*

### INTRODUCTION

The system of continuing education on "Priorities for the development of the social sphere" of the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, provided by the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No PF-4947 further improvement, increasing the capacity of quality educational services, highly qualified personnel in line<sup>1</sup> with modern needs of the labor market. The continuation of the training policy is of particular importance.

Therefore, in nowadays education system of Uzbekistan "Concept of primary education", the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated 04.06.2017 No 187

"On approval of state educational standards of general secondary and secondary special, vocational education" and curricula for primary education and special attention is paid to expanding the opportunities for the elaboration of students' cognitive activities in educational-methodical complexes.

The intensity level of student cognitive activity is influenced by the methods and techniques of teacher's activity. At the same time, this degree is also an indicator of the teacher's pedagogical skills. Active teaching methods include methods that accelerate the growth of students' cognitive activities. These methods, in turn, encourage students to acquire knowledge with aspiration.

In pedagogical procedure, there is experience that based on the source of knowledge in classifying teaching methods. These include:

- The method of presenting knowledge in words; story, lecture, conversation, reading, teacher's statement, etc .;
- Demonstration teaching method; demonstration in a natural way, through slides, through other visual aids and experiences;
- Practical methods; practical work and preliminary laboratory work.

Each of these techniques can be very active and relatively active.

The test assignments are used individually and for the whole class. In the age of modernizations, the use of test assignments is recognized as an effective way to determine students' mastery and learning opportunities. However, there are a number of drawbacks associated with the use of tests. Because students sometimes try to answer questions roughly. On the other hand, when using tests to determine students' mastery and cognitive abilities, their oral and written speaking skills remain undefined.

The problem-solving method is used in learning situations aimed at developing students' cognitive activities. The basis of this method is the creation of problem situations in the learning process. Elementary students will not have mastered the methods of activity needed to interpret facts and events. Therefore, they make assumptions that provide a solution to a particular problematic situation. This method allows students to develop the skills of mental activity, analysis, generalization, comparison, popularization, substantiation of cause-and-effect relationships.

The problem-based approach incorporates logical thinking operations. Because such operations are important to find a complete solution to the problems posed. At the same time, this method includes:

- ask problematic questions;
- create a problematic situation based on the ideas expressed by the teacher;
- to create a problematic situation on the basis of contradictory views expressed in the context of a particular question;
- Demonstration of experiences and information that help to create a problematic situation;
- solving cognitive tasks, etc.



In the process of using this method, the teacher's role is to create a problem situation in the learning process and to manage students' learning activities.

In the process of using the method of solving logical and computational tasks independently, all students solve logical and computational tasks based on the given tasks in a sample or creative way. However, complex, creative assignments are always solved by strong students. Sample-based reproductive tasks are solved by students who are idle. The students themselves do not pay special attention to this. Each student receives an assignment from the teacher according to their abilities and abilities. Under such conditions, students' interest in the learning process does not decrease.

Demonstrative methods are partly exploratory in nature. In using this method, the teacher guides the students in the classroom. As a result of organizing students' work in this way, they complete some of the assignments as they find themselves independently. In such an environment, teachers' experiences are demonstrated until they explain the new material. Students, on the other hand, solve problem-solving tasks through observation and discussion.

Practical methods are also partly exploratory and demonstrative in nature. In such a situation, students solve problematic tasks and acquire knowledge in part through independent research. They also learn new information by discussing their experiences in detail. Prior to independent practical work, students will not have an idea of the expected outcomes if they are aware of the goal.

In addition, oral conversation and oral narration methods are used in the progress of students' cognitive activities. In the procedure of using this method, a plan is developed to present the training materials in a certain sequence. In this proceeding, clear evidence is selected, compared, and information in this area is generalized. It also uses methods to manage students' learning activities. In particular, it has the character of accelerating students' aspirations and learning activities at the stage of perception of learning materials and arousing their interest. They are:

- a) Method of receiving news. The content of educational materials combines interesting information, facts, historical data, social experiences of the Uzbek people, spiritual and moral concepts;
- b) Meaning loading method. Based on this approach, there is an opportunity to arouse students' interest by revealing the meaning of words;
- c) The method of enthusiasm. Ensuring enthusiasm and expansion in students' cognitive activities in order to ensure the study of processes and events;
- d) Method of significance. To teach educational materials to students, explaining their socio-economic, spiritual and moral significance.

Methods of accelerating students' learning activities at the stage of mastering the studied materials include:

- a) Heuristic method. Students are asked difficult questions, through which learners are brought closer to the answers; discusses controversial issues and develops students' ability to substantiate and justify their opinions;

b) Research method. Based on the observations made, the analysis and experience of the literature, students form their own conclusions based on the solution of cognitive tasks.

At the stage of retrieving acquired knowledge, the method of naturalization is included in the methods of developing students' cognitive activities. In this course, learning tasks are performed by students using natural materials and collections.

Different criteria and indicators can be used to assess students' learning activities in learning situations. In order for students to have a high level of cognitive activity in learning situations, it is necessary to:

- 1) Teachers objectively evaluate the results of students' cognitive activities with a comprehensive diagnosis.
- 2) Teachers distribute cognitive tasks to students in accordance with pedagogical rules.
- 3) Assessment of the cognitive activity of the group of students and each student.
- 4) give students homework of a creative nature, popularizing the purpose of the educational operation.

In the procedure, students can become quietly, imperceptibly active. Students' cognitive activities can also be developed during extracurricular activities.

Any learning situation has a complex didactic character. In this process, first of all, the teacher and the student act in the framework of subject-subject relations. This approach should primarily focus on the development of students' cognitive activities. The concept of learning situation consists of a set of relationships and situations that make up a learning collaboration, a relationship between a teacher and a student, and a set of actions that lead to a specific solution in the process.

The main elements of the learning situation are:

- The purpose of the learning process;
- Objects of educational influence;
- Subjects of educational influence; these, in turn, are the driving forces of the pedagogical situation. It leads him to pedagogical tasks and their solutions.

Learning situations vary. It is the result of interaction between the teacher and the students. This means that both sides have a role to play in the learning situation.

The learning situation can be seen as a unit that analyzes the learning process. The assessment of learning activities in the learning situation integrates the solution of tasks from beginning to end. Certain subjects of the educational situation may change from the outside. If the teacher sets a new task for the students, or in connection with the internal situation, the subject changes the learning situation. As the assignments change, a new learning environment emerges. Although learning tasks vary, they can be divided into certain types. The type and level of complexity of learning tasks are the basis for classifying learning situations into specific types. Including:

1. According to the level of productivity: active and passive learning situations.
2. In terms of duration: intensive and long-term learning situations.

3. Learning situation participants: students and teachers.

1. Forms of interaction in a learning situation: cooperation is a kind of interaction in a learning situation, in which one person notices the situation of another and changes the negative attitude towards him. Accepts his actions and develops him to successfully solve the tasks set. Partnership demonstrates the ability of partners to care for each other's success through mutual support.

2. The nature of decisions made in the learning situation: a) learning situations require quick decisions, which are associated with the daily pedagogical activities of the teacher. The following can be summarized as follows:

- Identify the goals and objectives of certain actions performed by students, anticipate their consequences;
- Taking into account the peculiarities of the student's personality;
- Choose the most appropriate tools, methods and techniques to achieve the objectives of the learning situation.

Decisions made in such learning situations should not be voluntary, internal, intellectual, emotional. At the same time, students' inclinations, life experiences, memories, and their relationship with material wealth should be harmonized. These principles should be reflected in many ways in solving tasks in the learning situation. Here:

1. Not rushing to pass judgment;
2. Getting rid of preconceived notions;
3. Detailed description of the work done;
4. Express each question in simple terms;
5. Go from simple to complex in solving tasks.

Learning situations can be formulated in the following forms. They have a variety of appearances. The formation of a learning situation is in many ways directly related to the learning process. It also depends on the teacher how the learning situation is organized. Such learning situations include:

- ☐ Learning situations that guide students;
- ☐ Choice-based learning situations;
- ☐ Learning situations that ensure student success;
- ☐ Conflicting learning situations;
- ☐ Problem-based learning situations, learning situations aimed at solving problem-based learning tasks;
- ☐ Learning situations related to criticism and selfcriticism;
- ☐ Support and mutual aid training situations;
- ☐ Selfassessment learning situations;

- ☐ Communication situation;
- ☐ Accelerated learning and communication learning situation;
- ☐ Competitive and competitive learning situation;
- ☐ Gamebased learning situations;
- ☐ Responsible decision-making learning situation;
- ☐ The situation of learning new ways of working.

We discuss below some of the learning situations, their content, and their formation.

Problem situations in the learning process create an environment in which students can set learning tasks. In this environment, the knowledge acquired by students is mobilized to solve tasks, their thinking activities are accelerated. Such operations are performed by students with the help of a teacher. The main task of the problem learning situation is to ensure that students master the learning materials in the most complex conditions, and their mental capacity is involved in the state of activity. The problem situation can include the following:

- ☐ Questions, hypotheses, problems as unproven events;
- ☐ Tasks substantiating the theoretical state of ideas;
- ☐ Tasks to create diagrams of the studied events;
- ☐ Like assignments to find conflicts and seek solutions to them.

Learning situations of an instructive nature allow for the creative mastery of learning materials and the free reinstatement of knowledge. At the same time, the effect of the development of cognitive activity is reflected in the development of students' ability to distinguish the essence of events at a high level. Their ability to study the opinions of their classmates, to analyze the expected results together, to justify events, to put forward their hypotheses, to find solutions is reflected. At the same time, the ability of students to overcome difficulties with determination is also included.

The play situation encourages students to engage in conditional, fun, entertaining activities. Games have a great impact on the formation of knowledge, skills and abilities in students. The task of the game in the learning process is to give students emotional uplift in the restoration of acquired knowledge. Games have a strong effect on students' mood by making it easier for them to master the learning materials. Game-based activities create a variety of emotional experiences among students, stimulate their emotions, deepen their cognitive abilities, stimulate their internal orientation, engage them in the learning process, reduce various pressures, relieve fatigue, and enable them to visualize the amount of work they need to learn. In the learning process, with the help of the game there is an opportunity to model any life situation, relationships between people, events, the state of things.

Game elements can be involved in all forms of education. The educational essence of the game is that it creates a convenient opportunity for students to master complex learning materials in bright, emotionally rich, interesting situations. The developmental effect of games is reflected in the mobilization of students' extraordinary creativity and natural-creative potential.

From an educational point of view, games have the ability to help students overcome internal insecurities, express themselves, recognize themselves, and realize their full potential. The controlling, diagnostic essence of games is that they help the teacher to understand the independence of students, to determine their perceptions, imagination, dreams, desires, creative abilities, levels of activity, readiness for interaction, ability to feel in a team.

Thus, we try to analyze another type of learning situation that serves to develop students' cognitive activities. It is a state of striving for success. The only force that serves to overcome difficulties is the desire to read, that is, the desire to succeed in the learning process. Modeling this situation requires a great deal of knowledge and skill from the teacher. In this process, the situation manifests itself as the sum of the conditions that ensure the success of the students. The success of the students is the result of this situation.

Cognitive activities of students are a unit of emotional perception, theoretical thinking and practical activity. It emerges at every stage of school education and develops steadily. Cognitive activity is strengthened and expanded in students' social interactions and in all types of learning activities. In addition, the performance of specific learning tasks in learning situations also plays an important role in the elaboration of students' learning activities. However, it is only in the learning procedure that students' cognitive activity is clearly shaped. Because the learning activities of students serve as the basis for the formation and development of cognitive activities.

One of the important tasks of a teacher is to teach elementary school students to perform every aspect of cognitive activity. On this basis, the teacher should develop students' skills of planning and rational organization of their activities. The progress of cognitive activities will depend to some extent on how well students master different aspects of different activities and how well they can use them to acquire new knowledge. As a result, students' learning interests and needs develop holistically.

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## THE ROLE OF NATIONAL VALUES IN ENSURING THE STABILITY OF MARRIAGE AND FAMILY RELATIONS IN MODERN UZBEK FAMILIES

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### ABSTRACT

*The purpose of this article is to determine the features of the influence of national values in ensuring the stability of marriage and family relations in modern Uzbek families. The article analyzes the evolution of the institutions of family and marriage. The article presents the fundamental provisions from the hadiths about the need to form a family, which say that marriage is an important prescription for Muslims, those who refuse it are not considered true followers of the Prophet Muhammad. In general, Islamic values have had and continue to have a significant impact on strengthening the stability of Uzbek families.*

**KEYWORDS:** Marriage, Family, Family Structure, Strengthening The Family, Traditions, Customs, Examinations, Young Family.

### INTRODUCTION

The family serves as a social space and a pedagogical factor that ensures the eternity of social life, the continuity of generations, the continuity of upbringing, and influences how the next generation grows up. Man is formed in the family. Family is a source of love, respect, solidarity and kindness. It is these values that every developed society relies on.

As noted by President Sh.M.Mirziyoev, "it should be to further strengthen the foundations of the family, which are sacred to us, to create an atmosphere of peace, harmony and mutual respect in homes, to fill spiritual and educational work with concrete content."

Indeed, honest living, working, raising children in family relationships, which have been recognized for centuries and have risen to the level of religious and moral values, are a source of

social lifestyle development. In Eastern upbringing, the basis for the formation of an individual's worldview begins with the family.

The human child inherits genetically from the parents. He also has a share in the gene pool of his ancestors, of course. Biologists call this heredity. Dilbands, who open their eyes to the world of light, initially enjoy air, breast milk, and water, which are considered to be the highest material values. Then begins the factor of family upbringing, which is one of the important factors that provide the basis for the realization of personal maturity and ensure it.

What is the culture of family relationships? It is the creation of humane and appropriate conditions in the family, the full fulfillment of family responsibilities, the correct formation of family life, ensuring the behavior, worldview, ideology of family members, the continuity of family life. A strong family is the foundation of a strong society. Therefore, the society pays special attention to strengthening families, shaping and improving the individual's cultural outlook in family relations.

We must begin the scientific study of the common cultural worldview of the individual in the family and family relations by expressing his development in accordance with the laws of social development. The development of the family is related to the material production and spiritual life of society. It has been extensively analyzed in the scientific literature that the change in family forms is associated with changes in the spirituality of material production at all historical stages from the time of primitive society.

But the change in the material living conditions of society and the family does not in itself lead to spiritual maturity. When a person who is culturally poor becomes rich, he does not suddenly rise to the level of spiritual maturity. Educators-scientists study the educational aspects of this topic, paying special attention to the role of the family in the upbringing of the individual, highlighting the aspect of family education as part of general education; psychologists approach the family and family relationships from an ethno-psychological perspective. Ethnographers-historians have also studied the impact of family customs, traditions and rituals on the upbringing of young people, focusing on issues related to the origin of the family and the formation of a culture of family relations.

Our philosophers, in revealing the essence of the problem, based on the general anthropological law of the relationship between the individual and society, put forward the theoretical concept that the individual consists of a set of social relations. It is natural to draw another theoretical conclusion from the same concept that the upbringing of children in the family has a social character. Cultural scientists have been analyzing the impact of the culture of family relations on the upbringing of the younger generation.

It should be noted that in the works of Central Asian thinkers and enlighteners Farobi, Beruni, Ibn Sino, Yusuf Khos Hajib, Kaykovus, Devoni, AlisherNavoi, Babur, MunisKhorezmi, Bedil, Behbudi, Abdulla Avloni, QoriNiyazi, Cholpon, Fitrat and others. there are valuable insights into family and family relationships. In many of them, views on the subject have been streamlined and raised to the level of doctrine. In particular, in the works of Abu Ali ibn Sina "Morality", "Family Economy", AlisherNavoi "Hayrat-ulabror" and "Mahbub-ulQulub" special attention was paid to the family and considered it the main place in the development of man.

One of the founders of the Enlightenment movement in the early twentieth century, Fitrat in his work "Family" stated that it is possible to get rid of this stagnation, to reform society by building the family foundation, physical, mental and moral education of the younger generation. "The fate of a nation depends on the condition of the family in which it lives. Erda The stronger the family relationship, the stronger and more orderly the country and the nation." he writes.

The skill of the culture of family relationships also occupies a special place in mystical philosophy. In the sects of Ahmad Yassavi, BahovuddinNaqshband, NajmiddinKubro, who are the great representatives of this philosophy, we see that the role of parent-child relations in the development of children, the attitude of children to parents is emphasized.

The great scholars Al-Bukhari and al-Termizi also paid great attention to this topic in their hadith collections and works. In the hadiths after the Qur'an, the Prophet Muhammad (peace and blessings of Allaah be upon him) said: it is the duty of the child to the parents not to give, not to break their heart, to be polite in conversation, to do what they are told to do in a timely manner.

Issues of legal regulation of family and marriage relations during independence Otahojayev, the historical foundations of the spirituality of Uzbek families, the spiritual psyche, traditions, the problems of raising children from the point of view of the ideology of independence. Safarov, M. Mahmudov analyzes the role of the family in society, family upbringing, the role of family members in the family, national and universal upbringing in the family from a pedagogical point of view. Musurmanova, the essence of the family, the responsibility of parents in the upbringing of children, some national religious traditions related to the duty of childhood. Yusupov, issues related to the preparation of young people for family life. Halmatova analyzed.

The division of family species according to demographic and social structures has its own peculiarities and its influence on the culture of family relations. Most of the families in our country are full families. A complete family is a family consisting of parents and children. This is a typical family trait. Such families, in turn, are divided into patriarchal, nuclear, mesalcan. Another peculiarity of Uzbekistan is that today there is a large patriarchal family farm in Uzbek families. In this case, the economy of 2-3 generations is common, and family property, which is the basis of their economic unity, is in the hands of only the head of the family, and everyone is subject to him. That is why the marriage of relatives and descendants continues. The marriage of close relatives is also included.

When we make a comparative analysis of the characteristics of Eastern and Western families, the peculiarity of European families is explained by the prevalence of free life without marriage, the increase in divorces, the decrease in births. Some Western scholars believe that by completely abolishing marriage, marriage restricts a person's freedom, which is contrary to human nature. Of course, this is wrong and contradicts human progress.

The second characteristic of modern families is their nucleation (Nuclear is derived from the Latin word, which literally means "nucleus". It consists of a couple and children). Today, under the influence of Western civilization, this type of family is on the rise. In such families, conflicting relationships between the mother-in-law and the bride or brides-to-be are prevented because they live separately, and in a way of life they have a more valued, compassionate cultural relationship with each other. On the positive side of this issue, it leads to the formation of an individual's common cultural outlook in family relationships. The bride and groom, living separately from their parents, learn to live independently, to plan the family economy, to raise

children independently. Nuclear families will have the freedom to relax on family matters, make the most of their free time, and so on.

The third characteristic of modern families is the growth of mesalis. ("Mesallians" is a French word meaning families with large differences between the couple's social, cultural and economic positions). "Mesalyans" can be understood, for example, marriages between urban and rural people, intellectuals and workers and peasants, herdsmen and people of different nationalities. The increase in the number of mesalian families is also a genetically positive social phenomenon.

In Eastern upbringing, we parents should pay special attention to sexual education in ensuring family happiness and preparing young people for marriage. The famous philosopher Z. Freud taught that a family is built not only to live together, but also to live a full life, to meet human needs.

In deciding on a comprehensively healthy environment in the family, we can recommend the following social, pedagogical, psychological, spiritual and cultural criteria:

- Achieving a positive attitude of young people to sports, including family sports;
- Achieving the rational organization of life activities and the formation of reproductive culture in children;
- Study and widespread promotion of the unique traditions and values of our people as a key factor in a healthy lifestyle in the family;
- Enhancing the responsibility, capacity, literacy, pedagogical and psychological capacity of parents in the upbringing of children, ensuring the unity of family and social upbringing;
- Upbringing a spiritually and physically mature generation in the family, preparing young people for family life, equipping them with the secrets of modern professions;
- Achieving the formation of a common cultural worldview of children in family relationships.

It is clear from our rich scientific and cultural heritage, ancient customs and traditions that the family is a sacred value for us in any time and place. Therefore, our ancestors understood very well that the stronger the family, which is a social unit based on educational, spiritual-enlightenment, spiritual-moral, economic-legal relations, the more stable the development of society.

Today, our country is focused on building a democratic state governed by the rule of law and civil society. As we set ourselves the task of realizing our long and lasting national interests through a unique model of reform adopted in our country, the effective solution of this issue means, first of all, ensuring the family and its well-being, which is the smallest link in society. The family is a small part of society. The peace and prosperity of a society free from evil and corruption depends, first of all, on the peace of the family. Ensuring peace and happiness in the family will be sustained as its members understand and fulfill their responsibilities. The traditional nature of the family, its role in the system of national, religious and universal moral values, the role of the family environment in the upbringing of a harmoniously developed generation are playing an important role in the development of classical and modern philosophical thinking. Therefore, as a result of a scientific approach to the issue of family,

family relations, its philosophical study, the following can be identified as factors that lead young people to spiritual maturity:

- First, to inculcate in the minds of young people the historical heritage and national values that enrich the spiritual world of young people in strengthening family ties;
- secondly, to develop the ability to understand and fight against the inhuman nature of foreign ideas, which are considered in the West as an example of democracy and are escalating in the world;
- Third, to explain to the younger generation the importance of national, religious and universal values in strengthening the family, related to the duty and responsibility of the family based on single marriage to society;
- Fourth, to promote Islamic principles and their spiritual significance in strengthening family ties among various segments of society, especially the younger generation;
- Fifth, to teach the content of laws and other normative legal acts regulating family relations and supporting families in the legal and political sphere.

In short, in Uzbek families, spiritual perfection is the basis for personal development. The qualities of generosity, hospitality, honesty, courtesy, loyalty, purity, decency inherited from our ancestors are an important aspect of our national mentality. It is expedient to form these qualities in the minds of the younger generation in the educational process, to enrich their psyche with the gems of the people, to pay more attention to national values.

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## REVIEW ON MEASURING TRAINING EFFECTIVENESS, AN INTEGRATED MODEL OF TRAINING EFFECTIVENESS AND SATISFACTION WITH EMPLOYEE DEVELOPMENT INTERVENTIONS

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### ABSTRACT

*The world is changing rapidly, and with businesses required to be more competitive, the need for employees to be on top of their job has increased. Change is the order of the day, working methods and techniques are witnessing a change giving birth to the need for employees to learn continuously. The most innovative form of technology used, regardless of company size was videotapes. The major barriers or obstacles to using more innovative tools (i.e., computer-based) were high costs and short life span of current computer technology. Every organization determines its training needs according to its own environment and observed signals. Performance reports, for example, may indicate that performance is declining (e.g., decrease in production numbers, lower quality, increased number of accidents, increased rejection rates, etc).*

**KEYWORDS:** *Continuously, Interaction, Computer-Based*

### 1. INTRODUCTION

Employee training is not only linked to improved business results but is also a powerful factor in shaping employee attitudes. It creates a motivation for increased discretionary behaviour and a satisfaction with career development that ultimately leads to increased job satisfaction. Jobs with high scope and associated potential development lead to enhanced motivation, job satisfaction and performance. The present study seeks to identify and devise the mechanism on how to measure the potential enablers of a successful training event. The study also formulates a measurement scale to gauge satisfaction with organizations “employee development”

intervention. The study assumes that an increased satisfaction with the employee development is a strong catalyst in creating job satisfaction.

The research undertook employee development as a contingent factor to job satisfaction. Limited attempts have been made to measure satisfaction with training. Schmidt (2004) developed a model in the PhD dissertation whereas Sahinidis and Bouris (2008) used only one item scale to measure training satisfaction. Kauffeld and Lehmann-Willenbrock (2010) based their training evaluation only on items concerning the perceived content validity of the training, implementation of training content, and sales competence, thus limiting the scale to sales oriented trainings. There is certainly a gap in research, calling for the development of an appropriate scale of measurement for evaluation of training satisfaction. The current study proposes an integrated measurement scale to capture the overall training satisfaction and satisfaction with employee development intervention.

**Training** is a process that helps companies and employees cope with the effects of changes in the business world that result from competition, globalization, and technological advancements. The process essentially seeks to improve trainees' skills, knowledge, attitudes, and/or on the job behavior. Brown (1994) indicated that a company seeking continuous improvement could use training managers to facilitate the implementation of total quality management, as they would play the role of change agents. Every organization determines its training needs according to its own environment and observed signals. Performance reports, for example, may indicate that performance is declining (e.g., decrease in production numbers, lower quality, increased number of accidents, increased rejection rates, etc).

A manager may recognize that the workplace is evolving because of job redesign or technological advancements. Some companies administer training programs on the job because of simplicity and lower costs. This usually takes one of two forms: First, a trainee may be assigned to an experienced employee who acts for the trainee as a teacher, mentor, or coach. Second, employees may be allowed to work at different jobs in the company according to established job rotation schedule in order to have good exposure to a variety of tasks. Other companies arrange for their training programs to take place outside the workplace (e.g., training institutes, suppliers of equipment, labs, etc). The common methods used for such off-the job training programs include classroom-based methods, multi-media-based methods, and simulation-based methods. **Classroom-based methods** are usually designed to provide specific technical knowledge and/or problem-solving skills. **The multi-media-based methods** use films, videos, and computers to demonstrate technical skills that are not easily presented by other methods. **Simulation-based methods** provide learning and skills by having the trainees actually performing the work using computer simulated programs, case analysis, experimental exercises, role playing, and group interaction. While determining training needs and generating new training programs for employees is important, yet it is not enough. There is also a need to evaluate the effectiveness of the training efforts in order to rationalize them.

Prior studies (e.g., Kirkpatrick 1994, Bramley and Kitson 1994, Clements and Josiam 1995, and Bedingham 1997) indicated that companies use different levels of analysis to evaluate training effectiveness. Some companies follow a traditional approach that focuses on trainees' attitudes or reactions to a training program (e.g., trainee's opinions about training materials, delivery methods, effectiveness of the trainers, usefulness of the training program, etc). Others extend the

training evaluation to incorporate some measured outcomes of the training programs (e.g., skills learned or knowledge gained, measured changes in trainees' behavior on the job after the training, etc). Still other companies seek to measure the net financial effects of the training programs (or their returns) to the company, as a whole, or to its individual departments. Bramley and Kitson (1994) indicated that measuring the effectiveness of a training program at the reaction level and/or the levels of skills learned or knowledge gained are the most common approaches that companies use. However, Tan, Hall and Boyce (2003) indicated that trainee reactions to training programs tended to be poor predictors of training success.

This review examines the effectiveness of one of the training programs held in the United Arab Emirates (UAE) in 2003 using the first two levels of analysis. It focuses on trainees reactions to the training program (i.e., reactions to the training material and the trainers) and the level of skills and knowledge that trainees gained from the program. It also investigates the roles of trainees effort and their perceptions of the training usefulness, after controlling for the effects of demographic variables, in explaining achieved levels of effectiveness.

### **1.1. Review an integrated model of training effectiveness and satisfaction with employee development interventions**

#### **1.1. Employee training**

The world is changing rapidly, and with businesses required to be more competitive, the need for employees to be on top of their job has increased. Change is the order of the day, working methods and techniques are witnessing a change giving birth to the need for employees to learn continuously. The objective for the organizations is to improve business processes through enhanced learning that stimulates better performance. The intent for any business entity is to create an engaged and committed employee base resulting in better performance of the individuals and business. Training acts as a pathway for learning, learning and development is an important factor in creating a sense of progression and purpose that leads to organizational commitment (Armstrong, 2009). Choo and Bowley (2007) found that training positively impacts productivity, which results in higher level of customer and employee satisfaction thus increasing brand value.

Aligned with the aforementioned researchers findings Michael and Combs (2008) in their study, revealed that training can reduce probability of failure as training effects performance, enlarges the skill base and develops the level of competence, It helps in developing climate for learning which not only aids in training to flourish but also supports self-managed learning practices like coaching and mentoring (Armstrong, 2006). Truelove (2006) asserted that learning comes either by experience or training whereas Sadler-Smith (2006) referred to learning as an "elusive phenomenon" and drew upon learning from various fields whereas training was identified as one of those fields. He referred it to be a very formal, systematic and step wise process, defined as: The systematic acquisition of skills, rules, concepts or attitudes that result in improved performance in another environment. Striking in the above definition is the term "another environment" which actually draws onto the need of providing training, it shows that the current level of skills might not be suitable for the changing environment, as identified by Buckley and Caple (2004) that to survive and prosper in times of change; organisations would need to respond in a timely and flexible way, thus survival and growth would depend on its ability to cope with the change, implying the need for staff to be equipped with new knowledge, skills and attitudes.

**Figure 1 Model of training effectiveness**

**“ Management takes it for granted that employees already know the benefits, this makes the whole learning scheme nebulous. ”**

Garratt (1997) put forth the significance of learning. He postulated rate of learning shall be greater or equal to the rate of change so that one is able to survive, optimize returns or exploit new opportunities:

**Rate of learning = Rate of change = Survival**

Cementing the equation is Simmonds (2003) who also proposed that learning is firmly located in the centre of organisational change. Simmonds (2003) proposed:

**Learning = Action + Reflection**

Reflection is an integral part of learning, its offers individuals, teams and businesses to look back at what happened, identify the weaknesses, strengths and assess how things could have been done in a better way and ultimately leads to necessary changes. Eaglen et al. (2000) in their study at McDonalds identified systematic approach to training as a way to achieve strategic objectives. Training is in direct benefit to the organisation as identified by Burden and Proctor (2000) that a firm's ability to learn faster than its competitors may be its only sustainable competitive advantage. Acton and Golden (2003) compared firms that are committed against firms that are non-committed to training, the results yielded showed that training not only positively impacted job performance but also aided in improving employee ability to manage stress at work. Similarly the study by Lopez et al. (2005) in Spanish companies found organisational learning to be a mediator in high performance human resource and business performance. However Clarke (2004) in his research contradicted the findings and interpreted that there emerged some association between training and business performance, but causality was not established. The present study identifies four different yet interrelated dimensions of training satisfaction. The study proposes that being considerate of the four dimensions would result in a more satisfied employee training.

## **1.2 Satisfaction with training session**

Organizations often fail to communicate what they are trying to accomplish and how the training will benefit each employee. Management takes it for granted that employees already know the benefits, this makes the whole learning scheme nebulous. In most cases, the workforce does not understand the long-term benefits, elements that need to be shared with everyone early in the process. It actually dents the whole process as employees will not be able to do what they are expected to do after the training session. Dawe (2003) specified one of the drivers for a successful training program, he summarized that success in any activity can be thought of in terms of the extent to which an activity achieves its desired objectives. Buckley and Caple (2004) underlines the significance of training objectives, they help speculate the activities one should be able to perform at the end of training whereas Silberman (2006) highlighting the importance of objectives, called them to be the “pillar” of training programs and lack of solid objectives meant a total catastrophe. Apart from this objectives would facilitate in seeking an answer to the question of “Why” do the trainees need to be at the training session.

It could be conclusively proposed that objectives ultimately lend a helpful hand in bringing a motive to the training session. Jolles (2005) insisted that establishing utility of training program would make trainees understand the need to learn, the training program should answer the very basic question of the learner I-e “What’s in it for me”. Silberman (2006) presented the value objectives bring to the training program; they not only help in preventing too much and too little teaching but also help in forming basis for measuring the effectiveness of the training in terms of knowledge, skills and attitudes. It could be claimed that objectives help in fencing the training so that it does not go out of bounds. Wickramasinghe (2006) also claimed objectives are utilized throughout the training effort. They are frequently used to choose the type of training programmes, to provide an overview of what participants are going to learn, to explain to resource persons what is expected after the completion of the program and to validate/evaluate training programs.

## **1.3 Training content satisfaction**

Increasingly heavy amounts are being directed towards the enhancement of employee skills base; however the challenge lies in the fact that work-related knowledge is outdated quickly. Content validity concerns the degree to which trainees feel that training content reflects their job requirements. (Kauffeld and Lehmann-Willenbrock, 2010). This calls for sufficient attention to be put in while devising the contents for the training program. Kauffeld and Lehmann-Willenbrock (2010) study results suggested that incorporating the main knowledge, skills, and abilities needed in a certain job will result in higher content validity of the training while Kirkpatrick (1994) noted learning as the second level of training effectiveness and referred to as the skills and knowledge acquired in training are most important.

## **1.4 Satisfaction with trainer**

The person who is entrusted with the job to convey the training objectives is the trainer, trainer holds centre stage in achieving efficacy with the training program, Gauld and Miller (2004) emphasized that effectiveness of trainers who deliver the training is known to be momentous in the final return on training investment. Hinting on the characteristics of the successful trainer Moss (1993) suggested that trainer needs to plan, be prepared, and show encouragement and empathy to the learners. The role of trainer is changing, from a mere role of providing some



skills, now according to Buckley and Caple (2004) it is of active communicator, pro-active thinker, one who builds onto achieve training objectives with strategic dimension of the organisation holding central importance. Trainer plays an important role in transferring the learning to work. Broad (2000) identified one of the barriers to transfer the training is “poor training design and/or delivery”. Thus a complete trainer is one who has the skills ranging from foundation to administration.

### **1.5 Transfer of learning**

The study also takes into account the perspective of the results of training in the organization. Transfer is insufficiently considered in both practice and academic research. Content validity concerns the degree to which trainees feel that training content reflects their job requirements (Kauffeld and Lehmann-Willenbrock, 2010). Kirkpatrick (1994) at the third level of training effectiveness specified the question of transfer from training to work. Successful accomplishment at this level is represented by trainees’ ability to use the acquired skills and knowledge on the job.

Sofo (2007) reported learning acquired from training sessions is applied and maintained on the job to increase performance and productivity but still only about 10 percent of what is learnt in training is applied on the job (Fitzpatrick, 2001). Even if the knowledge obtained through training is accurate, organizational performance will not improve if dichotomy in implementation exists in the business organization (Tsang, 1997). The study by Seyler et al. (1998) implied that environmental variables (opportunity to use, peer support, supervisor sanctions, and supervisor support) have a broader influence affecting not only post-training behaviour, but motivation to transfer but on the contrary in their study Klink et al. (2001) focused on just one environmental behaviour I-e supervisory behaviour and did not found any convincing evidence for its impact on the transfer of training.

### **1.6 Employee development aspect of job satisfaction**

A UK bakery turned around its business after aligning its training with employee development which resulted in an expansion from two shops in 2002 to 22 shops in 2010 (Pollitt, 2010). Job satisfaction – refers to positive or negative feeling/perception one has about his/her job. Rowden and Conine (2005) called it a subjective perception of work, as satisfying factor for one employee might not act as a satisfying feature for another. Job satisfaction is widely researched topic (Curtis, 2007) because most individuals spend a large part of their life at work, and understanding the factors that contribute to job satisfaction are important in improving the overall well-being of individuals. One human resource function that aids in changing employee behaviour is that off support from employer for personal development, it leads to employees positive responses as being engaged and committed (Maurer and Lippstreu, 2008). Opportunities for employee development determine personnel satisfaction (García-Bernal et al., 2005) resulting in both an improvement in worker productivity as well as a reduction in the cost of hiring and training workers. Likewise Linz (2003) deduced that job satisfaction correlate positively with labour productivity and negatively with labour turnover, both of which influence firm performance. In order for a firm to positively impact its performance it has to take a step that increases employee satisfaction with the job. One such step is identified by Gazioglu and Tansel (2006) who specified employees who received job training were more satisfied than those who had no training opportunities.



Aligned with the aforementioned findings, the value of employee development is further cemented in a study conducted in America and Canada pointed that receiving training that enhanced skills and capability was a key component of what potential candidates looked for in jobs (Community Banker, 2001). The above assertions and findings lead us to propose that organizations failing to provide adequate employee development initiatives will fail to attain optimum level of employee satisfaction and will face turnover issues. Herzberg (1968) proposed training to be a hygiene factor thus training may not be a primary cause of employee satisfaction but on the contrary Rowold (2008) in their empirical study found training was specifically designed to accomplish an explicit goal: enhanced job satisfaction likewise Bedingham (1997) specified training brought changes in on the job behaviour, the benefits of this were established in the study by Eaglen et al. (2000), some of them are improved productivity, employee satisfaction, reduced turnover and willingness to accept strategic and organisational change.

Buckley and Caple (2004) suggested the categories of job satisfaction that can have an impact due to training. One is intrinsic that may come from performing task well or being able to apply the skills learnt, it infuses a sense of being developed and having an increased competence whereas extrinsic job satisfaction comes from extra earning that comes from improved job performance, the ability to perform the task, applying the skills and improved job performance stem from the learning that comes from training. The study of Linz (2003) among Russian workers agreed with the above assertion and maintained that workers reporting high levels of job satisfaction tend to be those who have a high expectation of receiving intrinsic job characteristic, by developing additional skills, learning new things, accomplishing something worthwhile and all this is possible to achieve through training.

Acton and Golden (2003) in their study identified that training of employees does not only positively relates to employee job satisfaction but also contributes in building a negative relation to turnover cementing the assertion is Winterton (2004) who stressed on failure to invest in training and development contributes to higher labour turnover. The researches support the conjecture that offering talented employees training to keep them current on their job functions and allowing them to learn new skills can be utilized to improve satisfaction with the organisation. Coetzer (2006) discovered that employees' perceived lack of incentives to learn posed a challenge in motivating and retaining employees while it threatened satisfaction of employees at work. To meet this challenge Barnett and Bradley (2007) made it imperative on the organisation to support employees in developing their careers which increased not only their job satisfaction but also their career satisfaction, this according to Sadler-Smith (2006) could be done through training as it provides a mean to master the skills employee's needs to advance in the company.

## **2. Review of Measuring Training Effectiveness**

Perdue, Ninemeier, and Woods (2002) assessed perceived relative effectiveness of alternative training methods (in relation to specific objectives) among managers of private clubs. They used an email questionnaire to collect their data from a random sample of 123 private club managers in USA. The results indicate that one-to-one training is considered the most useful overall method and the preferred method for all objectives except interpersonal skill development. The use of videotapes ranked fifth best overall training method. Audio conferencing, paper and pencil methods, program instruction, audio-tapes, computer conferencing, and self-assessment

were considered the least effective training methods. Buch and Bartly (2002) examined the relationship between learning styles and preferences for alternative delivery modes used by most organizations today. Delivery modes included computer-based methods, TV-based methods, print-based methods, audio-based methods, and classroom-based methods.

Learning styles included convergers, accommodators, divergers, and assimilators. The authors used a questionnaire to collect their data from a sample of 165 employees of a large US financial institution. The results support the notion that learning styles should be taken into account when making decisions regarding the use of delivery modes available today for training purposes. It was found that convergers had a strong preference for computer-based delivery while assimilators had a strong preference for print-based delivery. However, there was a strong overall preference for classroom-based delivery regardless of the learning style. Klink and Streumer (2002) examined the effectiveness of on-the-job training and some potential factors that explain effectiveness of two samples drawn from two Dutch companies. The first sample consisted of 36 telephone sales staff who were trained to improve the quality of the telephone sales call, with the underlying objective of increasing sales.

The results indicate higher levels of effectiveness for telephone sales staff training than the counter clerks. Trainees' perceptions of managerial support and experience as sales employee were the main explanatory variables for training effectiveness in the first sample. For the second sample, workplace and trainees' self-efficacy were the main explanatory variables for training effectiveness. Hashim (2001) surveyed 262 training institutes in Malaysia to identify the practices of training providers for evaluating training programs. The results show that training providers use different evaluation methods that include trainees' feedback, observations, interviews, performance analyses, and training reaction forms. However, the most used method was the training reaction forms as clients require them. Bolt, Killough, and Koh (2001) examined the behavior modeling and lecture-based approaches to computer training using a social cognitive theory framework. Their emphasis was on task complexity as an added variable to prior performance, computer self-efficacy, outcome expectations, and performance.

The authors indicated that soft skills such as listening, communication, teamwork and leadership are the least preferred in terms of tangible training gains. Training should only involve tangible, hands-on skills and observable behaviors. Thus, training objectives should focus on skills and competencies. The authors also indicated that for training to be successful, it is imperative that the goals of training be in line with the company's strategic plan. The strategic training plan should identify and detail problems that are currently impeding the company's potential for maximum profitability and should also serve as a reference point for determining success or failure of the training program. The time devoted to a given training program should be determined by how long it takes employees to master the skills that the company deems as important. Leat and Lovell (1997) discussed some of the weaknesses of current training needs analysis.

They cited imprecise training goal setting and failure of the performance appraisal reviews to diagnose needed areas to improve employees' skills in the working environment. The authors indicated that a variance between actual performance and performance objective should uncover training needs. But these needs should not be limited to that level only. Possible improvements at the organizational and task levels should also be evaluated, as part of training needs analysis.

Training expectations should also be developed and detailed after an extensive research into the interrelationship between inner and outer contextual changes and within the organization and individual goals.

The authors also indicated that evaluation of training must be linked to the organization's objectives. Effective training must have a value to the organization and training approaches should match the organizational culture. Mann and Robertson (1996) examined trainees reactions and knowledge gained as measures for effective training. The results indicate that training increased trainees' knowledge. However, positive attitudes do not predict how well people are able to perform actual tasks. Attitudes and reaction measure are not linked to later performance and therefore such measures should be used with caution as ways of evaluating training programs. Hedges and Moss (1996) examined the cost effectiveness of training commercial vehicle drivers. They selected a sample of 80 drivers who went through a specific driver training program and a matched sample from those who did not attend the driver training program. All drivers were from the Parcel force in North England. The parameters investigated were operating costs (in terms of fuel consumption), accident and repair cost, maintenance costs, and driver's attitude.

The results indicate that trained drivers experienced lower stress levels and lower accident rate compared with those drivers who did not attend the training program. On the financial side, the training program resulted in a total saving of about 33,000 British pounds. Harris (1995) surveyed the opinions of a sample of American directors of human resources and training programs about their training methods and the quality of each of these methods. The results indicate that the most used method of training is the classroom method. One-on-one training such as on-the-job training is the method most used by smaller firms. The most innovative form of technology used, regardless of company size was videotapes. The major barriers or obstacles to using more innovative tools (i.e., computer-based) were high costs and short life span of current computer technology. The author concluded that training methods and tools used to train employees were not as effective or efficient as they could be and recommended using computer-based technology and multi-media as training methods as they save time and money.

Bramley and Kitson (1994) discussed four levels of training evaluation. The first is the trainees' reaction to the program. It focuses on assessing what the trainees thought of the training program, usually in the form of a questionnaire. The second level is trainees' learning. It focuses on measuring their gained skills that were specified as training objectives. The third level is the behavioral outcome. It focuses on measuring aspects of job performance, which are related to the training objectives. The fourth level is the organizational results. It focuses on the results of the training program to organizational objectives and other criteria of effectiveness. The authors indicated that evaluation at the third and fourth levels are not well understood because of measurement problems. Defining the criteria by which improvements can be measured will help applying the evaluation levels. Cost benefit analysis, impact analysis, and analysis of organization processes could produce criteria for measuring improvements.

### **3. CONCLUSIONS**

The objective of the study was to formulate a scale for the assessment of training and an important feature of job satisfaction, i.e. employee development. Where previous studies have failed in a provision of a suitable and extensive scale that taken into account all the necessary

enablers of a successful training event the scale developed highlights the potent factors. The study also develops a scale to assess the effect of training initiative on employee development aspect of job satisfaction. As for evaluation of training the study identified four factors to be contingent to an effective training, they were:

1. Satisfaction with the training session.
2. Training content satisfaction.
3. Trainer satisfaction.
4. Transfer of learning.

Examined empirically two levels of measuring training effectiveness using a sample of trainees who attended a training program in 2003. The first level focused on trainees' reactions to the training material and the course instructor as documented in the trainees' evaluation forms. The second level focused on knowledge and skills gained from training as measured by scores on entry and exit tests. Conclusion that the training course was effective. In conclusion, the researcher recommends some avenues for future research. First, training institutions use different training aids and methods (e.g., computers, cases, and simulations), there is a need to address possible effects of such training aids and methods on training effectiveness. Second, the literature indicates that some companies prefer to have on-the-job training while others prefer to send their people to different training sites. Therefore, there is a need to study possible effects of training locations on training effectiveness.

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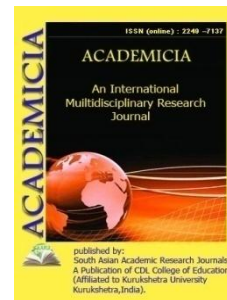
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## THE CURRENT STATE OF STUDY OF ANCLEANES OF KARAKALPAKSTAN

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### ABSTRACT

*Based on the collection materials 2015-2019. The taxonomic composition, abundance and biomass of zooplankton in different ecological zones of the reservoir are considered in seasonal and interannual aspects. The author faced the problem that the same species are marked by different researchers under different names. As a result of the work on synonymy, he was able to bring the species list of zooplankton of Lake Sudochye to the current state at that time (1988). The color is gray with a yellowish tinge. Antennulae 17-segmented. The posterolateral parts of the 4th thoracic segment are not elongated into pterygoid outgrowths; their posterior surface is characterized by a large tubercle. P1-P4 are three-segmented. P5 is two-segmented. They inhabit various biotopes - plankton, benthos, periphyton, neuston. The importance of cyclops in water bodies is determined by their significant number and variety of connections with other elements of ecosystems.*

**KEYWORDS:** Priaralye, Nauplii, Copepodites, Adults, Microalgae, Detritus, Rotifers, Bioindication, Identification.

## INTRODUCTION

### The relevance of research

One of the most important problems in the Aral Sea region is effective monitoring of ecosystems, including aquatic ecosystems. One of the important components of aquatic ecosystems are the copepods of the order Cyclopoida. Cyclops live in almost all types of aquatic ecosystems, avoiding only hyper saline water bodies. They inhabit various biotopes - plankton, benthos, periphyton, neuston. The importance of cyclops in water bodies is determined by their significant number and variety of connections with other elements of ecosystems.

Cyclops are an important part of the food supply of commercial fish, and their larvae, nauplii, are consumed by fish fry at the very first stages of development (Bogatova, 1980). On the other hand, large species of cyclops themselves can attack fish fry causing their death. In ecosystems, cyclops play a role, as a rule, of consumers of the 1st (nauplii, younger copepodites, as well as adults of many species) and 2nd (adults and older copepodites of many species) orders. Consuming microalgae, detritus, protozoa, rotifers, and crustaceans Cyclopoida have a significant effect on the dynamics of processes in aquatic ecosystems (Monakov, 1976).

The study of the Aralian cyclops is clearly insufficient. This is especially felt in recent decades, when significant progress in the taxonomy of Cyclopoida requires a revision of the composition of the fauna of this group of the Aral Sea region. Indeed, only with a sufficiently accurate species identification of cyclops can they be used in bioindication, parasitology, and the study of processes occurring in aquatic ecosystems.

### PURPOSE OF THE PROBLEM

The main purpose of the study is to conduct an audit of copepods, including the Cyclopoida of Karakalpakstan. To achieve this goal, the following tasks were pursued:

- Determination of the species composition of the Cyclopoida of Karakalpakstan;
- Study of the structure and variability of Cyclopoida;
- To analyze the zoogeographic links of the Cyclopoida of Karakalpakstan;
- Study of the distribution of Cyclopoida in the regions of Karakalpakstan, types of water bodies, biotopes;
- Studies of the seasonal development of Cyclopoida in Karakalpakstan;
- Study of Cyclopoida of Karakalpakstan as intermediate hosts of parasitic helminths.
- To assess the importance of Cyclopoida in the aquatic ecosystems of the region.

### MATERIAL AND METHODS

The material for the work was our own collections in 2015-2019 on various water bodies (lakes, rice paddies, fish ponds, puddles, swamps, canals) of Muinak, Nukus, Ellikkala, Takhtakupyr, regions of Karakalpakstan. In total, 300 samples from 7 reservoirs were processed.

Samples were collected with conical plankton nets of different diameters (nylon sieve NN 56-78), stretching them from the bottom to the surface, or by scooping up a certain volume of water using various containers (depending on the type of reservoir) and filtering it through the plankton

net. Samples were fixed with 3-4% formalin. The material was processed in laboratory conditions using microscopes MBS-9 and Biolam.

To determine, study morphology and sketching, crustaceans were placed sequentially in 50% and 100% glycerol and dissected under a stereoscopic microscope using sharpened entomological pins. The preparations mounted on a slide were covered with a cover slip on plasticine legs and edged first with fir balsam and then with pedicure varnish.

All drawings were made using a RA-4 drawing apparatus. The seasonal development of cyclops was studied in fish ponds and lakes. During the entire growing season of 2015-2019, from April to October, plankton samples were taken 1-2 times a month in 6 feeding and growing ponds. The area of pudd is hectares, the depth is about 1 m. Samples were taken in a 10-liter bucket in 5 replicates and filtered through a plankton net. To determine the quantitative indicators of the development of planktonic cyclops and zooplankton in general, zooplankton organisms were counted under a microscope using pipettes and a Bogorov camera. Counting was carried out separately for different species, size and age groups. This made it possible to estimate the abundance of zooplankton. To calculate the biomass, we used the obtained data on the number and the calculated data on the individual weights of organisms. The latter were calculated according to the well-known formulas of allometric growth that relate weight to linear dimensions (Salazkin et al., 1984).

### **The state of knowledge of the Cyclopida of Karakalpakstan**

The history of studying the Cyclopida of the Aral Sea region is almost 100 years old. The first information about the cyclops of Karakalpakstan was given by V. Meisner (1908) in a work devoted to the microscopic fauna of the Aral Sea. The most extensive studies of the zooplankton of Karakalpakstan were carried out by D.A. Aripov and A.M. Mukhamediev (Aripov, 1965; 1968; 1970, 1971; 1972; Aripov, Mukhamediev, 1967, 1974; Mukhamediev, Aripov, 1974). These authors studied the zooplankton of rice paddies, collector-drainage canals, and khauz. Among other planktonic animals, they noted a number of cyclops species: *Ectocyclops phaleratus*, *Microcyclops varicans*, *Microcyclops karvei*, *Microcyclops* sp., *Microcyclops dengizicus*, *Mesocyclops leuckarti*, *Mesocyclops leuckarti* var. *pilosus*, *Mesocyclops oithonoides*, *Mesocyclops crassus*, *Acanthocyclops vernalis*, *Acanthocyclops vernalis* var. *robustus*, *Acanthocyclops bicuspidatus* var. *odessana*, *Cryptocyclops bicolor*, *Macrocyclops albidus*.

In particular, these authors indicated that among many species of crustaceans of tropical and subtropical origin, there is also a cyclops *Microcyclops karvei* (Aripov, Mukhamediev, 1967).

In a special work, Mukhamediev and Aripov (1974) provided information on the bioecology of copepod crustaceans in small water bodies of the Aral Sea region - distribution, fertility, data on abundance, size, seasonality.

S.K.Kazakhbaev (1988) investigated in 1969-1986. and summarized the literature data on the zooplankton of Lake Sudochoye. This is by far the most complete and deepest study of the zooplankton of the Southern Aral Sea region. The author faced the problem that the same species are marked by different researchers under different names. As a result of the work on synonymy, he was able to bring the species list of zooplankton of Lake Sudochoye to the current state at that time (1988). According to the researcher, 106 species and forms of plankton animals were

identified in the lake zooplankton, including 52 (49%) species of rotifers, 36 (34%) species of cladocerans, 18 (17%) species of copepods. Among the latter there are 12 species of cyclops: *Macrocyclus albidus*, *Macrocyclus fuscus*, *Paracyclus fimbriatus*, *Cyclops vicinus*, *Cyclops strenuus*, *Cyclops* sp., *Eucyclops serrulatus*, *Acanthocyclops viridis*, *Microcyclus bicolor*, *Microcyclus* sp., *Mesocyclops leuckarti*, *Thermocyclops crassus* (Kazakhbaev, 1988). The author noted that the number of species varied significantly in different periods of research. The reason for this could be differences in the amount of materials that the authors had at their disposal, as well as in the duration of the observation periods. Comparison of changes in species diversity revealed a negative relationship with the dynamics of the mineralization of the reservoir. Moreover, copepods were probably the most resistant to fluctuations in mineralization.

With the increase in the salinity of the Aral Sea, there was a general decrease in biodiversity, including the diversity of crustaceans. So, by the end of the 1970s. former dominants such as *Acanthocyclops viridis* and *Mesocyclops leuckarti* were extremely rare (Andreev and Semakina, 1978). In the salinized areas of the sea (24-28 o / oo), only *Halicyclus neglectus rotundipes* was recorded (Andreev et al., 1978).

15 species of cyclops were identified by T. Allaniyazova (1977, 1980) in the course of parasitological studies at Lake Ashchikul, Dautkul reservoir, rice paddies and collectors. Almost all of the noted species were carriers of helminths. In Lake Dautkul, a spontaneous infection of crustaceans with botryocephals was noted. The carriers of the invasion were 7 species: *Macrocyclus fuscus*, *Eucyclops serrulatus*, *E. macrurus*, *Acanthocyclops viridis*, *Mesocyclops leuckarti*, *M. crassus*, *M. oithonoides*. The average extensiveness of the invasion was 1.9%. Some 11 species of cyclops were infected with bird cestodes:

*M. fuscus*, *M. albidus*, *E. serrulatus*, *E. macrurus*, *E. macruroides*, *Ectocyclops phaleraatus*, *A. viridis*, *M. leuckarti*, *M. crassus*, *M. oithonoides*, *Cyclops strenuus* (Allaniyazova, 1980). The infection rate ranged from 0.1 to 0.6%. Larvae of 13 cestode species were observed:

*Confluaria capillarioides*, *Diorchis elisae*, *Diorchis ransomi*, *Diorchis inflata*, *Diorchis stefanskii*, *Diploposthe laevis*, *Fimbraria intermedia*, *Microsomacanthus paramicrosoma*, *Microsomacanthus compressa*, *Microsomacanthus fausti*, *Retinometra macracanthos*, *R. venusta*, *Anomataenia* cf. *globulus*.

Seasonality of infection was noted. Only isolated finds of geminolepids were attributed to the winter period. The highest infection rate was observed in summer. In autumn, the infestation of copepods with cestode larvae gradually decreased (Allaniyazova, 1980).

Embergenov (1986) investigated the zooplankton of the brackish-water lake Ashikul in the vicinity of Nukus. The only cyclops he met was *Acanthocyclops viridis* (Jurine). The same species is given by Daribaev (1969) for lakes Sudochoye and Karateren.

Only *Cyclops strenuus* from *Cyclops* was recorded in Lake Sarykamysh by N. Mnazhev (1986) and Embergenov et al. (1987), and only *Mesocyclops leuckarti* - in the same place and at about the same time by Z.M. Zamanmuradova (1986). It should be noted that Embergenov et al. (1987) give unusually high rates of quantitative development of zooplankton for this lake - biomass up to 73 g / m<sup>3</sup>! In the memory of LP Pavlovskaya (1990), "in terms of the rate of production of zooplankton biomass, Lake Sarykamysh is ahead of other reservoirs of the lower reaches of the Amu Darya, which are part of the same irrigation and drainage system". Mnazhev (1986) also

provides data on the significant biomass of zooplankton in Sarykamysh in spring - up to 11.7 g / m<sup>3</sup>. In summer, the biomass was significantly lower - 3 g / m<sup>3</sup>, including copepods (mainly diaptomus) - 1.4 g / m<sup>3</sup>.

Seasonal changes in the composition of planktonic copepods of Lake Ashikul (2014, 2015, 2018): in March - April, Cyclops vicinus, which fell out of plankton in May, dominated in plankton. At the same time, thermophilic forms, including Mesocyclops crassus, gain mass development in plankton. Among other cyclops, Macrocyclus albidus and Eucyclops macrurus were noted here (Ainazarov and Mukhamediev, 1974). The general indicators of the development of zooplankton in this reservoir were very significant: in spring and summer 7-8 g / m<sup>3</sup>, in autumn - 1.7 g / m<sup>3</sup>.

**TABLE 1. CYCLOPS TAXA RECORDED IN THE WATER BODIES OF KARAKALPAKSTAN WITH OPENLY TO PREVIOUS RESEARCHERS.**

№	Taxa	Source
1	Halicyclops aequareus	V. Meisner (1908) .
2	Halicyclops neglectus rotundipes	Morduxhay-Boltovskoy (1972), Boruskiy (1972).
3	Eucyclops serrulatus	Nikolskiy, Pankratova (1934); Akatova(1950); Ivanova (1964); Kazakhbaev (1988
4	E. macrurus	Akatova (1950), Ivanova (1964), Allaniyazova (1980), Mukhamediev (1974)
5	E. macruroides	Akatova (1950), Allaniyazova (1980)
6	Macrocyclus albidus	Nikolskiy, Pankratova (1934); Akatova(1950), Aripov , Mukhamediev , Allaniyazova
7	Macrocyclus fuscus	Akatova (1950). Allaniyazova (1980)
8	Ectocyclops phaleratus	Allaniyazova (1980)
9	Paracyclops fimbriatus	Kazakhbaev (1988), Aripov , Mukhamediev .
10	Paracyclops affinis	Kazakhbaev (1988), Akatova (1950). Allaniyazova (1980)
11	Cyclops vicinus	Akatova (1950). Allaniyazova (1980)
12	Cyclops strenuus	Akatova (1950), Ivanova (1964), Embergenov . (1987) Allaniyazova (1980
13	Acanthocyclops viridis	Daribaev (1969), Ivanova (1964), Embergenov (1986) Allaniyazova (1980)
14	Acanthocyclops vernalis	Aripov , Mukhamediev (1980)
15	Acanthocyclops vernalis var. robustus	Aripov , Mukhamediev 1980)
16	Acanthocyclops bicus-pidatus var. odessana	Aripov B, Mukhamediev (1980)
17	Acanthocyclops bisetosus	Allaniyazova (1980)



18	Microcyclops dengizicus	Aripov , Mukhamediev (1980)
19	Microcyclops bicolor	Nikolskiy, Pankratova (1934), Aripov , Mukhamediev Allaniyazova (1980)
20	Microcyclops varicans	Aripov , Mukhamediev (1980)
21	Microcyclops karvei	Aripov , Mukhamediev (1980)
22	Mesocyclops leuckarti	Z.M. Zamanmuradova Kazakhbaev (1988)
23	Mesocyclops leuckarti v. pilosus	Aripov , Mukhamediev Allaniyazova (1980)
24	Mesocyclops crassus	Allaniyazova (1980)Mukhamediev (1974)
25	Thermocyclops crassus Mesocyclops dybowskii	Kazakhbaev (1988) Allaniyazova (1980)
26	Mesocyclops oithonoides	Allaniyazova (1980)

In the water bodies of Karakalpakstan, we found 32 species of cyclopids belonging to 14 genera of 3 subfamilies:

#### Halicyclopinae

1. Halicyclops rotundipes Kiefer, 1935
2. H. spinifer Kiefer, 1935 \*\*

#### Subsem Eucyclopinae

1. Ectocyclops phaleratus (Koch, 1838)
2. Eucyclops serrulatus (Fischer, 1851)
3. E. macrurus (Sars, 1863)
4. Macrocyclus albidus (Jurine, 1820)
5. Paracyclops affinis (Sars, 1863)
6. P. fimbriatus (Fisher, 1853)

#### Subsem Cyclopinae

1. Acanthocyclops robustus (Sars, 1863) \*\*
2. Apocyclops dengizicus (Lepeschkin, 1900)
3. Cryptocyclops bicolor (Sars, 1863)
4. C. linjanticus (Kiefer, 1928) \*\*
5. Cyclops vicinus Uljanin, 1875.
6. C. furcifer Claus, 1857 \*\*
7. Diacyclops bicuspidatus (Claus, 1857) \*
8. D. odessanus (Schmankevitch, 1875)
9. D. bisetosus (Rehberg, 1880)

10. *Megacyclops viridis* (Jurine, 1820)
11. *Microcyclus karvei* (Kiefer et Moorthy, 1935)
12. *M. pachyspina* Lindberg, 1937 \*\*
13. *M. rechtyae* Lindberg, 1960 \*\*
14. *M. rubellus* (Lilljeborg, 1901) \*
15. *Mesocyclops aequatorialis similis* Van de Velde, 1984
16. *M. aspericornis* (Daday, 1906)
17. *M. leuckarti* (Claus, 1857)
18. *M. ogunnus* Onabamiro, 1957
19. *M. pehpeiensis* Hu, 1943
20. *Thermocyclops crassus* (Fischer, 1853)
21. *Th. dybowskii* (Lande, 1890)
22. *Th. rylovi* (Smirnov, 1928)
23. *Th. taihokuensis* Harada, 1931 \*\*
24. *Th. vermifer* (Lindberg, 1935) \*

As can be seen, representatives of the subfamily Cyclopinae (24 species) predominated, marine and brackish water representatives of the subfamily Halicyclopinae were represented by only two species.

11 species turned out to be new to the fauna of Karakalpakstan (marked in the above list \*), including 7 species - new to the fauna of Uzbekistan (marked \*\*). If we compare this list with the list of cyclops noted by previous researchers (Table 1), then certain discrepancies are obvious.

So, we have not marked the following taxa:

1. *Halicyclops aequareus*
2. *Eucyclops macruroides*
3. *Macrocyclus fuscus*
4. *Cyclops strenuus*
5. *Cyclops* sp.
6. *Acanthocyclops vernalis* (Fischer)
7. *Microcyclus varicans* (Sars)
8. *Microcyclus* sp.
9. *Mesocyclops leuckarti* v. *pilosus* (Kiefer)
10. *Mesocyclops oithonoides*

What is the probability that these species are still present in the fauna of Karakalpakstan? To do this, it is necessary to consider each species separately.

*Halicyclops aequareus* (Fischer) is indicated for the Aral Sea by Meissner (1908). However, this definition was already disputed by Monchenko (1974), who pointed out that, judging by Meissner's drawings (short furcal forks, round shape of the 5th pair of legs), this researcher was dealing with *Halicyclops neglectus rotundipes* Kiefer. The latter taxon is currently considered as an independent species *Halicyclops rotundipes* Kiefer (Dussart and Defaye, 1985). The latter position is accepted by us.

Thus, it is likely that the *Cyclops* defined by Meissner as *Halicyclops aequareus* corresponds to the *Halicyclops rotundipes* Kiefer we are citing.

*Eucyclops macruioides* is indicated for the Aral Sea region by Akatova (1950) and Allaniyazova (1980). It is a northern Palearctic species, common in water bodies of Western Europe (Einsle, 1993), Ukraine (Monchenko, 1974), Russia (Pidgayko, 1984) and not recorded in the more southern regions of Uzbekistan (Mukhamediev, 1986; Mirabdullaev et al., 1997).

The likelihood that this species was mistakenly identified with closely related species *E. macrurus* and *E. serrulatus* is low, due to the presence of sufficiently clear characters. Thus, the habitation of *Eucyclops macruioides* in the Aral Sea region is possible, at least in the recent past.

A similar situation probably exists with respect to *Macrocyclus fuscus*, which is quite distinct from the closely related *Macrocyclus albidus*. The habitation of *Macrocyclus fuscus* in Karakalpakia can also be considered probable.

*Cyclops strenuus* is also a northern species. In Uzbekistan, it was noted by old authors more than once (Islamova, 1974; Tashpulatov, 1972; Mukhamediev, Umarov, 1986). However, it is very likely that in these cases the researchers were dealing with a closely related species, *Cyclops furcifer*. The fact that it is the last species inhabiting our water bodies was indicated by the largest specialist in the taxonomy of this genus, U. Einsle. Thus, it is most likely not *Cyclops strenuus*, but *Cyclops furcifer*, inhabiting Karakalpakia.

*Acanthocyclops vernalis* (Fischer) is also a northern species. In the past, it has often been confused with *Acanthocyclops robustus* (Kiefer, 1976; Fryer, 1985; Dodson, 1994; Sramek-Husek, 1954). Its status is also unclear in the well-known monograph of Rylov (1948), which is obvious and could lead to the incorrect indication of *Acanthocyclops vernalis* for Karakalpakstan. Instead of this species, the similar *Acanthocyclops robustus* lives here.

*Microcyclus varicans* (Sars) has been repeatedly reported for Central Asia. However, as shown by us (Mirabdullaev, Turemuratova, 1996) and confirmed (Bazarova et al., 1998), *Microcyclus varicans* (Sars) is absent in Central Asia, being replaced by similar *Microcyclus pachypina* and *Microcyclus rehtyae*. We also noted both species in Karakalpakia (Mirabdullaev and Turemuratova, 1996; Azimov et al., 1998).

*Mesocyclops leuckarti* v. *pilosus* (Kiefer) was recorded in Karakalpakia by Aripov and Mukhamediev (1967, 1974). This tropical form was described by Kiefer (1930) from the reservoirs of Madagascar and is now considered as an independent species (Dussart and Defaye, 1985). Its presence in the fauna of Central Asia is practically excluded (Mirabdullaev, 1996; Alekseev, 1995). Obviously, in this case, domestic researchers dealt with *Mesocyclops*

*aspericornis* (Daday), which also possesses pubescence of furcal branches and was repeatedly noted in water bodies of Asia (Dussart, Fernando, 1988; Reyd, Kay, 1992; Guo, 1999a), including Central Asia (Mirabdullayev, 1990; Mirabdullayev, 1996) and noted in this study (Mirabdullayev, Turemuratova, 1996).

*Mesocyclops oithonoides* was noted by Allaniyazova (1980) and repeatedly by Aripov and Mukhamediev. This is a northern Palaearctic species typical for water bodies of Europe (Einsle, 1993; Monchenko, 1974; Pidgayko, 1984), Kazakhstan (Dobrokhotova, 1975). This species was recorded for Uzbekistan (Mukhamediev, 1986). So, the finding of *Thermocyclops oithonoides* (this is how this species is now systematized) in Karakalpakstan is quite acceptable.

Thus, *Eucyclops macrurides* (Lilljeborg, 1901), *Macrocyclus fuscus* (Jurine, 1820), *Thermocyclops oithonoides* (Sars, 1863) are quite likely elements of the Karakalpakstan fauna.

Thus, taking into account the species registered in this study, the total number of Cyclopoida species in the Karakalpakstan region is 35.

### **Distribution of Cyclopoida of Karakalpakstan**

Different types of cyclopids live in certain ecological conditions, which are associated with water salinity, temperature, current, depths, trophic conditions, pollution, interaction with other aquatic organisms. Since the ecological conditions are heterogeneous in space, the spatial distribution of aquatic organisms, including Cyclopoida, is also heterogeneous (Monakov, 1976; Konstantinov, 1986).

Below, we tried to identify the patterns of confinement of certain species of cyclops to certain regions, types of reservoirs and biotopes. The biodiversity of cyclops of different types of reservoirs turned out to be approximately the same - in lakes, ponds, checks and puddles, 18-23 species were found. Significantly fewer species were recorded in watercourses (canals and rivers) - 11, however, we have studied them much less. If we consider ponds and checks also as temporary reservoirs (which they really are), then the diversity of cyclops is noticeably greater here (29 species) than in lakes. Only three species - *Halicyclops spinifer*, *Mesocyclops leuckarti*, and *Eucyclops macrurus* - were found only in lakes. The first of them is a tropical species recorded in Lake Ayazkala (the only find in Central Asia), the other two are typically cold-water Palaearctic species (Rylov, 1948; Monchenko, 1974; Pidgayko, 1984; Dussart and Defaye, 1985).

*Ectocyclops phaleratus*, *Paracyclops affinis*, *Cryptocyclops linjanticus*, *Cyclops furcifer*, *Diacyclops bicuspidatus*, *Diacyclops odessanus*, *Thermocyclops* were recorded only in temporary water bodies (in a broad sense). *dybowskii*, *Microcyclops karvei*, *Microcyclops rechtyae*, representing both Palaearctic and tropical zoogeographic complexes (Bening, 1938; Dussart and Defaye, 1985).

Regarding biotopes, overgrown forms were significantly more numerous than planktonic ones, which is also typical for other groups of aquatic organisms, reflecting more diverse conditions in the coastal overgrown biotope compared to the water column (Bening, 1938; Keizer, 1938; Konstantinov, 1986).

In relation to the mineralization of water bodies, 9 species are identified that can inhabit water bodies with salinity higher than 5 g / l: *Halicyclops rotundipes*, *H. spinifer*, *Apocyclops*

dengizicus, Acanthocyclops robustus, Cyclops vicinus, Mesocyclops ogunnus, M. leucklops The Thermocyclops Th. vermifer. Moreover, the first three of them were recorded exclusively in brackish water conditions, i.e. are truly halophilic forms, which is confirmed by the literature data (Lepeshkin, 1900; Monchenko, 1974; Kiefer, 1936b).

The following 6 species were recorded only in water bodies of the north of Karakalpakstan (Muynak district): Eucyclops macrurus, Cryptocyclops bicolor, Diacyclops bicuspidatus, Microcyclops rubellus, Mesocyclops leuckarti. All of them are representatives of the cold water Palaearctic fauna and do not occur in the more southern water bodies of Uzbekistan. Such tropical species as Microcyclops rechteyae, M. karvei, Halicyclops spinifer, Cryptocyclops linjanticus, on the contrary, are not recorded in the Muynak region and are common in the more southern regions of Uzbekistan (Afanasyeva, 1968; Stepanova, Pridatkina, 1971; Niyazov, 1974; Abdullaev et al., 1990; Mirabdullaev et al., 1994; et al.)

### **Subfamily Cyclopinae, Cyclops vicinus Ulyanin, 1875**

**DESCRIPTION.** Length 1200-1700 microns. Antennulae are usually 17-segmented. Characterized by lateral angles of the 4th and 5th thoracic segments elongated into wing-like outgrowths. The posterior margin of the urosomite bears spines. Furca is pubescent; its branches have a longitudinal groove on the dorsal side. L / W tucks 6.0-8.0. Base of s4 and lateral setae without spines. S1 is slightly longer than the furca, almost twice as long as s2, and more than twice as long as s4 and s5. Inner spine of Enp3P4 approximately equal to the segment and more than twice as long as the outer spine. P5 bisected, distal segment with apical setae and short, usually somewhat shorter than the segment, spine located in the middle of its inner surface. The outer seta of P6 in male is approximately twice as long as the middle one and four times as long as the inner spine.

**Ecology.** In contrast to the more southern regions of Uzbekistan, in Karakalpakstan, *C. vicinus* is common not only in spring and autumn, but also in summer. For more eutrophied water bodies, larger individuals with a relatively shorter peak an Enp3P4 spike and a large number of eggs in egg sacs.

**Spread.** One of the most widespread cyclops of Karakalpakstan. It inhabits both ponds and rice paddies, as well as lakes and reservoirs. Recorded by us in the lakes Kyrkkyz, Mailuzyak, in the rice paddies of the Kokdarya collective farm of the Kungrad region, in the ponds of the Muynak and Nukus fish farms.

**Taxonomic notes.** *Cyclops vicinus* was described by Ulyanin (Ulyanin, 1875) from the reservoirs of Central Asia. Individuals from Karakalpakstan are morphologically fully consistent with the original description and subsequent descriptions of this species (Einsle, 1993).

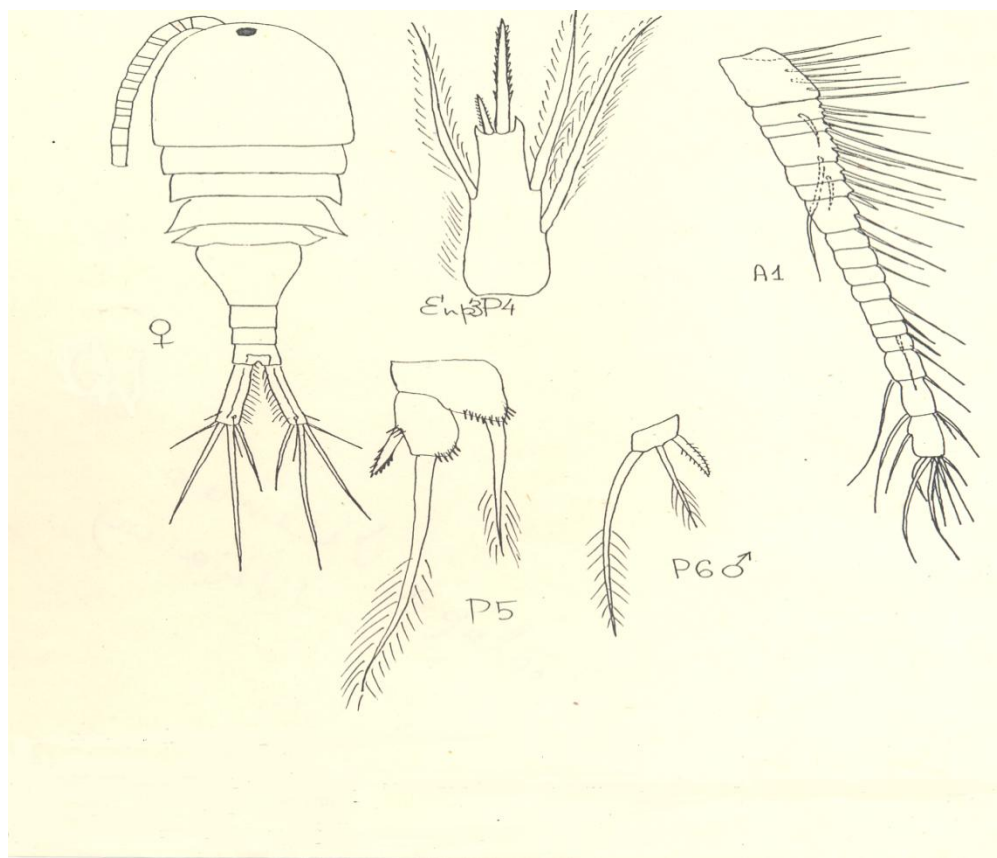


Fig. 1 *Cyclops vicinus* (Uljanin)

*Cyclops furcifer* Claus, 1857

**DESCRIPTION.** Body length 1200-1800 microns. The color is gray with a yellowish tinge. Antennulae 17-segmented. The posterolateral parts of the 4th thoracic segment are not elongated into pterygoid outgrowths; their posterior surface is characterized by a large tubercle. P1-P4 are three-segmented. P5 is two-segmented. Inner thorn free segment P5 considerably shorter than the outer setae, approximately equal to the segment length, and located in the middle of its inner edge. The inner spine of Enp3P4 is much longer than the outer one. L / W for trucks 4.5-6.5. Furcal branches with a chitinous fold on the dorsal side and hairs on the inner edge. S1 is noticeably shorter than a furrow and somewhat (usually no more than 1.5 times) longer than s4 and s5. Male P6 setae approximately the same length and twice as long as inner spine.

Biometric data are shown in Table 1.

Ekology. Inhabitant of temporary reservoirs. Recorded in autumn.

Spread. Recorded in temporary water bodies in the vicinity of Muynak.

Taxonomic notes. The morphology of individuals from Karakalpakstan is in good agreement with the morphology of the species from Europe (Monchenko, 1974; Einsle, 1993).



**TABLE 2. BIOMETRIC DATA CYCLOPS VICINUS, CYCLOPS FURCIFER, ACANTHOCYCLOPS ROBUSTUS, DIACYCLOPS ODESSANUS**

	Acanthocyclops robustus Rice checks n = 12 min-max		Cyclops vicinus Nukus.RH n = 10 min-max		Cyclops furcifer Muynak.rn n = 10 mn-max		Diacyclops odessanus Muynak.rn n=10 min-max	
	x		x		x		x	
Length, um		1079-1675		1525-1750		1700-2020		875-1050
Furca L:W		450-540	490	600-716	652	500-666	577	543-683
599								
S1 : L fu		444-555	498	108-134	123	77-92	84	29-33
31								
SI : s2		25-29	27	59-69	62	38-45	42	20-24
22								
S1 : s3		36-43	39	68-78	71	44-50	48	31-37
35								
S1 : s4		142-177	159	204-232	213	106-162	149	140-162
149								
S1 : s5		166-255	206	192-217	207	171-206	185	127-216
200								
Enp3P4:								
L art.:W art.		225-322	292	213-254	210	206-278	244	228-300
252								
Int.sp.:ex.sp.		78-91	83	97-113	106	80-97	86	67-76
72								
Int.sp.:L art.		104-137	123	225-290	255	162-207	184	78-87
82								

Apocyclops dengizicus (Lepeschkin, 1900)

DESCRIPTION. Body length 950-1200 microns. The body is widest in the cephalothorax. Antennulae 11-segmented. The third segment of the antennae bears 10 bristles. Labrum with 10-11 teeth. The lateral surfaces of the last thoracic segment have short bristles; the genital segment widens anteriorly. The first 3 abdominal segments bear transverse rows (sometimes intertwining) of minute fossae. The last abdominal segment and furcal branches bear short rows of spines. The posterior margin of the last abdominal segment bears groups of spines on the ventral side. Furcal branches are long and parallel, lateral setae located at the beginning of their last third. Base of external apical furcal setae with spines. Exo- and endopodites P1-P4 are two-segmented, spines 3.4.4.3, setae 5.5.5.5. Inner margin of P1 basipodite with long spine and setules. Inner margins of basipodites P2-P3 with setules, P4 bare. P1-P4 connecting plates with rounded outgrowths, more developed on P1, less on P4. The outgrowths bear the smallest spines. Connecting plates P1 and P3 bear 1, connecting plates P2 - 2, connecting plates P4 - 4 transverse

rows of spines on the caudal surface. The wide free segment of P5 bears a relatively short inner spine and a long outer seta.

Biometric data are shown in Table 2.

Ekology. Inhabitant of coastal, shallow and overgrown biotopes of brackish water bodies. It is rare in plankton.

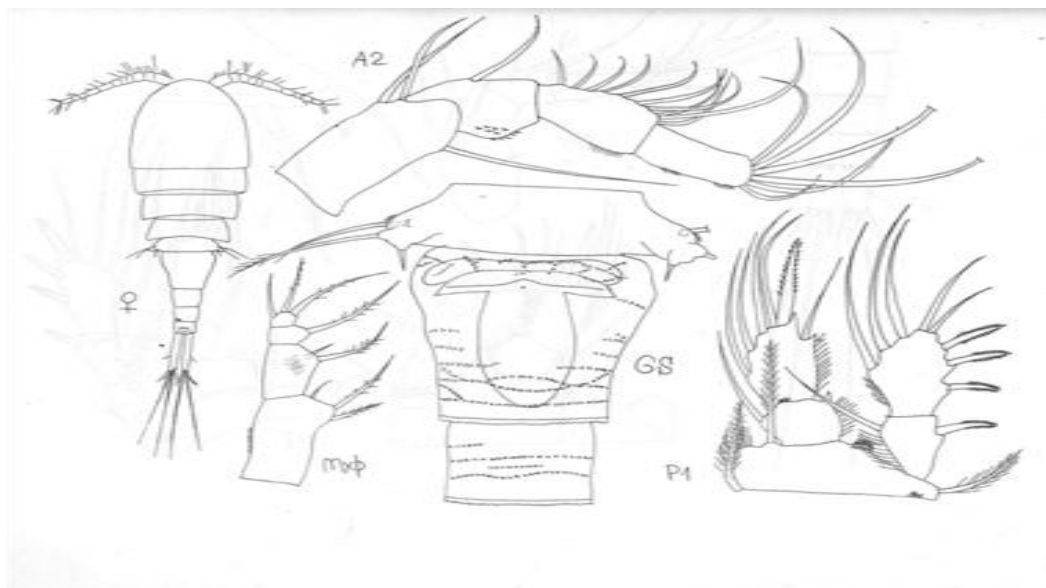


Fig. 2. *Apocyclops dengizicus* (Lepeschkin)

**TABLE 3. MEASUREMENT DATA *APOCYCLOPS DENGIZICUS* (LEPESCHKIN, 1900**

	lakes Atakul n = 10 min-max		lakes Karateren n = 10 min-max		Khorezm n = 10 min-max	
		x		x		x
Length, um	975-1100		950-1200		1175-1225	
Furka L : W	6.11-7.50	6.80	6.10-7.70	7.03	6.00-6.60	6.25
Seta 1 : L фурки	0.27-0.34	0.31	0.28-0.33	0.31	0.27-0.33	0.29
Seta 1 : seta 2	0.14-0.18	0.17	0.15-0.18	0.16	0.15-0.19	0.17
Seta 1 : seta 3	0.16-0.20	0.18	0.17-0.20	0.18	0.16-0.21	0.18
Seta 1 : seta 4	0.85-1.00	0.92	0.85-1.00	0.92	0.80-1.00	0.88
Seta 1 : seta 5	0.77-0.82	0.79	0.71-0.91	0.76	0.80-0.86	0.84
2EnpP4:						
L : W	1.67-1.80	1.72	1.67-1.90	1.73	1.57-1.80	1.66
int.: L	1.00-1.15	1.05	0.98-1.20	1.06	1.02-1.20	1.08
L apik brush:						
L peak thorn:	1.23-1.40	1.34	1.16-1.40	1.30	1.15-1.35	1.26

Spread. In Karakalpakstan, recorded in lakes Atakul and Karateren, Akshakul. A new species for the fauna of Uzbekistan. It was also found in the Khorezm, Kashkadarya, and Surkhandarya regions (Mirabdullaev, Stuge, 1998). Finds of *Apocyclops dengizicus* from all continents are known; the species is considered cosmopolitan (Dussart and Defaye, 1985).

Taxonomic notes and c and e remarks. *Apocyclops dengizicus* was first described from Lake Selety-Tengiz in northern Kazakhstan (Lepeshkin, 1900) as *Cyclops diaphanus* var. *Dengizica*. This species was considered for a long time within the genus *Microcyclops* (Rylov, 1948) as *M. dengizicus*. A detailed description of this species from water bodies of the typical habitat (Mirabdullaev and Stuge, 1998) creates the basis for comparing populations from different regions of the world and solving the issue of cosmopolitanism of this species.

## CONCLUSION

The conducted research showed the abundance and biomass of Cyclopoida in Karakalpakstan in comparison with the 80s and 90s decreased by several times compared to 2010 by more than a third. This indicates an initial sharp change in the ecological state of the reservoir.

The characteristics and morphology are presented and illustrated descriptions of 32 species are given, the key Cyclopoida of Karakalpakstan is compiled.

The fauna of the cyclopids of temporary water bodies was significantly richer than the lake fauna. In terms of biotopes, overgrown forms were significantly more numerous than planktonic ones, which reflects more diverse conditions in the coastal overgrown biotope as compared to the water column.

In relation to the mineralization of water bodies, 3 halophilic species (*Halicyclops rotundipes*, *H. spinifer*, *Apocyclops dengizicus*), 6 halotolerant species (*Acanthocyclops robustus*, *Cyclops vicinus*, *Mesocyclops ogunnus*, *M. leycarti*, *Thermocyclops. Rymiferi*) are identified.

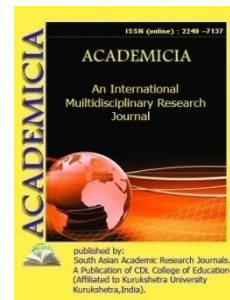
In the seasonal aspect, certain patterns can be traced in the development of the Cyclopoida of Karakalpakstan. In most cases, the development of tropical forms is limited to the summer months, while the Palaearctic forms are limited to spring and autumn.

Cyclops occupy a significant place in the structure of zooplankton cenoses in water bodies of Karakalpakstan, usually accounting for 25-60% of the biomass of lacustrine zooplankton and 16-24% of the zooplankton biodiversity of lakes and ponds.

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## CERTIFICATION AND CLASSIFICATION OF TISSUES BASED ON THEIR BIOLOGICAL PROPERTIES AND CHEMICAL COMPOSITION

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### ABSTRACT

*The article presents materials and discusses the problems of certification and classification of various fabrics based on the biological properties and chemical composition of the material. For some fabrics, tensile strength and relation to certain chemicals have been determined. To obtain properties that more fully meet the needs of consumers, blended or combined fabrics are produced. This somewhat complicates their analysis for compliance with GOST and dictates the need to develop accurate express methods of analysis. At the same time, certification methods also require the attention of chemists, since the development of convenient methods for determining chemical components will significantly simplify the certification procedure.*

**KEYWORDS:** Cotton, Linen, Silk, Wool, Artificial Fabrics, Synthetic Fabrics, Mixed Fabrics, Certification, Standardization, Classification, Product Nomenclature.

## INTRODUCTION

The fabrics used in everyday life and technology are varied primarily in their chemical composition. They differ in the nature and mass of polymer molecules. In turn, polymers are divided into natural, artificial and synthetic. Natural polymers, as a rule, consist of molecules inherent in a living organism - proteins, carbohydrates. This is their biological compatibility with the body and the feeling of comfort when wearing clothes made of such fabric, for example silk, satin, cotton, flax. Today there is a wide range of artificial and synthetic polymer materials such as lavsan, nylon and others. In addition to the known disadvantages, the latter have some advantages over natural ones. First of all, it is strength, wear resistance. Therefore, most modern products are made from mixed fabrics. A variety of fabrics are used for technical purposes such as packaging material. In the classifier of CN FEA (commodity nomenclature of foreign economic activity), fabrics are placed in section X1. The criteria for evaluating fabrics are rather limited, they are mainly density, tensile strength and the percentage of natural and artificial or synthetic yarn. In our opinion, the inclusion of the above biochemical indicators in this series would make it possible to make a better assessment of the material as a product as an object of foreign economic activity. The same applies to the certification of fabrics, the GOSTs of which do not fully reflect the biochemical indicators directly related to the consumer properties of the material.

### Main part

The purpose of the research is certification and classification according to the Foreign Economic Activity Commodity Nomenclature on the basis of their chemical composition of fabrics produced in the Republic of Uzbekistan or imported by import. The main purpose of fabrics is tailoring. Clothes - a product or a set of products worn by a person and carrying utilitarian and aesthetic functions [1]. Clothing can be made from fabric, knitted fabric, leather, fur and other materials. The appearance, structure and quality of materials used for sewing clothes determine the composition of the fibers from which they are produced [2]. The following groups are distinguished by the type of raw material: natural, which, in turn, are subdivided into fabrics of vegetable origin: cotton, flax - and animal: silk, wool; artificial, which are made by processing natural raw materials, most often wood pulp; synthetic, which are the product of the chemical transformation of monomers obtained from oil, coal or gas.

As a rule, the materials from which clothes are sewn do not consist of 100% of fibers belonging to the same group. To obtain properties that more fully meet the needs of consumers, blended or combined fabrics are produced. This somewhat complicates their analysis for compliance with GOST and dictates the need to develop accurate express methods of analysis.

Due to the natural origin of the fibers, natural fabrics are highly valued. This is facilitated by the advantages of the material: air permeability; hygroscopicity; high hygienic qualities; ease of care. Despite the insignificant thickness, cotton fabrics retain heat well, which is achieved due to the hollow structure of the fibers. The disadvantages include increased crease, lack of elasticity and low wear resistance. To improve the properties of cotton materials, artificial or synthetic fibers are added to them. Some canvases undergo a mercerization procedure - pre-treatment with a caustic soda solution, due to which they acquire strength and become resistant to premature wear.



Compared to cotton, linen fabrics that are used for sewing clothes appear denser and sometimes coarser. They are also characterized by all the positive characteristics noted above inherent in natural materials. Unfortunately, during the operation of linen products, problems arise: clothes wrinkle, and when wet, they shrink. In addition, fabric shedding is difficult to cut and sew. To reduce the negative characteristics, a small amount of polyester is added to pure flax.

Linen materials are classified according to the weaving method: linen, leno, jacquard, translucent. Clothes made of pure linen can not only be washed at high temperatures, but even boiled.

Woolen fabrics. The raw materials for the production of these materials are wool and down of various animals: rabbits, sheep, llamas, camels and others. They have high heat-saving properties and are quite expensive. However, it is these fabrics that take the lead among all the fabrics intended for warm clothing, since they have truly unique properties: hypoallergenicity, low crease, aeration, moisture absorption, durability. The big disadvantage of wool is the lack of elasticity. This problem is solved by introducing 5-10% elastin into the raw materials, due to which the clothes acquire better fit and elasticity.

In addition to purely woolen fabrics, semi-woolen fabrics are also used for sewing clothes, in which from 25 to 80% are cotton, silk or synthetic fibers. The properties of these canvases differ depending on the composition. Woolen fabrics are very diverse, for example: angora (angora goat fluff + acrylic), boston (merino wool). In order to understand whether the fabric is 100% wool or has impurities, there is a simple method. You need to pull the thread out of the canvas and set it on fire. Pure wool fiber will burn for a long time with the characteristic smell of burnt hair and leave behind a ball that can be easily rubbed with your fingers.

Silk fabrics have high hygroscopicity, air permeability, temperature regulation, wear resistance, durability. The disadvantages include deterioration in quality in bright sunlight and the appearance of unattractive stains on the surface when wet. They are due to the protein nature of silk. 100% silk fabrics include satin, gauze, crepe de Chine, organza, brocade, etc.

Artificial fabrics. As mentioned above, materials obtained chemically from natural components are considered artificial. Due to this origin, they are environmentally friendly and do not pose a danger to human health. It is noteworthy that for the production of these materials, not expensive raw materials are used, as is the case with natural linens, but wastes from the woodworking industry, that is, ordinary cellulose. Very often, artificial fibers are introduced into the composition of many cotton or wool fabrics in order to give them greater strength and durability. For example, we give some of them: acetate, corn, cupro, triacetate - the chemical name for cellulose triacetate. It is considered an improved type of acetate silk, as it can easily endure high temperatures and ultraviolet rays.

Synthetic fabrics. The beginning of the era of synthetic materials is considered to be 1938, when the specialists of the chemical concern "DuPont" obtained the first polyamide fibers - the "progenitors" of the famous nylon and nylon. The number of synthetic canvases currently known far exceeds the number of natural and artificial ones. The properties of these materials depend on the feedstock, but they all have such undoubted advantages: high strength; abrasion resistance; low degree of wear; durability; ease of care. Of course, synthetics cannot be compared with cotton, silk or wool in terms of the degree of aeration, hygroscopicity or safety. But it has

elasticity, extensibility and is not affected by mold and bacteria. Here are a few examples: faux suede, nylon, lavsan.

Knitted fabrics. They are knitted on special machines from fibers of various origins: both natural and artificial or synthetic. Despite the variety of shapes, knitted fabrics have common characteristics. The advantages of knitted materials include: pleasant tactile sensations; elasticity; hygiene; wide range of applications; practicality; ease of care; durability.

Currently, we have collected samples of individual fabrics produced in our country and imported from outside, as well as GOSTs, mainly Russian. Below are some of our experiments with some tissue samples. The main characteristics of fabrics were determined: density, tensile strength, hygroscopicity, interaction with chemical reagents.

### Material method

Samples were taken from store shelves or from manufacturing enterprises in Fergana region. The experiments were carried out in the laboratories of the Institute of Sericulture in Margilan and the regional department of the state standard in July 2020. The tensile strength was determined on a T-250 device on the basis and along the weft, that is, along and across. The readings of the device in kg s were converted into Newtons in the usual way. The ability to absorb moisture was determined in a desiccator filled with water up to the partition, the humidity of the medium was 98%. The weight gain was used to determine the percentage of moisture absorption, that is, hygroscopicity. Name of fabrics: silk, adras (50% cotton, 50% silk), nylon, wool, cotton, viscose, camouflage (90% polyester, 10% cotton).

The tissue density was determined on a laboratory balance, the accuracy was up to the 2nd decimal place. A ruler was used to establish the size of the segments.

The discussion of the results. The experiments were carried out in accordance with GOST. So, for a sample of the tested half-woolen fabric according to GOST 28000-2004, the following methods of analysis were used: GOST 3811-72, GOST 3812-72, GOST 3813-72, GOST 3816-81, GOST 9733.4-83, GOST 9733.7-83, GOST 9733.27-83, GOST 30157.0-95, etc. For cotton and mixed fabrics according to GOST 29298-2005, research methods were used: GOST 3813-72 (ISO 5081-77, ISO 5082-82), etc. Table 1 shows the results of determining various characteristics and parameters of the studied tissues.

**TABLE 1. MAIN CHARACTERISTICS OF FABRICS**

parameter the cloth	Segment size	Density g/m <sup>2</sup>	Breaking load (on the basis), H	Breakable Elongation,%	Hygroscopicity%
silk	5x30 sm	28	16kg.s·9,81=156H(duck 121H)	14 (duck15,5)	12,66
adras	5x30 sm	172	48,5kg.s·9,81=476H(duck 382H)	17(duck12)	6,54
nylon	6x30 sm	44	35kg.s·9,81=343H(duck 313H)	21	
wool	5x20 sm	258	709 H(duck 590H)		12,3
cotton	6x30 sm	12 0	40 kg.s·9,81 = 392H (duck 255H)	13,5 (duck10)	16,96
viscose	5x30 sm		31 kg.s·9,81 = 304H	15	16,0

			(duck 313H)	(duck25)	
camoufl age	6x30 sm	13 2	75kg.s.9,81 736H (duck 530H)	= 19,5% (duck14%)	14,2

The data obtained show that semi-woolen and cotton technical (coarse calico) fabrics meet the requirements of GOST in almost all parameters. However, the remaining 5 samples deviate significantly from the GOST requirements for finished products.

The ratio of fabrics to chemicals and solvents is shown in Table 2.

**TABLE 2 INTERACTION OF TISSUES WITH CHEMICAL REAGENTS**

Reagent The cloth	Acetone	NaOHd iluted	HNO <sub>3</sub> c onc.	H <sub>2</sub> SO <sub>4</sub> c onc.	HCl (36%)	CH <sub>3</sub> COOH icy	HCOOH (95-100%)
silk	ND	ND	ND	ND	ND	ND	ND
adras	ND	ND	ND	ND	ND	ND	ND
nylon	ND	DDB	ND	D	D	ND	D
wool	DDB	ND	DDB	D	ND	ND	ND
cotton	ND	ND	D	D	ND	ND	ND
viscose	ND	ND	D	ND	ND	ND	ND
camouflage	PDDB	ND	ND	ND	ND	ND	ND

Note. Legend: D - dissolves, DDB - dissolves during boiling, PDDB - partially dissolves during boiling, ND- does not dissolve.

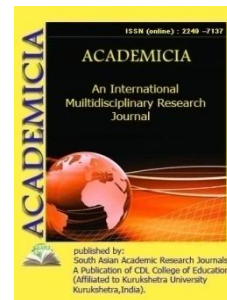
## CONCLUSION

From the results of the experiment given in table. 2, it can be seen that most of the studied tissues are inert with respect to chemicals and solvents. Cotton fabric dissolves in strong acids as it chemically interacts with them. Capron stands out with good solubility among others: it dissolves in formic, hydrochloric, sulfuric acids, as well as in an alkali solution during boiling.

Summarizing the above, it should be noted that the classification of fabrics according to the Commodity Classification of Foreign Economic Activity needs to be detailed on the basis of the chemical composition, since it is the nature of the molecules from which the fabric is formed, their structure determines the consumer properties of the material. At the same time, certification methods also require the attention of chemists, since the development of convenient methods for determining chemical components will significantly simplify the certification procedure.

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## THE MAIN OCCUPATIONS OF THE KYRGYZ AND KIPCHAKS IN THE KOKAND KHANATE

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### ABSTRACT

*This article provides information on the labor activities, main occupations and lifestyles of Kyrgyz and Kipchaks living in the Kokand Khanate, as well as it explains the trade attitude of this Khanate. During the reign of Muhammadalikhan, the territory of the khanate expanded and the khanate was bounded on the north by the Russian Outer Siberian District, on the west by the Khiva and Bukhara Emirates, on the south by the Koratagin, Darvaz, and beyond - Shugnan, Rushan, and Vakhon (which was dependent on Kokand). In the Kokand khanate, the main part of the population of the capital and many other cities was engaged in handicrafts. Artisanry was specialized in the cities, and there were industries focused on the production of one type and part of products.*

**KEYWORDS:** *Economy, Khan, People, Artisans, Agriculture, Animal Husbandry, Various Strata O the Population.*

### INTRODUCTION

The economic traditions of the peoples living in the Kokand khanate were different. At the time of the establishment of the khanate, it included only the Fergana Valley. Later, as a result of military campaigns, its territory expanded and its population increased. The total population of the Kokand Khanate in the 1950s reached 3 million people. In the territory of the khanate, the majority of the population were Uzbeks engaged in sedentary agriculture. In addition to Uzbeks, Kyrgyz, Kazakhs, Tajiks, Kipchaks, and Jews inhabited the khanate. During the reign of Kokand khan Abdulkarimbi, because of the invasion of the khanate by the Dzungar tribes, the khan's relations with neighboring Kyrgyz tribes took the form of a military alliance, which led to the entry of many Kyrgyz tribes into the khanate. In this period, the Kyrgyz were mainly nomadic tribes, and their main occupation was cattle breeding. They played an important role in the socio-

economic life of the khanate. Livestock also played an important role in the khanate to provide the khan's army with horses.

**Main part:** At the end of the 18th century, the territory of the khanate consisted only of the Fergana valley, during which time it subjugated all the principalities and regions of the Norbotabi valley and subjugated them to Kokand. In his time, Andizhan and Margilan regions were the largest estates in the valley. During the reign of Alimkhan, the territory of the khanate expanded significantly due to Tashkent and the surrounding lands. In historical sources, the property of Tashkent is mentioned by the names of regions, cities, Tashkent and Dashti Kipchak regions. Its territories include Ahangaron, Chinoz, the outskirts of Tashkent, the city of Turkestan on the banks of the Syrdarya and its environs. The governors of this property are mentioned in the sources and documents with the terms governor, ruler, governor, deputy. During the reign of Umar Khan, a number of attacks were carried out on the lands around Khojand, Uratapa and Jizzakh, and in 1817 Uratapa was conquered.

During the reign of Muhammadalikhan, the territory of the khanate expanded and the khanate was bounded on the north by the Russian Outer Siberian District, on the west by the Khiva and Bukhara Emirates, on the south by the Koratagin, Darvaz, and beyond - Shugnan, Rushan, and Vakhon (which was dependent on Kokand). Kulyab and Kashgar border it in the east. The lands of the khanate included the Fergana region between Syrdarya and Korategin, Namangan, Khojand and other cities on the right bank of the Syrdarya, Kurama region between the Bukhara emirate and the Kokand khanate, Turkestan, Syrdarya. The lower reaches to Lake Balkhash are inhabited by Kyrgyz, the eastern foothills of Mount Billur, inhabited by nomadic Kyrgyz, and the western foothills from 1830 onwards.

In the Kokand khanate, the main part of the population of the capital and many other cities was engaged in handicrafts. Artisanry was specialized in the cities, and there were industries focused on the production of one type and part of products. Artisans are masters who have mastered the secrets of their profession and raised their products to a high level of art. Although the development of handicrafts was the same in almost all towns and villages of the khanate, production differed in some of its features, namely, the type and quality of products. Blacksmithing, jewelry, weaving, pottery and other branches of handicrafts are widely developed, and each city of the khanate is famous for its products in a certain field. Crafts, handicrafts and handicrafts in the khanate were mainly supplied by raw materials for cotton, silk, cattle breeding and mining. Raw materials needed for handicrafts were obtained from the territory of the khanate, as well as purchased from abroad. Gold, one of the main raw materials, is extracted from the upper reaches of the Syrdarya, the Kansuv River. Gold was also extracted from Kosonsoy, the Kukrev River north of Karatag, the Chirchik River, near Burchmulla, and the upper reaches of the Chatkal River. Artisans mined iron ore from the foothills of the Alay Mountains, lead and other ores from Karatov. According to sources, the extraction of mineral resources was so simple and scarce that it could not meet demand. That is why most metals are imported from Russia. Domestic and foreign trade relations were of special importance in the life of the Kokand khanate. Domestic trade is based on the exchange of traditional products between settled farmers, nomadic pastoralists and urban-rural artisans. Products made by manufacturers meet the daily needs of the population. All domestic trade was retail, and wholesale trade was almost non-existent.



Artisans were in close contact through trade. They often sold their products themselves. Farmers and herdsmen brought their cattle to the market on certain days of the week. Prices in the markets have not remained the same. Prices varied depending on factors such as peace in the khanate, wars, and declining productivity due to bad weather.

The main trade and commercial centers of the Kokand khanate are the cities of Kokand, Tashkent, Margilan, Andizhan, Khojand, Namangan, Osh, Uratapa, among which Kokand is not only a khanate, but also is one of the trade centers of Central Asia. According to the data, Kokand markets are characterized by the richness of their products and the fact that the price is much cheaper than in other cities. The city's walled bazaars have always been crowded with locals and foreign traders. Foreign trade also played an important role in the economic life of the Kokand khanate. The country has extensive trade relations with Bukhara, Khiva, Afghanistan, Iran, Turkey, and India in the west and south, China (via Kashgar) in the east, Dashti Kipchak migrants in the north, and especially Russia. According to some sources, Japanese and British merchants also came to the khanate.

The khanate exported mainly silk and silk fabrics, cotton, leather, precious stones, gold, silver, jewelry and other products. Mainly tea, metal, porcelain, household goods, ready-made fabrics, clothes, shoes and others are imported. The merchants of the khanate had regular trade relations with Bukhara and the cities on the borders of the emirate. The traders of both countries took an active part in trade, and the Kokand merchants supplied the Emirate of Bukhara with Russian iron, steel, and cast iron, tobacco, handkerchiefs, rice, and some Chinese or other goods necessary for economic life. Local silk fabrics, tea, and porcelain were brought, and merchants from Bukhara brought Indian tea, surp cloth, silk, dyes, opium (taryok), embroidery, yarn, and cloth to Kokand.

Russian chit played a special role in Bukhara's trade with the Kokand khanate. This fabric was brought from Orenburg or Petropavlovsk to Kazalinsk, and from there to Kokand via Bukhara, Samarkand and Khojand. The khanate also brought English fabrics from Mashhad, a small number of Kabul tunics and turbans, and Indian attire.

The trade relations of the Kokand khanate with Kashgar were similar to those of the Bukhara emirate, with opium, porcelain, silver, Chinese silk fabrics, fiber and carpets brought from Kashgar to Kokand. The subjugation of the Kazakh Juz to Russia led to the cessation of wars between the ruling classes, which led to a wide range of trade relations in Central Asia, including the Kokand Khanate with Siberia, the Urals and the Volga and this situation opened wide way for trading relations.

Khalik also has regular trade relations with India. According to sources, between 10,000 and 15,000 camels are shipped annually from India to Kokand, Tashkent, Bukhara and Kashgar via Kabul. Among them were yarn fabrics, silk, goat hair, horses, and so on. Horses were one of the most lucrative sources of trade. There are reports that Indian merchants lived in the cities of the khanate and engaged in trade and even usury.

Kokand-Russia trade relations also have a special place in the foreign relations of Kokand. According to sources, the rapid development of Russian industry after 1861, the growing base of raw materials and the need for foreign markets was one of the main reasons for the active occupation of the Kokand market in Russia and its unlimited use. Iron, copper, steel, cast iron and iron products, foreign and low-quality fabrics, small quantities of velvet, sugar, glass,

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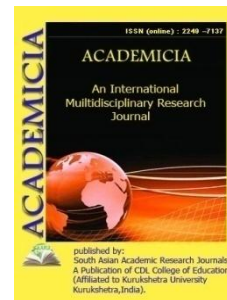


leather, sheep and skins from the Kazakh deserts belonging to Russia, leather and leather products, felt. Cotton was mainly exported from the khanate to Russia.

**CONCLUSION:** Governors and heads of territorial divisions were appointed from among the members of the khan's family, groups close to him, the upper class, and the chiefs of the leading tribes. For example, during the reign of Khudayarkhan, the khan's sons and close relatives ruled seven principalities. In turn, the governors divided the territory of the region among their children and relatives. In the system of administrative-territorial administration of the Kokand khanate the bek (governor, governor) and his middle had a special place. The governor and judge appointed by the khan had many powers.

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## SOURCES OF MEDICAL AND SCIENTIFIC WORKS WRITTEN IN TURKISH LANGUAGES PROTECTED IN WORLD FUNDS

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### ABSTRACT

*This article highlights the historical issues of the work done in the world on medical sources written in Turkic languages. Moreover, it provides a detailed description of the information provided in scientific works, catalogs and small scientific works of Turkish language medical sources. The difference between this catalog and the catalog published in Tashkent is that it includes works on pharmacology in the category of medical works. This can be explained by the lack of resources in this area in the museum fund. The University of Utrecht library also contains medical information in a Turkish source under the number Hs.1 F18, but this catalog does not specify which field of medicine it belongs to. The most complete preservation of the manuscript, which contains medical information in Turkish, is given in Chapter 15 of the catalog. It is true that his works also need to be critically examined and studied, but we believe that the situation with the scientific approach to the information contained in his works is only positive for the Hungarian scientist.*

**KEYWORDS:** *Medicine, Turkish Language, Source, Catalog, British Museum, Leiden.*

## INTRODUCTION

Medicine is one of the most crucial areas of the country's social sphere. The study of written sources on the development of medicine in all regions of history is of both scientific and theoretical and practical importance for the future development of this field. Therefore, we believe that today the object of this research is one of the most topical issues. Today, manuscripts on Turkic languages are available in many countries around the world. Due to their high interest in the history and culture of the peoples of the East, many manuscripts can be found in libraries, funds and collections abroad. Today, many originals or copies of Oriental manuscripts are available in the United Kingdom, the Netherlands, Russia, and the United States.

### The main part

Most of the manuscripts written in Turkish are kept in the British Museum of the British Royal Academy. The special catalog of manuscripts on Turkic languages in the museum is the first work in this direction in the world. The catalog was published in 1888 by *Charles Riu*, a researcher at the British Museum. The catalog consists of 6 sections in total.

*Chapter 1* is entitled "*The Theology of Mukhammad (prophet)*" and provides information about Turkish works from the Qur'an and hadiths [4: 4]. *Chapter 2*, entitled "*History*", deals with works on the history of the Islamic world from the creation of the world to the middle of the XIX century. *Chapter 3* is entitled "*Science and Art*" and provides information on sources in the fields of politics and management, astronomy, medicine, veterinary medicine, art and chemistry. *Chapter 4* is entitled "*Philosophy*" and contains a description of works on Arabic lexicography, Persian lexicography and Turkish lexicography. *The 5th section of the catalog* is devoted to Turkish art and is called "*Poetry*". *The last chapter*, entitled "*Turks or Eastern Turks*", provides information about Turkic works on the traditions and literature of the peoples of Central Asia. [4:5].

In Section 3 of the British Museum's Catalog of Turkish Manuscripts, we have mentioned that among the works in the field of science and art, there are also works in the field of medicine and veterinary medicine. The difference between this catalog and the catalog published in Tashkent is that it includes works on pharmacology in the category of medical works. This can be explained by the lack of resources in this area in the museum fund. As you provide information about each source in this catalog, you will see that there is a clear sequence and structure. According to it, each manuscript first contains information about the element number, and then about the number of pages, size, number of lines, type of letter, type of source decoration, period of writing, title of the work, about the author, a summary of the work and information about the incomplete pages of the work.

"*Catalog of Turkish Manuscripts in the Library of Leiden University Library and Other Collections in the Netherlands.*" This catalog consists of manuscript sources on Turkic languages kept in the University of Leiden and other collections in the Netherlands and is published as part of the Islamic Manuscripts and Books.

The collection was published in 2012 in Leiden, the Netherlands and Boston, USA. *Jan Schmidt* was instrumental in compiling this catalog. We used the third edition of the catalog. *Arnoud Vrolijk*, a professor at the University of Leiden, did a great deal of work in preparing the

second edition and enriched the catalog with additional information. The catalog was originally completed in 2003, but work continued until 2012.

The catalog consists of 433 pages, and its structure differs slightly from other catalogs in that it is based on where the source is currently stored, rather than on what area or period the source belongs to. Clearly, Turkish manuscripts kept in a total of 15 institutions, including the Amsterdam Museum in Amsterdam, the Royal Library in Groningen, the Museum of Ethnology in Leiden, the Moritime Museum in Rotterdam, and so on. That is, it consists of 15 sections.

The medical information contained in this catalog is contained in the Medical Monuscripts section. This information is taken from *RamazanSheshen, KemilEkpinar and JevadIzgin's "Catalog of Islamic Medical Monuscripts (in Arabic, Turkish and Persian) in the Libraries of Turkey" (Istanbul 1984).*

Section VII of this catalog contains information about the manuscript kept in the Hague Museum. The manuscript is written in Turkish and is encrypted with the number ***Hs 10 E 30***. The manuscript was found by a German officer named *Fushchofer* near Beirut. The manuscript was later purchased by Baron *van Vestrenen* from bookseller *Friedrich Augus Helm*. This manuscript provides information on three prescriptions used in medicine. It contains information about the powder recipes that were widely used in local medicine at that time [1: 96-97].

Section XII of the catalog contains information on the availability of fragments of manuscripts in several Turkic languages stored in the library of the University of Leiden and the areas in which they cover. The museum has a text stored with the number *CodOr.977*, which is of great importance to us. This is because this text is an excerpt from the work of our ancestor *Abu Ali ibnSina, Al-Qanun fi-t-tib*, copied and commented on by *Abu al-Hazmib nan-Nafis* in 1288. The fragment contains information on respiratory and nasal diseases, as well as medical terms [1: 219-220].

Manuscript *No. Cod.Or.58* is a letter from one person to another that deals with daily problems, two different medical prescriptions in addition to different fatwas. However, it is not known exactly which diseases it is used to treat [1: 220-221]. The University of Utrecht library also contains medical information in a Turkish source under the number *Hs.1 F18*, but this catalog does not specify which field of medicine it belongs to. The most complete preservation of the manuscript, which contains medical information in Turkish, is given in Chapter 15 of the catalog. This manuscript is also kept in the library of the University of Utrecht and (2) ff. Encrypted with numbers 32p-48p. This book discusses the role of treatment in medicine. The main part of the manuscript contains the views of *Abu Ali ibnSina, Galen and Hippocrates* on medical treatment. It contains the authors' views on ways to treat cough, treatment and cure with amber, the role of the mummy in medicine and the healing of the disease with religious verses.

Oriental written sources issued in 1976 were published in a separate edition in 2007 in various libraries in Russia, in particular in the Bogchasaroy Historical and Cultural Archaeological Museum, and it was noted that it also contained medical and pharmaceutical sources. In 2002, *Dmitriev* placed *Akimushkin's* publication on Turkish manuscripts in a separate catalog. Among these manuscripts, *IbnSina's* medical sources included two small volumes of pharmaceutical recommendations written in Turkish, but their author is unknown. These resources are based on the general Manuscript *al-islamica Rossicanomi* on separate Internet networks. [7: 104].

Hungarian turkologist, orientalist and linguist *LazzloCaroly* has been working for many years on the languages, history and culture of the Turkic peoples. The scholar's book "*Central Asian Islamic Turkish Medicine*", published in 2014, deserves special mention.

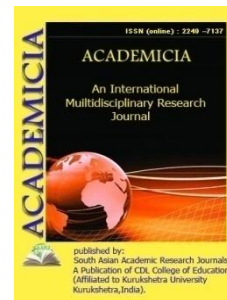
This literature provides a description of medical sources written in Turkic languages around the world, as well as an earlier description and in-depth scientific analysis of Turkic manuscripts written mainly in Central Asia during the Islamic period. The book contains not only the medical sources in the Turkic language kept in the Tashkent fund, but also a scientific analysis of the manuscripts written in this region, which are now in various funds around the world. A short critical text of Subhanqulikhon's treatise (1680-1702) "*Medical program-ilamal*" can also be found in this book [2: 7].

## CONCLUSION

In conclusion, it should be noted that most of the work related to the study and identification of medical works written in Turkish languages is in the form of cataloging, short descriptions (commentary on their external features from the point of view of source studies). It is true that one of the best experts on them is *Lazzlo Caroly*. It is true that his works also need to be critically examined and studied, but we believe that the situation with the scientific approach to the information contained in his works is only positive for the Hungarian scientist.

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## ANALYSIS OF DEVELOPMENT MONITORING THROUGH INNOVATIVE TECHNOLOGIES

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### ABSTRACT

*This article is devoted to the development of testing methods that allow to diagnose the psychological predisposition of students to religious and scientific views. The aim of the work is to develop a convenient and effective software tool that allows you to determine and psycho-diagnose the predisposition of young people, especially students, to follow various misguided religious movements. In the "Terms" menu you can get acquainted with the Uzbek translation and interpretation of terms and terms in more than a few hundred fields of psychology. The "Recommended" menu is a small virtual library of national and foreign literature: lectures, works, textbooks, which serves to enrich the mental and spiritual world of various student*

**KEYWORDS:** *Engineering Psychology, Psychological Testing, Psychological Diagnostics, Virtual Portrait, Virtual Psychologist, Psychological Prevention And Technical Logic.*

### INTRODUCTION

There is no doubt that to organize the monitoring of mastery of student knowledge through a computer system, it is impossible to diagnose the quality of teaching in a modern education system, that is, to effectively manage the process and achieve a specific goal in education without diagnosing its condition. It is possible to determine the final knowledge and skills of students based on various criteria and approaches in the educational process, to check the validity of their compliance with didactic requirements as a result of the use of information technology in these processes. [1]

In it, pedagogical diagnosis includes determining the level of formation of knowledge, skills, and abilities of students, monitoring, evaluation, analysis of collected and statistical data, as well as predicting the future development of this process.



## LITERATURE REVIEW

The strategy we used to create the search strings was as follows [4]: • Finding papers about engineering 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: psychological diagnostics AND psychological prevention and technical logic. It has been highlighted in [7] 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 (engineering psychology OR — psychological testing) AND (virtual portrait, OR virtual psychologist). The revised search string has given us a reasonable number of studies and we finally selected relevant empirical studies

## METHODOLOGY

Diagnostic tests in the educational process are important in that they help to some extent choose an effective methodology. When managing knowledge, its prognostic function serves to obtain information about the educational process, about its future, that is, about a situation that may be known in advance. [2]

At each stage of the learning process, it is possible to verify the prediction that the specific knowledge, skills and abilities intended for a particular piece of learning material are sufficiently formed or not formed. The results obtained from certain scientific predictions are used to create a model of students' future activities. Such a prediction is a great help in drawing clear conclusions for planning and implementing future training. [3]

Methods of psychology such as testing and analytical diagnostics effectively help in carrying out this work.

In the process of analyzing the results of activities, it is not the result itself, but the activity involved in generating that result that is psychologically evaluated. This method is widely used, especially in student psychology. By studying the activities of students, information about their psyche and development is obtained. [4]

In the era of computer and information technologies, in order to increase the efficiency, speed and convenience of psychological testing and diagnostics, two opposing areas, such as psychology and computer science, are currently mutually contradictory. working in communication and complementing each other. In the end, just as technical psychology exists, so psychology has its own technique. [5]

To be more precise, many modern technical devices, software of various psychological tests, diagnostics and analysis of other psychological processes and events are now available using a wide range of software tools with incredibly good capabilities that can be implemented in any field. and technical equipment is being created. [6]

Based on the above considerations, the Department of Modern Information and Communication Technologies of the International Islamic Academy of Uzbekistan has developed a program for psychological diagnosis "Psychological diagnosis of students' propensity to religious sciences (on the example of psychological diagnostic testing program)." This program is a diagnostic system that, unlike ordinary diagnostic programs, has the ability to determine the direction of the spiritual-enlightenment and religious orientation of students, diagnose it and direct it correctly. [7].

The program includes a set of psychological tests as a repository of data, based on the nature of the answers entered by the student after the test, the degree to which the student's consciousness has developed, the level of knowledge and the scope of knowledge, the direction of existing knowledge. (conscious) or false (unconscious), a tendency to deviate from the wrong currents in his verb, a diagnosis (diagnosis) of the presence or absence of extremist and terrorist ideas formed in the mental and intellectual world, the physical, mental and the formation of a virtual portrait of the mental trinity is then a "virtual psychologist" system that advises the student according to the result achieved. [8]

The main goals and objectives of the software system are:

- a) To study the personal (individual) psychological characteristics of the subjects of the educational process;
- b) Monitoring the development of students' social maturity and professional qualities;
- c) Determining the psychological and pedagogical readiness of students for vocational education;
- g) Identify the psychological causes of defects in the intellectual and personal development of students;
- d) Determining students' professional abilities, skills, competencies and attitudes towards their chosen profession;
- e) Determining the social role of students and their place in the group, and so on.

After the stage of psychological diagnosis, the process of psychological prevention is carried out and it includes:

Ensuring the personal development of the psychologist in collaboration with the team leader, medical staff and officials, while maintaining the individuality of the student;

Identify the causes of deviations (negative deviations) in student behavior and prevent such cases;

Identify and prevent the causes of stress, depression, conflict, negative emotional experiences;

Provides psychological support to students with disabilities.

Creating a program based on the right structure and logic will require the program to be perfectly linked in terms of both psychology and technical logic. Testing is a standardized, often psychodiagnostic method designed to identify individual psychological differences that are specific to a quantitative and qualitative type, limited in time overtime during the experiment.

The purpose of the test is to understand a weapon with a special feature that performs the function of assessing the psychological characteristics of individuals. It consists of a set of

conditions (tasks) or questions designed to reveal categories of different parts of behavior, taking into account a certain standard condition.

This psychological diagnostic test program serves not only as a system to diagnose the individual, unique features of the user's mental and spiritual world, to conduct additional interesting tests, to help him increase his knowledge in the field of psychology, to deliver useful literature. One of the biggest advantages of the system is that it runs both a test mode for the experimenter, a working mode, and a diagnostic mode for the experimenter.

That is, in this case, the test taker works by giving sincere answers to the test, thinking that he is taking the test just to get information about himself, because he is not given any notes or tests that indicate that his religious affiliation will be checked. However, the observer receives enough information to determine the level of his mental and emotional aptitude on the basis of the results, and the program automatically records them in the database.

Based on this, the main sections of the program consist of the following menus: "About the program" menu; "It's interesting" menu; "Terms" menu; "Recommended" menu; "Search" menu; "Start test" menu;

In the "About the program" menu: help with the installation and launch of the program, its purpose and rules of use. Information about the creators of the program will be available.

In the "It's interesting" menu: users are faced with a set of interesting, humorous tests on a variety of topics, which allow them to identify different aspects of their individual characteristics and behavior. Examples of such tests are: temperament detection, various picture and shape tests. They go through a testing process and are diagnosed on the surface of the results.

In the "Terms" menu you can get acquainted with the Uzbek translation and interpretation of terms and terms in more than a few hundred fields of psychology. The "Recommended" menu is a small virtual library of national and foreign literature: lectures, works, textbooks, which serves to enrich the mental and spiritual world of various students. It contains useful and interesting literature in the field of religion, psychology, spirituality, enlightenment and other areas.

"Search" menu - it is possible to search all the information contained in all available databases in our program in the form of a site. These include: psychological terms, useful literature, types of tests, user lists by administrator password, and so on.

The "Start test" menu is the main menu of the program, in which the process of diagnosing the level of religious affiliation of the student is carried out.

There is also a list of other similar software and websites that reflect the goals and objectives of the disclosure within our software tool, as well as the convenience of accessing them directly via a link.

By pressing the "Exit" menu button, the user can end the program and leave it.

The program view is in the form of a website, and its main window consists of four main parts: top, bottom, left and main parts. [7]

Unlike other psychological programs, the questions are not selected in a one-way and primitive form. The tests themselves are divided into five stages, which include:

Optional tests serve to reveal subtle points about a subject's inner psychological state, his or her character and behavior. Such cases include: his will;

Approved motivation (yes-no answer) tests - determine the degree to which the test taker's traits such as persistence, skepticism, honesty or deceit, cowardice;

Picture (aggression) tests help to determine the degree of irritability, that is, the nature of aggression, which has existed in the subject's character and behavior for a long time and occurs when faced with certain situations. The level of propensity is so high in a person with strong aggression

Logical tests - reveal how well the test taker's logical thinking ability has developed. Explains independent thinking, mental level, well-developed and well-formed logical thinking ability.

Formal or IQ tests are a collection of antique and very interesting tests that report IQ, that is, the level of intellectual ability developed in individuals, the speed of logical and mathematical thinking.

The main purpose of dividing the tests into such groups is: to increase the interest and courage of the test taker.

The program is based on web technologies, designed to attract users in terms of design, ease of interface, analysis of current psychological diagnostic data, using JavaScript, JQuery library, HTML, CSS, PHP, PhotoShop software and AJAX technologies.

## CONCLUSION

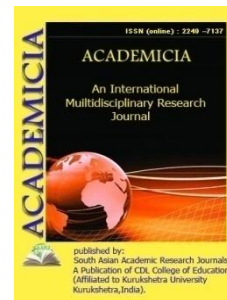
The above method is used for research purposes. In addition, some psychological methods are also used for testing purposes. The aim is not to introduce any innovations in the science of psychology, scientific knowledge, to discover the law. These methods are to determine the presence of a trait in the person being studied, its level of development, the degree of compliance with various criteria. The software system is used to study a person's professional ability, level of mental development, level of knowledge and voluntary inclinations. The effectiveness of the program is determined by the methodology on which they are based, the suitability of the test structure for many requirements, the conditions of conduct, and the adequacy of the requirements.

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## GENDERED FAMILIALISM: NOTIONS OF CARE AMONG CARERS FOR CHILDREN SUFFERING FROM LONG-TERM ILLNESSES

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### ABSTRACT

*This paper is based on a minor study inquiring into the prevalence of the phenomenon of single mother led households, in Kerala, with differentially abled or terminally ill children. Instead of asking the question why the fathers desert these households, the paper explores the notions that hold the mother to the child through all hardship. The methodology involved a loose interview schedule keeping in mind Thomas's seven key variables that affect different ways in which care is conceptualized. An elaborate yet insufficient welfare regime that reinforces gendered familialism as well as a discourse of morality of care and responsibility are found to lead to not only a feminization of precarity but also to a feminization of the notion of care itself. The paper concludes that effective change can only be brought about by intervening and correcting the structural inequalities through shift in the intended direction of policy.*

**KEYWORDS:** *care, childcare, feminization, gendered familialism.*

### 1. INTRODUCTION AND REVIEW OF LITERATURE

In an interview shot by Tv New in 2015, SheebaAmeer, a prominent social worker in Kerala, estimated that out of about 780 cases of child-patients registered under her organization 'Solace', around 300 are situations in which the father has deserted the mother and the ailing child(ren) (Tv New, 2015). Solace is a local NGO that facilitates curative and palliative care for children, from poor backgrounds, suffering from long-term illnesses. This was not the first time I had heard Ameer, a personal acquaintance, make such a statement. She had always been very vocal about the struggles of women as oftentimes the sole carers of the sick children. Even though exact figures are not yet available, the magnitude of the condition suggested by Ameer recommends that this could be defined as a social problem. I was further intrigued by her



emphatic statements that mothers do not abandon their children even when they have to guide the child through his/her most basic grooming throughout their lives, sometimes at the cost of their marriages. Even in cases where both parents are present, the mother undertakes the majority of the care requirements of the child. When fathers do fulfill these needs, as Tronto(1993) suggests we find “a pattern of exceptionalism” (as cited in Hughes, 2002, p. 110). What keeps the women so devoted to the care of the ailing child? Is Ameer’s conclusion a folk theory or can research support her claims?

According to Hughes (2002), care holds a contradictory and ambiguous place in existing feminist literature. It is viewed as an entrapment from which women must escape and also, contrarily, as essential to women, a hallmark of their difference based in the relationality of womanhood. However, most feminist theorizing agree that the structuring effects of women’s responsibilities for care result in cumulative economic disadvantages for women.<sup>1</sup> Most theorists criticize the role of policy in incurring those disadvantages;<sup>2</sup> however, keeping in mind the particular field this paper focuses on, it is Indian sociologists RajniPalriwala’s and Neetha’s appraisal of what they call the “residual welfare regime” (2011, p. 1050) of India, that holds interest. In their opinion, the implicit conceptualization of care as a familial and female responsibility guides public policy and this in turn affect the orientation and possibilities that the policies reinforce, create or foreclose. For instance, they comment, the 86<sup>th</sup> Constitutional Amendment in 2002 shifted the right to free and compulsory education from 0-14 years to 6-14 years (Palriwala&Neetha, 2011, p. 1061). This meant that the government was freed from the responsibility of care for children in early childhood, where caring and education are inextricably linked, and this was left in the hands of the family. Thus “familialism”(Palriwala and Neetha, 2011) dominates Indian public policy, the assumption being that the state need not deal with people as citizens but as members of households, the primary unit. Any internal inequalities or dynamics are seen as necessary to sustain this essential unit. It is important to stress that family ‘failures’ are considered the exception against the majority - the ‘normal’ mode of life. It is the prevalence of this exception that makes this paper all the more pertinent.

At the heart of familial responsibility lies women’s unpaid labour, both in the daily upkeep of the family and in the care of children. Women in Kerala, from lower classes, with ailing children, find it difficult to combine paid work with strict hours, with unpaid childcare. Additionally, despite legal dictates and discourse in the public arena, childcare facilities at worksite are almost entirely absent. Thus, these women prefer to work as unskilled labour in the informal sector sacrificing work hours, resulting in fluctuating pay, in the name of care responsibilities. The precarity of this situation is compounded by the dominance of low pay and job insecurity in the informal sector. Gutierrez-Rodriguez (2013) terms the situation the ‘feminization of precarity’, where precarious working and living conditions prevail and a “being in the world” shaped by constant uncertainty regarding life dominates female lives. Thus, the gendered nature of familialism with regard to provision of care forces not only a feminization of precarity but also a feminization of the notion of care itself. This conclusion is further supported by the ‘devaluation framework’ (England, 2005) which emphasizes that cultural biases limit state support for care work because of its association with women. In fact, care and womanhood are inextricably linked and a devaluation of care does not necessarily imply a conscious devaluation of women’s work, even though in effect this translates conversely.

A discussion of conceptualizations of care is incomplete without at least considering the host of cluster concepts it invokes. 'Responsibility' for care, for instance, lies in the connection between moral values and identity through which people craft themselves based on understandings of what it means to be a good mother or father and so on. Gilligan (1982) explains how women see conflicting responsibilities as a moral dilemma. A conventional interpretation of responsibility as responsive to others, Gilligan notes, impedes women's sense of themselves as autonomous subjects and renders care for oneself an act of selfishness (as cited in Hughes, 2002). Selflessness or self-sacrifice is thus another concept attached to the definition of care.

Devika (2008), on the other hand, views responsibility, and self-sacrifice to an extent, as the culmination of a long-term process of "domestication" (p. 16) in Kerala society. The idea is that people are directed to devote a majority of their time to their natural calling, parenting. Parenting or "handicraft" (Devika, 2008; p. 16) requires such attention that parents withdraw from the public sphere. In fact, participation in public is shaped in such a way that the interests of the family or household holds weight above that of the citizen. Again, it is the centrality of the family as the primary unit to which responsibility is owed, that is stressed in both Gilligan's and Devika's arguments. While the energies of men and women are guided towards the home, the home in itself is seen as a private matter and the work undertaken for its upkeep a personal virtue. Consequently, as Crozier (2010) maintains, people in caregiving roles tend to be marginalized.

A seemingly reasonable explanation of the level of responsibility felt and the self-sacrifice entailed in the care given, is the "intergenerational contract" (Crivello& Espinoza-Revollo, 2018, p. 149) by which carers expect their services returned by their children in their old age. The aim of feminist politics with regard to the matter of care, then seems to be not just mere voicing of caregivers' concerns but also to stress that life revolves around the "mutuality of inter-dependence" (Hughes, 2002, p. 119) or "shared experiences of vulnerability" (Crivello& Espinoza-Revollo, 2018, p. 142). Care is to be seen as a vital civic virtue, the responsibility of every citizen. Crivello and Espinoza-Revollo (2018), through their discussion of the "intergenerational contract" as extending within generations as well, bring in the often latent figure of the child in both care receiving and care giving roles. However, in the context of this paper, the 'contract' remains unfulfilled in terms of the absolute dependency of the children upon their parents. The care givers themselves do not expect the ailing child to support them even when they would grow old and infirm. What, then, accounts for the strong sense of responsibility and unstinting care given to the differentially abled or sick children? Do structural inequalities facilitated by dominant notions of care explain the phenomenon of single mother led households with sick children?

This paper is unique and relevant as it considers care outside its performance in 'normal' families. There is also a dearth of literature on care given and received at home in the society of Kerala.

## 2. METHODOLOGY OF RESEARCH

This paper is based on a minor study of conceptualizations of care in poor households with ailing children. A loose interview schedule was prepared keeping in mind Thomas's seven key variables (1993, as cited in Hughes, 2002, p. 111) that affect the different ways in which care is conceptualized. These variables include the social identity of the carer and of the recipient,

interpersonal relationships between carer and care recipient, nature of care, the social domain within which the caring relationship is located, the economic character of the relationship and the institutional setting in which care is delivered. The context of this paper determined early on that the caring relationship was not based on any economic advantage and that the care was given by the primary care giver mostly in a home based setting.

The schedule was divided into five parts – personal details of the carer, details of the care recipient, details of the process of caring, help provided and miscellaneous. Details like the occupation, income, education, age, relation to the recipient etc. were supposed to provide information regarding the social identity of the care giver. Likewise, details of the care recipient like education, age, illness or disability, treatment history and the like were to provide the social identity of the recipient. The details of the process of caring involved drew on a list of chores performed for the recipient's basic grooming. Each chore was stated to gain information on the carer who performs each task. It also included questions on difficulties faced during the process of caring, special needs of the child-patient, the way the child views his/her carer and so on. This section was meant to collect data on the interpersonal relationship involved and the nature of care. Particulars of help provided by outside forces were to determine the social domain in which the relationship was located.

The study focused on the patients registered under the NGO, 'Solace'. Out of around 1300 cases registered, 10% or 130 were to be selected as subjects for the larger study. As part of the current paper, fifteen responses to the interview were collected. 'Solace' also provided access to the files of these fifteen cases. The files contained information of their visits to solace to seek help at various times. It recorded their personal details, needs, grievances and the treatments undertaken or ongoing. The study also involved home care visits with members of 'Solace' to four of these fifteen households. SheebaAmeer, the founder of 'Solace', was also interviewed to gain a stronger understanding of the organization's vision, scope, forms of care provided, experiences and so on. The results were analyzed and compiled in the next section.

### 3. ANALYSIS

Taking into account their convenience, twelve mothers, two fathers and one sister of the fifteen cases of child-patients selected, were interviewed.<sup>3</sup> Almost all of the cases identified the mother of the child as the primary care giver. Public policy in India aimed at the betterment of the poor is elaborate and many of the families of the child-patients selected made use of such provisions. For example, the Public Distribution System which offers essentials at low prices to families with the BPL (Below Poverty Line) Card is hugely popular. Many of them were aware of free healthcare provided by local government hospitals and make use of free education provided by public schools. Government policies such as Indira Gandhi National Disability Pension Scheme, *Aswasakiranam* which provides financial assistance to care givers, Widow Pension, various educational scholarships and monetary help for building houses as a part of the 'housing for all' policy of the housing department of the Government of Kerala were recorded as major interventions that help improve the lives of these families.

Unlike SheebaAmeer's claim that state welfare facilities are non-existent, the list of policies seem substantial until one takes a closer look. While all these schemes assist in providing care to children, they depend upon the persistence of mostly unpaid, full-time care workers in the form of mothers. Moreover, in the case of differentially abled children or those with terminal

sicknesses, the existing facilities are not adequately provisioned to meet their needs. Sajitha, whose four year old toddler has been diagnosed with Global Development Delay, explains that she could not leave her child in crèches or similar institutions as these require the child to be at least toilet-trained. *Anganwadis*, local government centers that provide childcare and education for those in early childhood, are also not equipped to deal with children with different needs. Sheeba Ameer also points out that the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) scheme, a social security measure aimed to provide at least 100 days of wage employment per year, is ineffectual in the case of single mother led households with ailing children. If the mother finds that she is unable to leave her child's side on the first day of a month, then she becomes ineligible to benefit from the scheme the entire month. As Gutierrez-Rodriguez (2013) upholds, not only is child care generally inaccessible and unaffordable, but increasingly deemed a private matter. Additionally, at least nine of the carers responded that they were either ineligible for benefits, have not yet obtained these benefits or receive them only sporadically. Complicated paperwork and elongated processes encumber these families from obtaining entitled benefits. For instance, Suhara, whose child also has Global Development Delay, couldn't acquire help from the local *Panchayat* bodies for building her own house as a relative in her joint family with the same ration card had already availed this policy.

Palriwala's and Neetha's (2011) account of gendered familialism as the driving ideology behind policy making is reinforced in this study. Both NREGA and PDS schemes view the family as their primary unit of intervention. Even the radical *Aswasakiranam* issues a negligible allowance for the care giver and also further strengthens the position of women as the primary care giver within the family. Ameer, while talking about an unrelated subject, told me that "our children (patients) do not need nurses, their mothers care for them". A word cloud of the aggregated catalogue of carers who perform different chores for the care of the child-patients revealed that a whopping total of 96 of 164 words was the term 'mother'. This role as the primary care giver of the ill child consumes the mother's life. At the very least five mothers more or less said that they could not go to work because they had to care for their children. Of the mothers who did find employment, most worked erratically. For instance, Sathi, who works as a household help, explained that she accepted whatever payment she was given each day as she worked irregularly and often lend money from her employers.

Reinforcing this notion of the mother as responsible primarily for the care of the child, is the deep seated belief that the mother's care is the best care. In Pameela's words, "no one can take care of her like I do". She is a single mother caring for her only daughter who has Down Syndrome. "Since maternal care is culturally treated as the 'real' care, all other childcare arrangements other than the same are labeled as 'substitute care'" (Thampi, 2007, p. 130). Anything else is substitution and naturally inferior. The result is that, for the mother spaces of living and caring overlap and even the conception of a separate self is problematic.

Ameer further establishes this argument by ascribing a morality of justice for fathers as opposed to the traditional morality of care and responsibility of the mothers. She emphasizes, "The mother knows every feeling, emotion and dream of the child. Men can't reach that level, their gender does not allow it. That difference exists. Women are stronger; more compassionate than men". In the mother's absence, the responsibility for care shifts to other mature female members of the family. There is a seemingly strict division of labour. The father is supposed to be the breadwinner, which Palriwala and Neetha assert is vital to the ideal and practice of familialism.

Most of the patients' files in 'Solace' lists the source of income for the family as arising from the father's employment. However, many of the mothers discreetly remarked that the fathers cannot/are not physically or mentally able to/do not find work regularly. Despite this, fathers never take on the role of primary carers. Even when involved in the child's direct care, the father performs traditionally masculine tasks like teaching the child, taking him/her to school or tasks that are physically strenuous like heaving the child to the toilet. Again, Ameer admits that Solace's 'family strengthening programs', which aim to facilitate home-based employment or businesses for the mothers of the patients, mainly target preserving the dignity of the mothers by ensuring at least a small income for them, rather than ensuring meaningful employment.

The entire family is affected by the sickness or disability of the child. Siblings usually undertake a significant amount of labour within the household, though their work is hidden and seen as secondary. "The everyday language of 'chores' and 'help' undermines the value of their contributions" (Crivello & Espinoza-Revollo, 2018, p. 143). However, the mother's 'presence' and silent supervision are required to maintain the household and care for the child-patient. The home and the private are her domains.

The constant uncertainty, indeed the precarity of their living conditions, makes these families constantly utilize kinship ties and social support networks. The 'intergenerational contract' is not a rationale for responsibility of care, as far as the families interviewed are concerned. Their motive appears to arise more from a sense of self-sacrifice and responsibility. The families follow a scheme outlined by public discourse – that of the father as the breadwinner, the mother as the care-giver and the children as potential breadwinners and care-givers. Non-fulfillment, which is a certainty in most of the cases discussed above, results in severe anxiety. Mohammed Shahrooq, a nineteen year old suffering from paralysis, fears that his parents suffer because of him and would abandon him. In fact, he is afraid to the extent that he resists staying in a place other than his home even for a night.

Love, perhaps, is the most overtly manifested cluster concept related to care. Love is articulated in the tiny spurts of actions, be it Ameer's example of a sibling upending coconut shells filled with water to ensure that mosquitoes do not linger and trouble his paralyzed brother, or Sharooq's guilt for imposing on his parents, or Sindhu's desire to fulfill her son's wish to learn to play the musical instruments of 'chenda' and 'mruthangam'. Love is also displayed through the relentless search of the family for the best treatment available for the child. In some cases, like that of Sinan who suffers from hearing loss, such a search leads to private, expensive hospitals even when equally good alternative treatments are available at a lesser cost. Conversely, love and care can also be articulated by favouring social prejudices over treatment for the child. For example, Nizam's mother was more concerned during the interview about her daughter. Her daughter, around 18 years old, was partially blind in one eye; however, her mother was more concerned about keeping the condition a secret because she was terrified that it would affect her daughter's prospects for marriage. Care, love, morality, responsibility are all linked in an intricate dance about public discourse. In an interesting turn of events, Ameer, who fights for women's rights and gender justice, stressed that she ensured that Solace's logo, which portrays a big person hugging a small person, was designed in such a way that the adult in the logo was gender neutral. However, the power of pervasive discourse is such that I still saw (albeit the fact that I paid only cursory attention to it) a woman or mother hugging a child.



#### 4. CONCLUSION

Feminist research on care has focused on its gendered character. However, much of it usually sidelined discussion of care in households that do not fit the norm of the 'normal' family. Analysis of independent study conducted reaffirms the fact that gendered familialism drives policy and discourse in the discussion of care. Interventions are directed towards the primary unit of family and a scheme of gendered division of labour directs responsibilities within the family, resulting in pervasiveness of mostly unpaid, full-time care workers in the form of mothers. An opposition between the morality of justice and that of care and responsibility helps loosely explain interviewed mothers' devotion to their ailing children. In contrast to a morality that focuses on individual rights, many women's conception of self and others is based on relationships and responsibility. The strength of such a morality coalesce spaces of living and caring, making even the conception of a separate-self problematic. Reinforcing the morality of care and responsibility is the fundamental belief in the infallibility and superiority of mother's love and care. As a result, the mother's 'presence' and silent supervision is required to maintain the household and care for the child-patient. As Nelson remarks, dichotomizing habits of thought within the family is rooted in tacit assumptions about gender (as cited in England, 2005, p. 393). Structural inequalities facilitated by these assumptions lie at the heart of the single mother's struggle to care for her ill child. These assumptions ensure the functioning of the configuration of inequalities even in the wake of failure of the 'intergenerational contract'.

Change in the predominance of the phenomenon of female care giving as the primary, and oftentimes the sole, care for children suffering from long-term illnesses could only be brought about through structural changes in the functioning of the society. The first step would logically be a radical restructuring of childcare policy with specific emphasis on the intended populace who are a subject of the policy's reforms. State should take responsibility as the primary unit of provision of care instead of placing the entire responsibility on the gendered structure of family. A more comprehensive understanding of childcare incorporating the prevalence of non-'normal' families and thus a complete change in the dynamics of the family, is also necessary for effective change in policy.

It is the intensity of the feminization of precarity in the case of single mothers with differentially abled or terminally ill children that drives this study. A more elaborate study with a sizable sample, as mentioned above in the methodology, will be conducted in due course. Avenues for a more detailed study of notions of care in households with ailing children include exploration of the concept of "mutuality of inter-dependence" and of the sharing of vulnerabilities, apart from its material dimensions. An examination of the influence of caste and religion in perpetuating gendered familialism also could help in understanding the problem in depth.

#### ENDNOTES

1. These economic disadvantages including women's unpaid care of family members and resultant contribution to the maintenance of existing labour is discussed in the next paragraph.
2. For instance, Hughes (2002) cites Parker's work (1993) on "how gendered nature of public policies reinforce the economic dependence of women in relation to spousal caring relationships" (p. 115). Additionally, England (2005) provides the example of benefits conditioned on prior employment which offer little for the mother without previous



employment because she had been caring for her children (p. 384). Devika (2008) also comments on the 'withdrawing welfare state' in the context of policies on care.

3. The economic backgrounds of these families differed only slightly as 'Solace' verifies that their need for financial assistance is indeed dire. As regards the social background, four of the fifteen were single women led households. Most of the parents and relatives of the child-patient were employed in unskilled, informal sector.

### ACKNOWLEDGEMENT

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**APPENDIX A****INTERVIEW SCHEDULE FOR CARE GIVERS OF CHILD-PATIENTS****I. PERSONAL DETAILS**

- 1) Name of carer
- 2) Age
- 3) Where do they live?
- 4) Members of family (names, age, education/employment)
- 5) Education
- 6) Employment History (if not employed, do they yearn to be employed. Why?)
- 7) Organization in which they work
- 8) Skilled or unskilled labour
- 9) Income
- 10) Dreams

**II. DETAILS OF THE CHILD-PATIENT**

- 11) Name of the child
- 12) Age
- 13) Illness
- 14) Treatment History
- 15) Current Treatment
- 16) Education

**III. DETAILS OF CARING**

- 17) Who takes care of the child?
- 18) Which activities do the carers perform, individually and collectively?
  - a) Who helps the child to bathe
  - b) Brushing teeth
  - c) Eating Food
  - d) Dress
  - e) Go to the toilet
  - f) Give medicines
  - g) Plays with the child
  - h) Takes the child out
  - i) Teaches the child
  - j) Takes the child to school
  - k) Takes the child to solace
  - l) Takes the child to the doctor

m) Takes the child for physiotherapy

n) Put to sleep

19) Does the child have any other special needs? Who performs them?

20) Difficulties faced in the process of caring

21) How do you manage caring with other household duties?

22) Do the siblings face difficulties due to the illness of the child?

23) How does the child see the carer?

#### IV. HELP PROVIDED

24) Do you receive support, monetary or otherwise, from any organization, agency, religious institution, independent people etc.?

25) How do they help you?

26) What help does Solace provide?

27) Are you satisfied with the help that Solace provides?

#### V. AWARENESS OF POLICIES

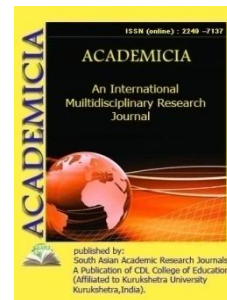
28) Which of the government policies benefit you in the care of the child?

29) Where did you gain information about these schemes?

#### VI. MISCELLANEOUS

30) Who do you think is responsible for the care of the child?

31) Do you think anything more could be done to achieve your dreams?



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## ISSUES OF ENVIRONMENTAL PROTECTION AND COORDINATION OF THE SYSTEM OF RATIONAL USE OF NATURAL RESOURCES IN UZBEKISTAN

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### ABSTRACT

*Due to the fact that ecological problems have become one of the most important ones owing to their detrimental consequences during globalization, the attainment of sustainable development of ecology and state through the elimination of these ecological problems and their effects are analyzed in the current article. Coordination of work in the field of sustainable development education in educational institutions, enterprises and organizations, teaching of natural sciences in general education institutions in accordance with state educational standards, the impact of scientific and technical progress on the relationship between society and nature, Environmental Aspects of Sustainable Development, the Concept of Sustainable Development and Education Priorities, and the United Nations Millennium Development Goals for Sustainable Development and Development are all the more important in the current era of globalization. The rapid development of transport, population growth and urbanization, the chemicalization of agricultural production, the chaotic, unplanned development of lands, the uneconomical use of water resources, on one hand, will allow to use more of the republic's resources, on the other*

*hand, from ammonia to the environment, disrupting its natural balance. As a result, the region's air and water are being polluted, soil erosion is accelerating, some species of plants and animals are declining or disappearing, and natural monuments are being damaged. Preventing these situations shows that all countries must work together to maintain the ecological balance in nature.*

**KEYWORDS:** *Environmental Aspects Of Sustainable Development And Prosperity, Concept Of Sustainable Development, Education Priorities, Environmental Protection, Agenda 21 Visit Agenda.*

## INTRODUCTION

In the current process of globalization, the competitiveness of any country depends on the availability of natural resources in the region and environmental protection. In 1992, the governments convened the UNCED-92 Conference on Environmental Protection and Development, known as the "Summit on Land Issues" in Rio de Janeiro. "In addition to ensuring sustainable development, there are countries that can protect the environment, develop on the path to a clean future of the planet, based on mutual needs and common interests, as well as more industrially developed countries." to reach an agreement on laying the foundations for global cooperation. The UN emphasized the principle of the need to protect the environment, as an integral part of any activity aimed at economic development, without changing the current model of economic development, global economic goals cannot be achieved. Developed nations adopted the "Visit to the 21st Century" agenda at the 1992 Land Summit in Rio de Janeiro, where the United Nations has been tasked with implementing the program since then is taking steps to integrate the concept of development ecology. In the Republic of Uzbekistan on the basis of this program:

- Measures have been taken to curb the deterioration of the environment and to lay the foundations for sustainable living and development in the 21st century.
- In Rio de Janeiro, governments have developed detailed plans to implement the UN Visiting Agenda for the 21st Century program, to take the world out of its current model of unstable economic development, and to create activities that support and renew important environmental trends.
- Action plans have been developed for atmospheric protection, forest conservation, soil erosion and desertification, air and water pollution, prevention of depletion of fish stocks, and decontamination of toxic waste.

Awareness of the need to maintain stability and protect the environment is now being monitored through all areas of UN activity. Cooperation between organizations and governments, NGOs, academia, and the private sector, developed by all countries, helps to bring new knowledge and concrete action to address environmental issues.

In order to coordinate the system of environmental protection and rational use of natural resources in the process of globalization, and to implement the appeal of the Summit on Land Issues, all UNEP-sponsored countries should do the following:

- Adopt and work on a Global Action Plan for the Protection of Coastal Polluted Oceans since 1995;
- Development of international agreements on global and regional assessment of drinking water, coastal and marine resources, management of water systems of different countries in accordance with the Water Resources Program;
- Ensuring international cooperation in the implementation of the Global Action Plan for the Protection of the Marine Environment from Land Activities;
- Strengthening and developing the work of the UN Commission on Sustainable Development (launched in 1993);
- The Interdepartmental Committee on Sustainable Development (established by the Secretary-General in 1992), as an organization that cooperates within the UN and coordinates the implementation of the decisions of the Summit, is one of the first plans for the Visit to the XXI Century Agenda to monitor their activities and submit all reports to the UN General Assembly.

Environmental problems are scientifically based problems that threaten all mankind, and scientifically based the measures taken by states and peoples to preserve the environment, use nature wisely, protect it and increase its natural resources in the interests of all mankind. The Committees on Ecology and Nature Protection study environmental disasters caused by human error and seek measures to prevent them. Then nature will not lose its importance as the main source of material wealth for mankind.

The use of natural resources in Uzbekistan has its own characteristics, due to the fact that the main cities, villages, factories, cotton fields are located in the oases, Tashkent, Mirzachul, Fergana, Zarafshan, Surkhandarya, Kashkadarya, Lower Amudarya oases are industrial and domestic. -contaminated with municipal waste and agricultural residues of chemicals used in agriculture. "Agricultural reform and food security will undoubtedly remain one of the most important issues for us" [1,129].

The most active regions in the country's fuel balance are gas and oil from the North Sokh, South Olamushuk, Polvontash, Chimgan, Shursuv, Mingbulak fields, and in the Bukhara and Kashkadarya oases - Shortang (with reserves of 60 million tons), Zevarda, Mubarek. , Uchkir, Jarkoq and Kokdumalak (reserves 143.7 billion cubic meters). The explored natural gas has covered the republic's needs for 35 years and oil for 30 years, ranking third in Russia and second in Central Asia in terms of coal reserves, after Russia and Turkmenistan. The Angren, Shargun and Boysun coal seams contain clay, kaolin, sand, bentonite, shale and various other rocks of economic importance.

The country has huge mineral resources, ranking first in the world in terms of gold, copper, molybdenum, tungsten, lead, zinc, natural gas, precious stones, phosphorite, salt, sulfur, aluminum raw materials in the region and there is a large stock of building materials.

In Uzbekistan, iron ore deposits are found in the Sultan Uvays, Nurata, Chatkal mountains, which contain nickel, cobalt, bromine, platinum and other ores. The region has the Zarafshan, Korjontov and Morguzar manganese deposits, the third largest in terms of copper reserves after Kazakhstan and Russia. Copper deposits are found in Almalyk, polymer deposits in Surkhandarya region, Nurata, Qurama ridges.



Nature and man-made products are limited, and coal, oil, and natural gas have been around for hundreds of millions of years. Gasoline, diesel and rocket fuel used for vehicles are extracted from oil and used in coal plants to generate electricity, natural gas heating and engine start-ups, and as transportation fuel. In the current process of globalization, saving solid fuels is an important source to leave as a reserve for future generations, and their excessive burning leads to air pollution, which in turn leads to the destruction of natural ecosystems.

Solar-powered water heaters use solar energy through collectors. The production of mechanical or electrical energy from wind energy depends directly on wind speed. Minerals are a source of energy and fuel for human economic development, and their use is growing every year. If in the last 25 years the world's demand for coal has increased by 2, iron ore by 3, oil and gas by 6, manganese, potassium, phosphorus salts by 2-3 times, then the share of the population is 40%. Currently, the world produces 150 billion tons of minerals a year, and 15 billion tons of rocks flow into the oceans and seas due to erosion.

According to the UN, the world produces 32 billion tons of coal a year, 2.6 billion tons of oil, 6 billion tons of iron ore, 3.6 million tons of chromium ore, 7.3 million tons of copper ore, 3-4 million tons of coal. lead ore, 159 million tons of salt, 120 million tons of phosphates, 1.2 million tons of uranium, mercury, molybdenum, nickel, silver, gold, platinum ores are mined [2.28 b].

According to experts, if the mineral resources are used at the current rate, gold will be 30-35, zinc 36, antimony 70, potassium 40, uranium 47, copper 66, mercury 70, coal, oil, gases in 150 years may be exhausted. As a result, many developed countries: Japan, England, Germany, Italy, the Netherlands, Belgium and other countries, due to lack of raw materials, underground resources, recycle secondary waste and use the resources of other countries. According to Japanese scientists, due to the amount of metal in the ocean floor, the current level of consumption of world industry can reach 2,000 years with copper, 70,000 years with nickel and 14,000 years with manganese. Up to 20% of these resources are used for the needs of world industry. In addition, underground minerals are usually mined at the expense of 1 or 2 metals and the rest is released into the environment. M: 8 t aluminum from 100 t granite, 5 t zinc, 0.5 t titanium, 80 kg manganese, 30 kg chrome, 17 kg, nickel, 14 kg. The bath can be separated. At present, 150 billion tons of ore, the required elements are extracted and the remaining 95-98% is released into the environment.

More than 2,700 different prospects of Uzbekistan's mineral resources have been identified, of which more than 60 are involved in production. The proven reserves of more than 900 deposits in the country are estimated at \$ 970 billion, and the total mineral resources are estimated at \$ 3.3 trillion. The most important strategic sources are: oil and gas condensate, 155 prospects for natural gas, more than 40 for precious metals, 40 for non-ferrous, rare and radioactive metals, 15 for mining raw materials. Annually, about 5.5 billion soums are extracted from the country's deposits. \$ 6.0-7.0 billion dollars of worth of minerals are being mined. New reserves are being added. Uzbekistan has proven reserves of a number of minerals, including gold, uranium, copper, natural gas, tungsten, calcium salts, phosphorites, kaolin, not only in the CIS, but also in the world.

In Zafarabad, the Central Ore Department is conducting uranium mining on 170,000 hectares, rendering these areas unusable to varying degrees. The total area allocated for the second phase

is 16,000 hectares, and as a result of practical activities, the amount of ground salts has increased by 10-50 times, and the amount of some radioactive substances by 10-20 times.

Navoiyazot plant discharges its 570,000 cubic meters of toxic seeds into reservoirs with an area of 50 hectares, based on polymers 25%, rhodonites 10%, solid mixtures, containing zeonite 50 mg / l, ammonia 150, sulfate salts 15000, copper is 2500mg / l.

Waste of Navoi electrochemical plant composed of highly 7 800 000 complex organic compounds, covering an area of 125 hectares. In recent years, there has been a problem with the use of hydrogen in order to keep the environment clean and save natural fuel resources. The advantage of hydrogen is, firstly, that there is an increase in production on an industrial scale with unlimited reserves, and secondly, it is a universal fuel used in electricity generation, road transport, aviation, maritime transport in liquid and gaseous form.

Angren coal deposit (reserves of 1885 million tons), phosphorides (reserves of 100 million tons), black coal in the Fergana Valley (reserves of 30-35 million tons), 33 deposits of 32 types of non-ferrous metals have been launched. There are 16 mining and metallurgical enterprises. Of the 27 gold reserves, 16 are being explored and 7 are being exploited.

In accordance with the Law "On Waste", Uzbekistan annually generates more than 100 million tons of industrial waste, 14% of which belongs to the toxic category state control work is carried out.

## CONCLUSION

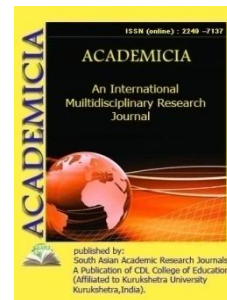
The issues of coordination of the system of environmental protection and rational use of natural resources are very important, and it is necessary to achieve healthy and sustainable development in nature and society by performing the following tasks:

- Improving economic mechanisms for the use of natural resources, developing programs for the management of protected areas;
- Identification of sources of environmental pollution, improvement of environmental certification control system based on environmentally friendly products and technologies;
- Creation of a database system for environmental information and environmental monitoring, development of international environmental norms and standards;
- Implementation of scientific and technical developments in various sectors of the economy, environmentally friendly technologies, waste disposal and development, as well as the continuation of scientific research;
- Strengthen cooperation with community environmental organizations on environmental protection and use of natural resources, and joint environmental decision-making.
- Reducing the amount of substances that are extremely dangerous to public health;
- Rational use of natural resources, transition to waste-free technologies;
- Saving raw materials in enterprises, their integrated use, production and recycling of consumer waste;

- Encouraging companies and organizations to release pollutants into the environment, inefficient use of natural resources, and encourage companies and organizations that comply with protection laws.

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## CHALLENGES IN ASSESSING ENGLISH LANGUAGE PROFICIENCY (AS AN EXAMPLE OF UZBEK SECONDARY SCHOOLS)

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### ABSTRACT

*Children who speak the majority language, English, as their second or third language - English Language learners: ELLs are found in the caseloads of speech-language pathologists in Canada, the United States, Australia, the United Kingdom and elsewhere. Uzbekistan is a country in which the English language has been learnt as a foreign language for decades, nevertheless, step-by-step, English is almost getting the place of the second language. The significance of the English language is increasing in Uzbekistan due to the several factors: state policy, Internet usage, prestigious jobs and so on.*

**KEYWORDS:** *Lingua Franca, Presidential Decree, CEFR, IELTS, Uzbek Model of CEFR*

### I. INTRODUCTION

Approximately 375 million people speak English around the world and there are more than 50 English speaking countries, where English is either the official or the primary language. English is the third most common spoken language in the world. The English language which evolved from a combination of Old English and the German Anglo-Saxon tongue, began to be commonly used around the 5th century. It is the most widely learned second language in the world [1].

Today the role and influence of English are gaining a higher speed in the world as well as in Uzbekistan. Since the Republic of Uzbekistan declared its independence in 1991, the role of the language used in the country started to change, shifting in dominance and significance in all spheres of Uzbek people's life. The Uzbek language acquired its position as the only official state language, while Russian was given the status of foreign language and lost its power as

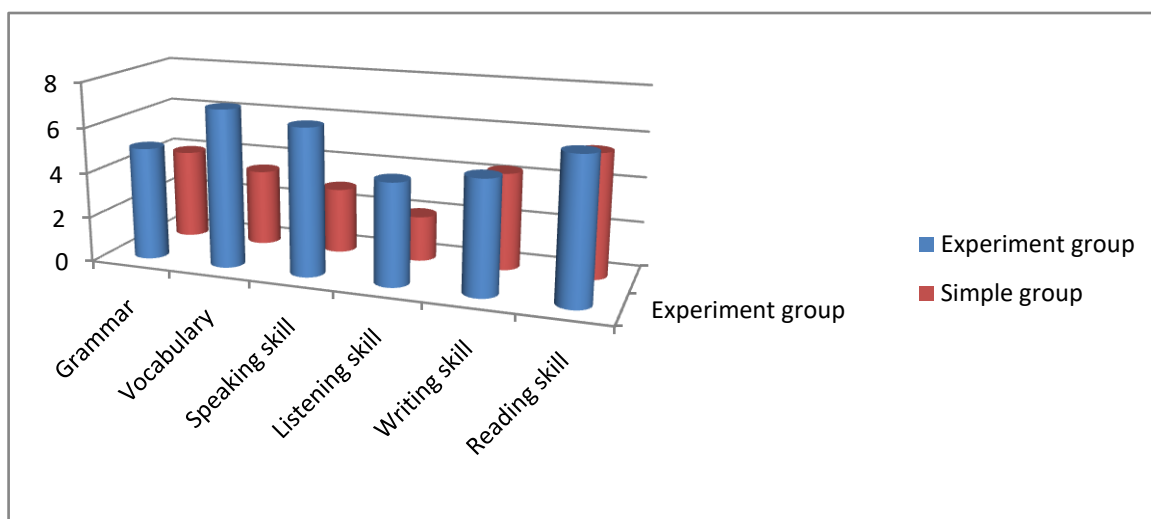
“Uzbek’s second mother tongue”. However, preserving its importance on communicational level and the function of lingua franca for ethnical minorities. English, in its turn has been continuously increasing in importance and acquiring the status of the most preferred foreign language to be learned.

The Presidential decree was enacted on the Resolution of the Cabinet of Ministers of Uzbekistan, which substantiates foreign language teaching significance comprehensively. It has got points for English language and affirms following: Firstly, from 2019 on all the applicants applying to the universities who puts in IELTS (5.5 band score) or TOEFL (IBT 72) certificates, plus the ones who has got B2 level on CEFR or FCE (Cambridge assessment English) are privileged to get the total high score in entrance examination on English as a primary subject. Secondly, the applicants taking exam on English as a minor subject must show IELTS (4.5 band score) or TOEFL (IBT 42) certificates either B1 level on CEFR or FCE in order to take a privilege for the total high score. In this research, secondary school pupils are taken as subjects, as most of the English test takers are considered to be the very secondary school learners. In the following, a scientific research will be held on English Language Assessment in secondary schools [2].

## **II. RESEARCH AND RESULTS**

The Common European Framework of Reference (CEFR) is the internationally recognized framework for learning, teaching and assessment. This framework became the requirement in teaching and learning languages in Uzbekistan from 2013 onwards in the education system. Since then several reforms has been adopted in order to create domestic multistage of the CEFR in the country [3].

Now we discuss whether English Language Assessments mentioned above matches or not for the pupils of secondary schools. In order to reveal the given problem, the experience was held with the participation of 15-year-old school children in the period between September 2020 and October that year. About 15 pupils were selected for experiment and another 15 pupils was only for comparing the difference and improvement between them. The first group was assessed according to Uzbek model of CEFR and the other group according to IELTS. The results of the research are distinctly shown in the following diagram.



In the diagram there are given the improved degrees of pupils in per cents. Within the arranged period of time, the two groups were offered Uzbek model of CEFR and IELTS and as Uzbek model of CEFR assesses not only the four skills, but also grammar and vocabulary, the experiment group dominated the simple group. The used assessment strategies were helpful for the basic 4 English skills: reading, writing, listening and speaking, also grammar and vocabulary. They got accustomed to using new tools because they are widely being used in our daily life nowadays.

### III.CONCLUSION

The experiment gives relatively good results despite the short period of study. They give a real opportunity to “break the pattern” and to enrich the English teaching process at secondary schools. Uzbek model of CEFR generally helps to assess:

- a) using grammar and vocabulary;
- b) knowing rules of speaking, i.e. how to begin and end conversations, what topics may be talked about in different types of speech events, which address forms should be used with different persons one speaks to and in different situations;
- c) knowing how to use and respond to different types of speech acts, such as requests, apologies, thanks, and invitations.

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## BIOECOLOGICAL CHARACTERISTICS OF NEMATODES IN THE SOILS OF NAVOI REGION

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### ABSTRACT

*Soil samples taken from industrial enterprises of Navoi region were tested in the laboratory. Representatives of soil nematodes were 401 nematodes belonging to 2 subclasses, 3 subgroups, 12 families, 4 small families, 2 subgroups, 22 genera and 51 species detected. It should be noted that some of these nematodes were found on the horizon at a distance of 1000 meters from the perimeter of the plant, and most of them were found in layers of 20-40 cm. Analysis of soil samples taken from the horizon at a distance of 1,500 meters from the plant also revealed the presence of several nematodes. The nematodes found were relatively numerous at both distances on the south and north sides of the plant, and the conclusions will be drawn from the study.*

**KEYWORDS:** *Salinization, Saprobiotic, Multicellular, Biocenosis, Systematics*

### INTRODUCTION

Navoi region is one of the largest regions of the Republic of Uzbekistan, with an area of 111,000 square kilometers. The region is one of the most industrialized regions in the country, which includes the largest industrial enterprises in Central Asia: Navoi Mining and Metallurgical Combine, Navoiyazot Production Association, Kyzylkum Cement, Navoi Electrochemical Plant and others. These enterprises emit more than 560,000 tons of various toxic substances into the atmosphere per year, and these wastes pollute the soil through sewage.

Currently, the waste of the Mining and Metallurgical Combine alone occupies 280 hectares of land, the plant emits more than 268,000 tons of toxic waste per year and regularly pollutes the air, soil and groundwater with cyanide, sulfuric acid, ammonia, nitrate and other wastes.

Navoi region has uranium ore deposits, which contain large amounts of uranium, which, due to its radioactivity and radon emissions, can pose a serious threat to public health. Industrially produced uranium radioactive waste and rock deposits are natural sources of radioactivity. The radioactive waste storage area in the region is also an environmentally hazardous source of pollution. The radioactive waste can be blown into the Dormon, Azamat and Turkmen villages, where the last part of the plant's waste is stored. This is dangerous for the livelihoods of the local population.

Due to the fact that the amount of mineral fertilizers produced by Navoiy Electro-chemical Plant is several times less than the volume of products produced by other industrial enterprises in the city, the amount of emissions into the atmosphere is relatively small, but these wastes contain highly toxic substances.

The level of air pollution in Navoi and its environs is generally considered dangerous, and due to the specific nature of the desert zones, the amount of dust particles in the air of these areas is always much higher than normal. (0.116 mg / m<sup>3</sup>, 0.8 PDK).

The region's arable lands drink mainly from the Zarafshan River, which is the most ecologically vulnerable river. Its upper reaches are the Anzob concentrator in the Republic of Tajikistan, the middle reaches are the Southern and Ingichka deposits in Samarkand region, and the lower reaches are Kattakurgan and Navoi regularly polluted by industrial wastewater.

Excessive tillage leads to salinization and contamination with mineral fertilizers, heavy metals, reduced humus content, increased erosion and other negative consequences. Land degradation in the region is mainly caused by the obsolescence of irrigation and drainage systems, the backwardness of irrigation equipment and technology, and wasteful use of water, which in turn leads to deterioration of land reclamation and soil salinity leads to extinction. Currently, 45-55% of the region is saline, and groundwater is very close in Karmana, Navoi, Navbahor and Kyzyltepa districts. In these areas, the drying up of crops and trees due to rising groundwater is becoming commonplace. Most of the pumps designed to draw groundwater have become unusable.

Structure and biological significance of nematodes. Nematodes are organisms that are adapted to living in a variety of environments and can be found in water, soil, and in the bodies of plant and animal organisms. A unique school for the study of nematodes - roundworms - has been established in Uzbekistan, which is named after the late Professor Ahror Tulaganov. Today, the work of the teacher is continued by many of his students.

Nematodes are the main part of multicellular organisms in the soil biocenosis and are an important link in the food chain in the soil. Nematodes are found in large numbers in the soil layers, the decomposition of any organic matter in the soil occurs in the presence of nematodes and the soil is saturated with organic and mineral substances. Many species of nematodes parasitize various organs of humans, plants and animals, cause many infectious diseases in humans and animals, leading to reduced plant productivity.

The body of roundworms is covered with a layer of mature cuticle, which protects them from any harmful substances. The mature cuticle layer is the main means of protection, allowing it to survive in a variety of environmental conditions. The movement of nematodes is also unique, they move differently in different layers of the soil.

## EXPERIMENTAL PART

In order to study the vertical and horizontal distribution of nematodes in the soils of Navoi region, soil samples were collected around industrial enterprises. These are: Navoi Nitrogen Production Association, Kyzylkum Cement Production Association, Hydrometallurgical Plant of Navoi Mining and Metallurgical Combine.

Soil samples were taken from around the industrial enterprises, at depths of 0-20, 20-40 cm at a distance of 1000, 1500 and 2000 m along the four horizons, and a total of 108 soil samples were collected around the enterprises and laboratory nematodes were isolated by the Berman method. A metal net was placed over the water in the funnels, soil samples were placed through a two-layer gauze, and the funnels were kept for a day. In doing so, the nematodes in the soil floated in the water and settled to the bottom of the funnel. One day later, nematode water was separated from the funnels into test tubes containing 4% formalin, and a label was placed on the test tubes indicating where and when the soil sample was taken. From these nematodes were prepared permanent preparations in glycerin-gelatin by the methods of ES Kiryanova and EL Krall. To do this, the nematode water was gradually placed on a Petri dish and the nematodes were isolated using the MBS binoculars. Isolated nematodes were placed in a watch glass with clean water, mixed with 96% glycerin-alcohol and stored for one day. The body of glycerol-alcoholized nematodes is bright and can be easily seen under a microscope. After that, glycerin - gelatin is instilled on the glass of the object, nematodes are placed on it, covered with closed glass and permanent drugs are prepared. The location of nematodes is determined by a microscope and included in the ring with a black dream.

To study the taxonomic composition of nematodes using the prepared dry preparations were analyzed in the scientific laboratory "Soil Zoology" of the Department of "Zoology of vertebrates and invertebrates" of the Faculty of Biological Soil Science of the National University of Uzbekistan. Examination of soil samples taken around industrial enterprises in Navoi region revealed different changes in the number of nematodes on different horizons. The difference in the number of nematodes is due to the fact that industrial wastes are blown in different directions by the wind. The fertility of the soil where industrial waste falls is reduced and the humus layer is eroded. As the number of nematodes living in the surface layer of the soil decreases, industrial wastes migrate from one layer of soil to another, reducing their life activity.

Taxonomic role and ecological-trophic groups of soil nematodes in terms of species composition. Examination of soil samples around industrial enterprises revealed the presence of nematodes belonging to 51 species. The taxonomic role of nematodes was determined by the systematics of J.B.Goodey (1963), E.Kiryanova, E.Krall (1969-1971), M.H.Siddiqi (1971-1968), I. Andrassy (1976) and other scientists. All found soil nematodes belonged to two subclasses (Adenophorea, Secernentea.), to three subfamilies (Dorylaimida, Rhabditida, Tylencheda). There were 2 families belonging to the Dorylaimida detachment, 4 family members belonging to the Rhabditida detachment, and 1 family member belonging to the Tylencheda detachment.

These soil nematodes A. A. Paramonov (1962) and G.I. According to the classification of Solovyova (1989) are divided into 6 ecological-trophic groups. These groups differ from each other in the nature of nutrition, but the groups of all nematodes are a unique link in the general food chain and play a key role in the metabolism of substances in nature.

1. Typical parasites parasitize healthy plant tissues, destroy highly active enzymes and cause various specific diseases in plant tissues and organs.
2. Potential parasites. In addition to parasitizing plant tissues, they are also adapted to living in a saprobiotic environment.
3. Mycotrophs - they enrich the soil with nitrogen compounds and feed on fungal residues. *Aphelenchus cylindricaudatus* was found in this group.
4. Devisaprobionts - live in a saprobiotic environment. In the experiment, species such as *Cephalobus persegnis*, *Shiloplacus bibigulae*, *Cervidellus habibullae*, *Eucephalobus elongatus* were encountered.
5. Algae - they live around the roots and live like single-celled algae. The type *Eudorylaimus monohystera* was found in the experiment.
6. Wild nematodes are single-celled organisms that live in the soil and are relatively rare in the study area.

## CONCLUSION

Soil samples taken from industrial enterprises of Navoi region were tested in the laboratory. Representatives of soil nematodes were 401 nematodes belonging to 2 subclasses, 3 subgroups, 12 families, 4 small families, 2 subgroups, 22 genera and 51 species detected.

It should be noted that some of these nematodes were found on the horizon at a distance of 1000 meters from the perimeter of the plant, and most of them were found in layers of 20-40 cm. Analysis of soil samples taken from the horizon at a distance of 1,500 meters from the plant also revealed the presence of several nematodes. The nematodes found were relatively numerous at both distances on the south and north sides of the plant, and the following conclusions can be drawn from the study:

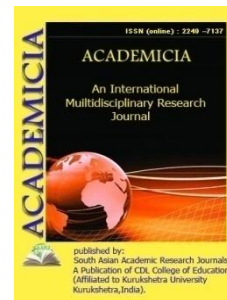
- Taxonomy of nematodes found in soil samples taken around the enterprise according to the systematics of such scientists as J.B. Goodey (1963), E. Kiryanova, E. Krall (1969-1971), M.N. Siddiqi (1971-1986), I. Andrassy (1976) According to him, the found nematodes belong to 2 subclasses and 3 squads.
- The higher the number of nematodes in the north and south, the greater the amount of dust and various gases emitted into the atmosphere from the plant by the wind to the east and west of the plant.
- Harmful substances fall into the soil, reducing soil fertility, leading to a decrease in the humus layer, and their reduction in species and numbers as a result of their impact on the organism of nematodes through the food chain in the soil;
- Relatively low number of nematodes in the 0-20 cm layer of soil, harmful wastes can fall on the top layer of soil and damage them, as a result of which nematodes can migrate from one layer of soil to another.

In order to improve the environment and reduce industrial waste in Navoi, the following suggestions can be made:

- Industrial enterprises located in the city area should be equipped with the latest, most modern equipment, strong filters should be installed at the end points of waste disposal;
- It is desirable to develop waste recycling technologies and turn the waste into environmentally friendly products.

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## PEDAGOGICAL DIAGNOSTICS AND ITS ROLE IN THE EDUCATIONAL PROCESS

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### ABSTRACT

*Based on the attention and requirements presented by society in the educational process, it is required to teach taking into account the individual, psychological and personal characteristics of students. For this, teachers need to know the diagnostic methods in accordance with modern requirements, as well as be able to put them into practice. It is pedagogical diagnosis that allows you to effectively use diagnostic methods in the educational process. The content of pedagogical diagnostics lies precisely in the methodological and pedagogical process, the speed of cognition and assessment, regulation and correction of the student or teacher, regardless of the level of activity.*

**KEYWORDS:** *Diagnostics, Pedagogical Diagnostics, Diagnostic Functions, Diagnostic Tools.*

### INTRODUCTION

In today's complex globalization, the focus of all reforms in Uzbekistan is the individual. That is why teachers have a great task to bring up a new generation that is ready to continue the reforms launched on the path to independence, to have their own ideas and worldview, modern knowledge and thinking. Only well-developed individuals can demonstrate the brightest human and civic qualities in the path of development and prosperity of the country. For this reason, in this article we have tried to explain the importance of using the opportunities of pedagogical and diagnostic activities in the education of students as fully developed individuals.

In the course of their work, educators should implement diagnostic tools taking into account the individual characteristics of each student. This requires that the educational process in educational institutions be organized on the basis of special curricula, in a logical sequence. An incorrect diagnosis can not only invalidate all the efforts of the specialist, but also lead to



another, more serious problem, eliminating the possibility of solving the existing problem. Correction of negative factors identified on the basis of pedagogical diagnostics, ie in the process of pedagogical therapy and correctional activities of the teacher is also important.

Pedagogical diagnostics, firstly, facilitates the process of individual education, secondly - provides and guarantees the correct identification of educational outcomes based on the needs of society, and thirdly helps to make a rational choice of specific educational direction and specialization. With the help of pedagogical diagnostics, the educational process is analyzed, the results and dynamics of change are determined, and science-based methodological recommendations are given.

However, in the information resource centers (libraries) of educational institutions there is not enough literature that reflects the current state of the world theory and practice of pedagogical measurements. Today, the first steps are being taken in our pedagogical universities to create and use professional methods and tools of pedagogical diagnostics in the training or retraining of personnel. The implementation of scientific and methodological work in this area will undoubtedly help to bring the quality and content of education in our country to the level of developed countries.

Now let's talk about the terms "diagnostics" and "pedagogical diagnostics". The term "diagnostics" (from the Greek "dia" - transparent and "gnosis" - knowledge) means a common way of obtaining initial information about an object or process being studied. Diagnostics is defined as a method of knowing, studying, and creating the various relationships, states, qualities, and characteristics of research objects.

Today, diagnostics is widely used in various areas of human activity, and the most widely used types include "medical diagnostics", "psychodiagnostics", "management diagnostics" and "technical diagnostics".

Pedagogical diagnostics means defining the essence of realities in the field of pedagogical activity, comprehensive study of processes, reflecting the complex movement of pedagogical factors. Its task is to provide the educator and the supervisor with fast and reliable information about the interrelated movement of causes, which of them is critical at the moment. Therefore, it is important to diagnose all components of the educational and methodological process. The content of pedagogical diagnostics means the rapid study and evaluation, regulation and correction (correction) of the methodological and pedagogical process, regardless of the level of activity of the child, the teacher or the leader.

According to A. Jurinsky, a scholar of pedagogical history, Abu Rayhan Beruni used several alternative answers in his work "At-Taqvim" dedicated to the teaching of geography, mathematics and astronomy. He raised the issue of learning concepts by asking comprehensive questions.

Psychologists first diagnosed the child to determine the level of intellectual development (KN Kornilov, MA Sikorsky, V.Shtern, RI Sunnatova), and then studied its formation as a full-fledged psyche and personality (Sh.Abdullaeva, L .A.Vengir, N.Dalimova, Z.I.Kalmikova, T.D.Morsinkovskaya, N.I.Nepomnyashaya, N.F.Talizina, Sh.Tulaganova D.B.Elkonin and others) [].

Until now, pedagogical diagnostics has been used to determine the appropriateness of teaching

methods used in the educational process (KN Buchgolts, R. Mavlonova, N. Rakhmonkulova, PAShevarev), and then began to be used to determine the results of the educational process. .

Pedagogical diagnostics is aimed at more effective implementation of the functions of the educational institution, including the study of the educational process and all the components and connections in the system of the educational institution on the basis of a system-functional approach. Therefore, pedagogical diagnostics is considered as one of the most important components of the educational process in the educational institution, as a theoretical and practical field of pedagogical science.

Pedagogical diagnostics, as a theoretical field of pedagogy, provides recommendations for the development and implementation of reliable diagnostic methods for determining the level of education and upbringing of a person, criteria for the level of formation of personality traits, interpretation of results and rules of their correct and effective use. In some cases, such rules may be a little easier to use, and in some cases they may be too complex, requiring additional knowledge, skills, and competencies from the educator.

The practical activity of pedagogical diagnostics is reflected in the use of diagnostic methods developed on the basis of theoretical research in teaching and educating students, monitoring the formation of traits in students, determining the direction and content of educational activities and correctional work.

The results of pedagogical diagnostics are shown in the table below.

#### **The main functions of pedagogical diagnostics:**

**The feedback function** in the educational process serves as a basic source of information for planning and developing future pedagogical processes based on diagnostic data on the level of upbringing and education of students at a certain stage of development, ie the analysis of previous pedagogical experience. Obtaining important information on the development of the educational process, the analysis of the results obtained will help to prevent and timely correct shortcomings that may occur in this process.

**The assessment function** is also important for pedagogical diagnostics. Modern and comprehensive assessment has many aspects: value-orienting, corrective, incentive, and measurable.

Value-oriented assessment enhances the student's views and perceptions of the person and himself or herself, allowing him or her to compare his or her spiritual, labor, aesthetic, and other qualities with the demands of society. Through pedagogical assessment, students change their values.

The corrective aspect of pedagogical assessment is that the educator helps to adapt his actions to the norms of society, to further develop the system of relationships with others.

The motivating aspect of pedagogical assessment is particularly high when it is consistent with the actual development and behavior of the learner. When the student sees the objectivity of his assessments, he tries to develop the positive aspects he has or to overcome the shortcomings.

**The management function** of pedagogical diagnostics is related to the main stages of development of the student community and individual student personality. Accordingly, three

types of pedagogical diagnostics can be distinguished: initial (primary), current (control) and generalizing (final).

Pedagogical diagnostics collects, records, identifies dynamic trends, predicts the further development of reality by determining the degree of formation of certain qualities in the personality of the student and assessing them at certain values, using specific methods.

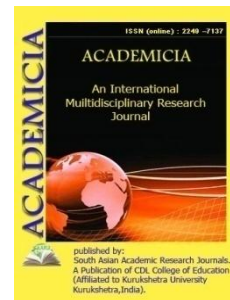
Pedagogical diagnostics is one of the most important components of the educational process in an educational institution and is considered as a theoretical and practical field of pedagogical science.

The object of pedagogical diagnostic activity is the interaction, cooperation of subjects of the pedagogical process, as well as the behaviors and attitudes that arise in this process.

1. The relationship between the conditions of individual and personal development in the field of education and the causes and consequences of future changes serves as the subject of pedagogical diagnostics.
2. Pedagogical diagnostics should also take into account the immediate social environment of students. In doing so, the study of individual students and groups of students should focus on identifying behaviors and their causes, rather than expressing evidence.
3. Diagnostic activities are carried out on the basis of clear principles, the effectiveness of which is determined not only by the quality of training. At the same time, the content of pedagogical activity, direction, quality of educational impact should be taken into account.
4. In order to achieve the planned results in the educational process, it is important to regularly diagnose in students not only personal and psychological qualities, but also the level of formation of spiritual and moral qualities. Fulfillment of this condition allows the educator to monitor the educational impact.

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## WAYS TO DEVELOP CRITICAL THINKING IN ADOLESCENTS

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### ABSTRACT

*The ability to think critically is one of the key skills of the 21st century. Every day we voluntarily or involuntarily absorb so much information that sorting, processing and evaluating it is absolutely necessary. The amount of information around us is growing exponentially. Even adults sometimes find it difficult to separate the necessary from the unnecessary, the truth from the lie. What does critical thinking lead to? Towards an affirmation in truth. It can be scientific discoveries, effective solutions to any business or everyday issues, overcoming crisis situations, the formation of personal beliefs and the acquisition of the meaning of life.*

**KEYWORDS:** *Critical Thought, Processing, Evaluation, Adolescence.*

### INTRODUCTION

The famous American psychologist and educator Diane Halper writes in her work “The Psychology of Critical Thinking”: “The most expensive commodity in America is thinking and educated adults. The goal of the education system should be to have as many of them as possible.” This statement characterizes as accurately as possible the current attitude of most developed countries to such an important social sphere as education. The top priority in it is not so much the acquisition of a large amount of knowledge by students as the development of their intellectual

and creative potential, which allows them to produce new knowledge in the future, which, in practical embodiment, will serve as a source of sustainable development of the state, nation, and allow it to gain technological superiority over other countries.

E. S. Polat in the textbook "New pedagogical and innovative technologies in the education system" notes: "The main, strategic direction of the development of the education system is in solving the problem of personality-oriented education, an education in which the student's personality would be in the center of the teacher's attention, a psychologist, in which the activity of learning - cognitive activity, and not teaching - would be leading in the teacher-student tandem, so that the traditional paradigm of education - teacher-student-textbook would be decisively replaced by a new paradigm - student-textbook-teacher. This is how the education system is built in the leading countries of the world. It reflects the humanistic direction in philosophy, psychology and pedagogy. "

The digital society aggressively imposes its living standards on people. The amount of information around us is growing exponentially. Even adults sometimes find it difficult to separate the necessary from the unnecessary, the truth from the lie. Being constantly involved in the Internet, people lose purposefulness of thinking and activity, cease to control themselves, wasting time in vain and wasting mental strength on momentary, unnecessary things. In order for life not to dissolve in the information space, it is necessary to keep oneself in tight-knit gloves and to be critical of every piece of information, every mouse click.

Even harder for children. Immature will and thinking make them literally rush to everything that is bright, dynamic and exciting. So, having not yet had time to form and determine, the personality dissolves, is carried away along information waves in an unpredictable direction, which sometimes leads to fatal consequences - involvement in dangerous communities, moral and moral corruption, digital dementia, gambling and Internet addiction (which is already officially recognized mental illness, akin to alcoholism and drug addiction). Much has been said and written about the negative impact of the Internet on children. Nevertheless, public education continues to pursue a course towards informatization and digitalization. Pupils are placed in such conditions that study becomes impossible without gadgets and the Internet.

How can children survive in such conditions? Following the principle "if you cannot change the situation, change your attitude towards it," the educational system offers to vaccinate children against all the evils of the information space - to form critical thinking in them. It would seem an excellent solution, because it is critical thinking that helps us to keep from trusting dubious sources and to keep ourselves under control, not clicking on random links.

However, critical thinking is needed not only for the intelligent consumption of Internet content and security in the network space. Children need it both in their studies and in building relationships with peers. Such thinking is necessary in order to resist harmful influences, overcome obstacles, adequately perceive their own mistakes and failures. Without it, a reasonable choice, self-development and the achievement of serious goals are unthinkable. Obviously, critical thinking was needed by people at all times and somehow it developed in them. But only now we are seeing how critical thinking is being forcefully and massively formed in children with the help of special technologies, starting from preschool age.

Why are children being artificially shaped to have critical thinking?



We have already identified one of the reasons - children's immersion in the Internet space requires the ability to filter out unnecessary, harmful information.

The second reason is the SES, which obliges that children in school do not acquire knowledge, skills and abilities, but “learn to learn,” that is, they set their own learning goals, achieve them and evaluate the results. Agree, this is not always possible for an adult - we ourselves attend professional seminars, trainings, fitness clubs and foreign language courses, and starting a new business, we are always glad if there is a mentor who can teach us using his rich experience. Naturally, such a super task from the SES requires mature critical thinking, and our education system has no choice but to try to form it en masse even in kindergarten.

Finally, the third reason is simply a fashionable theme that flourishes on parental and pedagogical vanity. It is very “cool” to be engaged in innovations and to be the owner of a special technology for the upbringing of “supermen” with superpowers. Such is the easily promoted topic. Pure marketing, nothing personal.

Real, mature critical thinking has nothing to do with the nihilistic debater who denies everything and everyone except his own opinion. For convenience, let's call this thinking pseudo-critical. At first glance, it looks like it is critical, but in fact it is not.

The purpose of critical thinking is to find truth and separate true information from false information. The pseudo-critical seeks not the truth, but "rightness", tries to argue with the opponent, push through its line, and achieve superiority.

Pseudo-critical thinking is subjective, impulsive and emotional; critical is reasonable, based on good self-control, and strives for objectivity.

Pseudo-critical thinking criticizes only the ideas of others; the critical is equally balanced about one's own and other people's thoughts. Possessing critical thinking, a person is ready to admit his own mistakes, reconsider false, unreasonable conclusions and abandon beliefs that have not withstood the test of reality and common sense. In pseudo-critical thinking, he is completely closed to the perception of judgments, facts and circumstances that indicate his mistakes.

Critical thinking is born of the need for truth, pseudo-critical thinking is born of protest. The latter is always the fruit of unstable self-esteem, a kind of psychological defense - self-affirmation, exaltation over others at the expense of righteousness, or simply preserving oneself, when the recognition of one's mistake is subjectively equivalent to the collapse of the personality. What does critical thinking lead to? Towards an affirmation in truth. It can be scientific discoveries, effective solutions to any business or everyday issues, overcoming crisis situations, the formation of personal beliefs and the acquisition of the meaning of life. Pseudo-critical thinking, when it absolutely prevails in a person's life, leads him to extreme egocentrism, worldview relativism, awareness of the plurality of "truths" or the absence of truth in general, and as a result can lead to despair and a sense of meaninglessness of existence.

If we understand thinking as the process of processing information and making decisions, then there will be no mistake in using this concept. The fact is that in our soul there is nothing separate, isolated. All mental processes are interconnected, and the younger the person, the more they are fused together. We know, for example, that a two-year-old child is dominated by manual or visual-active thinking (is it thinking? Or action?), And it will take three or four years before he learns to think without doing, but only observing or imagining images, and a few more years



before he can reason theoretically, without relying on an image. In this case, all the ancient "layers" of thinking will remain, only one more new, higher form of it, an additional opportunity will appear. In the same way, the younger the child, the more impulsive and merged with emotions his thinking, and only as he grows up does the ability to think objectively and impartially appear.

Critical thinking is not just the level of development of a particular mental process. This is a phenomenon related not only to thinking, but also to the individual as a whole. We think it will not be a mistake to say that critical thinking can be considered as one of the criteria for personal maturity. It would be absurd to try to invent a "technology" that will force a child to reach the psychological maturity of an adult already at preschool or primary school age - only time and life experience can do this. This means that it is a pointless task to form full-fledged critical thinking in a preschooler or younger student with the help of certain techniques and exercises. It will be an illusion. Soap bubble.

What is important to do as a teenager to develop critical thinking?

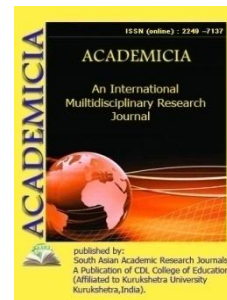
Teenagers, as a rule, are already able to express a personal attitude to phenomena, events, opinions, and they even like to do it. Opening up your own mind is very exciting. The teenager treasures him extremely, and it hurts painfully when his point of view is criticized or condemned. The task of a wise adult is to carefully lead the child a little beyond the limits of his black-and-white picture, to show (or rather, allow to see, as far as possible) the depth and complexity of the phenomenon in question. But to show so as not to hurt, to maintain trust, and so that the resulting understanding remains for the teenager real and his own.

All adolescent reactions, to which the child is prone by his psychological type, will be significantly aggravated, causing a lot of trouble for both the child himself and his parents and teachers.

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## INFLUENCE OF PUPIL-TEACHER ATTACHMENT PATTERNS ON EMOTIONAL WELL-BEING OF PRIMARY SCHOOL PUPILS IN RIVERS STATE

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### ABSTRACT

*This study investigates the influence of pupil-teacher attachment patterns on emotional well-being of primary school pupils in Rivers State. Three research questions and three hypotheses were formulated to guide the conduct of the study. The population comprised all primary six pupils in Rivers State. The research design adopted for the study is ex-post facto research design. The sample is made up of 1,000 pupils selected through multi-stage sampling technique. The instruments for data collection were Pupil-Teacher Attachment Pattern Questionnaire (PTAPQ) and Emotional Wellness Scale (EWS). The reliability of PTAPQ and EWS were determined through Cronbach Alpha method of estimating reliability. The reliability coefficient of PTAPQ is 0.84, while the reliability coefficient of emotional well-being (EWS) is 0.82 respectively. The validity of the instruments were determined by experts in measurement and evaluation. Mean and standard deviation were used to answer the research questions while two-way Anova was employed to test the hypotheses. The result indicated that, there is a significant influence of pupil-teacher attachment patterns on pupils' emotional well-being, there is no significant influence of pupil-teacher attachment patterns on pupils' emotional well-being based on gender and there is no significant interaction effect of pupil-teacher attachment patterns and gender on pupils' emotional well-being. Based on the findings, the paper recommended amongst others that teachers should establish secure pupil-teacher attachment pattern with all pupils irrespective of gender.*

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**KEYWORDS:** *Pupil-Teacher Attachment Pattern, Emotional Well-Being, Secure Attachment, Avoidant Attachment, Disorganized Attachment, Ambivalent Attachment.*

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## INTRODUCTION

Emotional well-being is related to mental, social and physical health. Research has established that there is a relationship between students' academic achievement and emotional wellbeing. The mental health foundation described emotional well-being as a positive sense of well-being which enable an individual to function effectively in the society and cope with the challenges of everyday life. It is characterized by emotional regulation, motivation, and self-awareness. Emotional wellbeing enables the individual to regulate emotions appropriately, function effectively in the society and adapt easily to learning environment. Consequently, teachers need to develop secure attachment pattern with their pupils, which will promote school adjustment and pupils' emotional wellbeing.

Keifer (2008) defined emotional well-being as a state of being physically, socially and emotionally balanced. In the same vein, Stewart-Brown noted that emotional well-being is more than a state of happiness; it encompasses the well-being of the soul, body and mind. The importance of pupils' emotional wellbeing cannot be over emphasized. Emotional wellbeing enable pupils to regulate their emotions, thoughts and behavior appropriately, it fosters resilience and the ability to cope with the challenges of everyday life. Furthermore, a pupil that is emotionally stable has the ability to accept task without avoiding them, have capacity to function independently without undue dependence on others and establish positive relationship with their teachers and peers. However, most primary school pupils are emotionally unstable which has affected their well-being, social skills and academic performance. Teachers and school administrator have a role to play in ensuring the emotional well-being of pupils. It would be practically and morally wrong for educators to emphasize on academic achievement when most pupils are emotionally unstable.

Emotions influence our perspective about life. Emotional well-being facilitates an individual's adjustment to his environment as well as assist the individual in making realistic decisions and live happily with maximum effectiveness and happiness. More importantly, the World Health Organization (WHO) states that emotional well-being is connected to physical health. This assertion has been supported by series of epidemiological studies. Diener and Chen (2011) noted that subjective well-being is associated with health and longevity. Emotional distress has multiple health implications such as cardiovascular diseases, stress and viral infections. Teachers and Educational administrators have a role to play in stabilizing students' emotional state. Pupils spend approximately six to seven hours a day in the classroom, as such the relationship that exist between pupils and teachers is critical to their emotional stability. A classroom environment that is tensed, lack psychological support and social support could have negative impact on the learner. It is absurd to focus on pupils academic achievement when they are emotional destabilized.

Emotion as a concept has varied definitions; Plutchick in Gray (2007) defined emotion as a subjective feeling that is mentally directed towards some object. The object in this instance is the teacher and the feeling refers to emotional experience. In the same vein, Durojaiye in Nnachi (2010) referred to emotion as an outward expression of inner feelings of an individual, it is a stirred up by a state in an organism. These inner feelings could be pleasant or unpleasant. A

feeling of pleasure could be experienced in a classroom where the teacher is encouraging, supportive and responsive. Conversely, negative emotions could be triggered by teacher's lack of responsiveness, apathy towards pupils' well-being and lack of interest in their general well-being. Plutchickin Nnachi (2010) identified eight primary emotions arranged in four opposites, joy versus sorrow, Anger versus fear, Acceptance versus defeat and surprise versus expectancy either of these emotions could be stirred up in a pupil depending on pupil-teacher attachment pattern. It is on this note that the emotional well-being of pupils are being studied. Pupils who are emotionally healthy are in control of their cognitive processes, they have adequate control of their emotions whether positive or negative. They are also able to manage and cope with the challenges in their environment, conversely, emotional distress trigger risk behaviors such as aggressiveness, drug abuse, decreased academic performance, low self-concept and lack of confidence in their abilities. Based on the foregoing, the paper investigates the influence of pupil-teacher attachment patterns on pupils' emotional well-being.

### **PURPOSE OF THE STUDY**

The research centers on the influence of pupil-teacher attachment patterns on pupils' emotional well-being. The study intended specifically to achieve the following objectives:

1. Determine the influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being.
2. Examine the influence of pupil-teacher attachment pattern (secure, ambivalent, avoidant and disorganized) on pupil emotional well-being based on gender.
3. Examine the interactive effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant, disorganized) and gender on pupils emotional well-being.

### **REVIEW OF RELATED LITERATURE**

Attachment is an enduring connection between two individuals, this implies that pupil-teacher attachment pattern refer to the level of connection or bond between a pupil and the teacher. Attachment relationship is pivotal for pupils' emotional well-being, social competence and academic performance. There is an established link between attachment and emotional well-being. Pupils who are not emotionally stable are at risk of diseases such as depression, anxiety and cardiovascular diseases. Merz and Consedine (2001) stated that the more secure the attachment relationship is, the higher the individual's emotional stability. It is apparent that socially and emotionally supportive relationship has effect on pupils' mental, physical and social development. Pupils are not likely to become emotionally stable, if there is no secure attachment relationship with their teachers. Attachment relationship could help the teachers to be proactively, instead of reactively interpret the emotional state of pupils and provide the needed remedial measure.

Bowl by in Matthews (2014) stressed the need for children to develop attachment relationship with a caregiver. He noted that, the type of attachment children formed during childhood could have an impact on subsequent relationships. Attachment in classroom is characterized by pupils seeking proximity to the teacher. Pupils that have established secure attachment pattern with their teachers regulate their emotions appropriately, they are self-confident and less prone to violent behavior. Also such pupils have correct perception about their selves and people around them (Matthews 2014). Conversely, pupils with insecure attachment pattern find it difficult to regulate their emotions appropriately, experience behavioral and emotional disturbances.



Ainsworth classified attachment into four types: Secure Attachment Pattern, Avoidant attachment pattern, Ambivalent attachment pattern and Disorganized attachment pattern.

**Secure attachment pattern:** This refers to an attachment pattern where there is an affectionate tie or bond between a pupil and a teacher. This attachment pattern is based on mutual trust and teacher's consistent responsiveness to the needs of the pupil. The bond between the teacher and the pupil help to build the child's confidence and enable him/her to engage in productive activities. Secure pupils are able to solve problems, explore the classroom and they are emotionally stable and resilient. Secure attachment enables pupils to regulate their emotion, motivate and improve their social skills.

**Avoidant attachment pattern:** Avoidant behavior is triggered by teacher's insensitivity, neglect and absence in the child's life which culminates to avoidance behavior. This attachment pattern is developed when a pupil is independent of the teacher. There is a feeling of indifference about the presence of the teacher. It is characterized by social incompetence, sudden outburst, avoidance of any form of assistance when distressed and inability to manage their emotions appropriately.

**Ambivalent attachment pattern:** This attachment pattern is triggered by teachers' inconsistent responsiveness and lack of interest in pupils' behavior. Ambivalent attachment pattern is characterized by passive, fussy, hyperactivity, attention seeking and difficulty recovering from distress. Pupils with this attachment pattern lack trust in the teacher which affects the bonding process and they often experience difficulties in adaptation.

**Disorganized attachment pattern:** It is characterized by display of disorganized behavioral pattern, feeling of worthlessness and hopelessness. Pupils with this attachment pattern have negative view about themselves and others around them, it stems from maltreatment, lack of responsiveness and care for the child. Such pupils have low self-esteem and feeling of unacceptance by others (Bergin & Bergin 2009, Bomber 2007, Greddis 2006.)

Dointe (2015) examined attachment relationship with emotional intelligence. The result indicated that there is a positive relationship between self-esteem, emotional intelligence and subjective well-being. This result is in conformity with previous empirical findings. In the same vein, Monaco, Schoeps and Montoya-Castilla (2019) investigated attachment styles and well-being of adolescents, the result indicated that emotional competence mediate relationship between parents' attachment and well-being. The study also pointed out that attachment to parents is vital to adolescents' well-being. In the same vein, Ruppel, Lievsch and Walter (2015) investigated the influence of psychological well-being on academic achievement and interaction effect of socio-emotional state. A sample of 508 boys and girls were used. A cross-sectional research design was adopted for the study, a Kidscreen-27 questionnaire was used for data collection, and multiple linear regressions was used for data analysis. The result indicated that negative emotions affected psychological well-being. However, it had an indirect positive effect based on school environment.

Interestingly, Karremon (2012) studied students' attachment style and psychological well-being. The sample used for the study was 632 students and the result indicated that secure and dismissive attachment pattern is connected to psychological well-being, this is in agreement with the present study. Similarly, in a study carried out by La Guardes, RyanCouchman and Deci (2000), it was established that attachment security is associated with subjective wellbeing.



Furthermore, Itong, Heubner and Hills (2013) found results that were in agreement with the above study using 201 middle school students to assess facts mediating between attachment and life. Satisfaction among adolescent, parental attachment and subjective well-being. The result indicates that secure parental relationship yield higher levels of subjective well-being.

### **STATEMENT OF THE PROBLEM**

Recent studies have indicated that most pupils experience sadness, low self-concept, fear, worry, rejection and anger which are characteristic of negative emotions. These negative emotions have the capacity of interfering with learning and pupil's emotional well-being. However, adequate attention has not been given to pupils' emotional well-being. Negative emotions, if not regulated and adequate remedial measures taken could degenerate to depression, stress, anxiety and phobia which could affect the child's ability to function effectively and independently in the classroom and in the society. There is lack of awareness among school administrators, teachers, counselors and students about the influence of pupil-teacher attachment patterns on pupils' emotional well-being.

Furthermore, negative emotions if not controlled could lead to inability to cope with task presented in the classroom. This could culminate to high rate of school dropout, drug abuse, hooliganism, prostitution and armed robbery. In the light of the stated problems, it is presumable that the above situation could be given the desired attention if teachers are encouraged to establish secure attachment pattern with their pupils. Consequently, the study examined the influence of pupil-teacher attachment patterns on the emotional well-being of primary school pupils in Rivers State.

### **RESEARCH QUESTIONS**

The following research questions were formulated to guide the conduct of the study.

1. What is the influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being?
2. What is the influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being based on gender?
3. What is the interaction effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) and gender on pupils emotional well-being?

### **HYPOTHESES**

The following null hypotheses have been formulated to guide the study:

1. There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils' emotional well-being.
2. There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils' emotional well-being based on gender.
3. There is no significant interaction effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) and gender on pupils emotional well-being.

### **METHODOLOGY**

The methodology discusses procedure used for the study, it is centered on the following subheadings: research design, population of the study, sample, sampling technique, instrument

for data collection, validation of instrument, reliability of the instrument and method of data analysis.

### **RESEARCH DESIGN**

The Expost-facto research design was adopted for the study Nworgu (2006) remarked that Expost-facto research design does not provide the researcher control over the variables of the study, as such cannot manipulate the variables. The research design involves collecting and analyzing data from variables that are already in place without manipulation (Nwankwo, 2006).

### **POPULATION OF THE STUDY**

The population of the study comprised all the pupils in Rivers State.

### **SAMPLE**

The total sample for the study consisted of one thousand (1000) pupils drawn from 25 schools in the eight local government areas of Rivers State.

### **SAMPLING TECHNIQUE**

Multi-stage sampling technique was used to select the sample from the primary schools in research area.

### **INSTRUMENT FOR DATA COLLECTION**

Two instruments developed by the researcher were used to collect data from the respondents (a) Pupil-Teacher Attachment Pattern Questionnaire (PTAPQ) (b) Emotional Well-being Scale (EWS). The instruments consist of two sections. Section A consist of demographic data such as gender, age and class, section B consist of items raised to elicit information from the respondents, the items were responded to on a four point Likert scale Strongly Agree (SA) = 4; Agree (A) = 3; Disagree (D) = 2; Strongly Disagree (SD) = 1 respectively.

### **VALIDATION OF THE INSTRUMENT**

The instrument (PTAPQ) and (EWS) were validated by experts in measurement and evaluation to ascertain their content validity. All the criticism and correction were made before making a final draft.

### **RELIABILITY OF THE INSTRUMENT**

The reliability of the instruments were established through Crombach Alpha method of estimating reliability. The reliability co-efficient of PTAQ is 0.84 and EWS is 0.82 respectively. These values are considered adequate and reliable.

### **METHOD OF DATA ANALYSIS**

Mean and Standard deviation were used to answer the research questions while the hypotheses were tested with 2-way Anova at 0.05 level of signifance.

### **SIGNIFICANCE OF THE STUDY**

The findings of the study will be of immense benefit to the following:

**Pupil:** The study will help pupils in Rivers state to understand the relevance of attachment to their emotional well-being. It will play a vital role in improving their self-confidence, self-

concept and improve their academic performance; it will further assist in improving their social skills.

**Teacher / School administrators:** This paper will help to enlighten teachers and school administrators about the need to place priority on the emotional well-being of pupils; it will further encourage teachers to meet the emotional needs of their pupils by teaching students emotional skills and therapeutic counseling when needed.

**Parents:** The findings of the study will enable parents to establish secure attachment pattern with their children, which will in turn serve as a template for future relationship in the classroom.

Finally, the paper will serve as a reference point for academic purposes to subsequent researchers, students, lecturers and organizations carrying out research in similar area.

## **THEORIES OF ATTACHMENT**

### **Harlows Monkey Theory of Attachment**

Harlows theory is based on the premise that the primary purpose of attachment is to provide comfort as opposed to food. He conducted series of experiments with Monkeys. In one of the experiments he separated infant monkeys from their mothers for three months, six months, nine months and one year respectively. When reunited with other monkeys, they exhibited bizarre operant's like scratching, rocking, and mutilating themselves. Consequently, Harlow concluded that lack of attachment is destructive; the longer the isolation, the severe the abnormal behavior exhibited.

In the second experiment eight monkeys were kept in two separate cages with two surrogate mothers. One made a soft terry towel while the other is made of wire. All the monkeys could have access to food from the surrogate mothers. The experiment was carried out for 165 days. Harlow observed that the monkey only approached the wire mother when hungry and once fed goes back to the towel mother, when frightened he sourced for refuge from the cloth mother which served as a secure base. This lend credence to the evolutionary theory of attachment which asserts that sensitive response is more important as opposed to food.

### **Learning / Behaviorist Theory of Attachment**

This was proposed by Dollad and Miller in Matthews (2014). They stated that attachment is precipitated by provision of food. The basic reason a child become attached to the mother is because the mother provided reinforcement which is food. They stated that an infant would form an attachment with whoever provided food. Consequently, certain behaviors like crying and smiling produce desirable responses from the caretaker, through operant conditioning they learn to repeat such behaviors that are followed by pleasurable consequences. This theory emphasized the role of reinforcement (food) in forming attachment relationship.

## **DATA ANALYSIS AND DISCUSSION OF FINDINGS**

Data presented in the study is based on research question answered and the hypotheses tested.

### **RESEARCH QUESTION ONE**

What is the influence of a pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being?

**TABLE 1: MEAN AND STANDARD DEVIATION OF PUPILS ON EMOTIONAL WELL-BEING DUE TO PUPIL-TEACHER ATTACHMENT PATTERN**

GROUP	N	MEAN	SD
Ambivalent	188	45.56	16.63
Disorganized	302	49.87	17.01
Secure	363	53.28	16.71
Avoidant	147	49.79	17.66

The result on table one revealed that the mean score of pupils on emotional well-being is as follows: pupils on secure attachment pattern had the highest mean score of 53.28, disorganized had a mean score of 49.87, avoidant 49.79 and ambivalent 45.56.

**TABLE 2: MEAN AND STANDARD DEVIATION OF PUPILS' EMOTIONAL WELL-BEING DUE TO PUPIL-TEACHER ATTACHMENT PATTERN AND GENDER**

GROUP	GENDER	N	MEAN	SD
Ambivalent	Male	103	45.22	16.70
	Female	85	45.98	16.64
Disorganized	Male	159	49.61	17.14
	Female	143	50.17	16.93
Secure	Male	199	53.15	16.30
	Female	164	53.44	17.24
Avoidant	Male	81	48.88	16.77
	Female	66	50.88	18.77

The result in the table above revealed that the males on ambivalent attachment pattern had a mean score of 45.22 and standard deviation of 16.70 while the female had a mean score of 45.98 and a standard deviation of 16.64 respectively. This indicates that the female had a higher mean score than the males by a mean difference of 0.76. The males in disorganized group had 49.61 and the female had 50.17 respectively, while the standard deviations are 17.14 and 16.93 respectively. The result indicates that the females had a higher mean score than the males by a mean difference of 0.56.

Furthermore, in considering secure attachment pattern, the males had a mean score of 53.15 and the females had a higher mean score of 53.44. This implies that the females had a higher score than the males by a mean difference of 0.37. The standard deviation of male and female score on emotional well-being are 16.30 and 17.24 respectively. Finally, for the avoidant attachment pattern, the mean scores for the males and the females are 48.88 and 50.88 respectively, while the standard deviations are 16.77 and 18.77 respectively. These results indicate that the females had a higher mean score than the males by a difference of 2.00.

## HYPOTHESIS 1

There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being.

**HYPOTHESIS 2**

There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being based on gender.

**HYPOTHESIS 3**

There is no interaction effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) and gender on pupils emotional well-being.

The three hypotheses stated in null form are tested using analysis of variance (2-way Anova)

Source	Type of sum square	Df	Mean square	f-value	significance
Pupil-teacher attachment pattern	7,417.223	3	2,472.41	6.598	0.002
Gender	176.77	1	176.77	0.615	0.433
PTAP & Gender	78.55	3	26.18	0.091	0.965
Error within	285,251.28	992	287.55		
<b>Total</b>	<b>292,992.20</b>	<b>999</b>			

From the table above, the calculated f-ratio (6.598) for pupil-teacher attachment pattern was significant at 0.000 level which is lower than the chosen 0.05 level of probability. Hence, the null hypothesis was rejected. This implies that pupil-teacher attachment patterns have a significant influence on pupils' emotional well-being. The table further showed that the f-value was significant at 0.433 level which is higher than the chosen level of probability. Hence, the null hypothesis is accepted, indicating that pupil-teacher attachment patterns on pupils' emotional well-being is not significant due to gender.

The table also showed that the calculated f-value of 0.091 for the interaction effect of pupil-teacher attachment pattern and gender was significant at 0.965 level which is higher than the chosen level of probability. This implies that there is no significant interaction effect of pupil-teacher attachment pattern on the emotional well-being of pupils. However, since a significant influence of pupil-teacher attachment pattern was found, there is need to determine the direction of the significant difference. And this was done using Scheffe test of multiple comparison. After the analysis the result observed were presented below.

**TABLE 4: SCHEFFE TEST SHOWING THE DIRECTION OF SIGNIFICANT DIFFERENCE IN THE INFLUENCE OF PUPIL-TEACHER ATTACHMENT PATTERN ON PUPILS' EMOTIONAL WELL-BEING**

Groups	Mean difference	Significant	Result
Ambivalent and Disorganized	-4.310	0.059	NS
Ambivalent and Secure	-7.717	0.000	S
Ambivalent and Avoidant	-4.212	0.0169	NS
Disorganized and Avoidant	-3.407	0.084	NS
Disorganized and Secure	0.097	1.000	NS
Avoidant and Secure	3.506	0.216	NS

The result on the table indicate that the mean difference obtained when the following group means were compared were not significant at a level lower than the chosen level of probability, ambivalent and disorganized, ambivalent and avoidant, disorganized and secure. Their mean differences were significant at 0.059, 0.169, 0.084, 1.000 and 0.216 respectively. Hence the direction of significant difference did not emerge from them. Furthermore, from the table, it could be deduced that when ambivalent and secure group were compared, their mean difference was significant at 0.000 level which is lower than the chosen 0.05 level of probability, indicating that the significant difference in the influence of pupil-teacher attachment pattern resulted from ambivalent and secure group.

## DISCUSSION

The result indicated that pupil-teacher attachment patterns significantly influence pupils' emotional well-being. When analysis of variance statistics was applied an f-value of 6.598 was found to be statistically significant at 0.05 level of probability. Furthermore, when Scheffe test was applied it was observed that the direction of significant difference emerged from ambivalent and secure attachment patterns. In answering the research question it was observed that the secure pupil-teacher attachment pattern had the highest mean score and influence on pupils' emotional well-being. Emotional well-being is a positive mental state which enables an individual to function effectively in the society and meets the demands of everyday life. The result further indicated that secure attachment pattern enhances pupils' emotional well-being, this is in contrast with other forms of attachment pattern. The result of this present study is in agreement with Monaco, Scheffe and Monteya-Castilla (2019) whose study indicated that secure attachment pattern to parents is positively related to emotional well-being. Similarly, research has established that secure attachment pattern positively correlated with emotional well-being.

The result of the present study is in disagreement with Lewis in Matthews (2014) whose findings indicate that there is a significant influence of pupil-teacher attachment patterns on pupils' emotional well-being based on gender. Finally, findings of the study also revealed that there is no interaction, effect of pupil-teacher attachment patterns on pupils' emotional well-being. The calculated f-ratio of 0.091 for the interaction effect of pupil-teacher attachment patterns and gender was significant at 0.0956 level, which is higher than the chosen 0.05 level of probability. Therefore, there is no significant interaction effect of pupil-teacher attachment pattern and gender on pupils' emotional well-being.

## CONCLUSION

Based on the investigation carried out the following conclusion were drawn; the paper revealed that pupil-teacher attachment patterns influence pupils' emotional well-being. The paper further revealed that there is no significant influence of pupil-teacher attachment pattern on pupils' emotional well-being based on gender. The study further indicated that there is no interactive effect of pupil-teacher attachment patterns and gender on pupils' emotional well-being.

## RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

- Teachers should strive to meet emotional needs of pupils.
- Parents and guardians should ensure they establish secure attachment pattern with their children



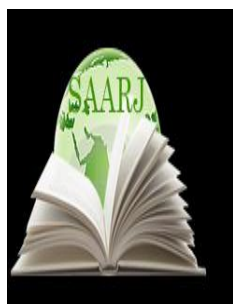
- Teachers should organize programs to teach pupils skills on how to regulate their emotions.
- Accurate knowledge of emotional intelligence is necessary; this will enable teachers to interpret and regulate pupils' emotions accurately.
- Teachers can improve the emotional well-being of pupils' by being responsive to their needs, encouraging and through empathy.
- Seminars and workshops should be organized to educate teachers on the importance of emotional health. A child who is emotionally unstable can't achieve much academically.
- Parents, teachers, school administrators and counselors should work together to promote pupils' emotional well-being.
- Attachment is not limited to any specific gender; as such teachers should establish secure attachment relationship with pupils irrespective of gender.
- Counseling services should be provided for pupils in emotional distress.
- Teachers should employ emotional coach to maintain pupils' emotional well-being.

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## ENGLISH AND RUSSIAN VISUAL PERCEPTION VERBS EXPRESSING THE ASSESSMENT OF THE VISUAL PERCEPTION OBJECT

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### ABSTRACT

*This article explores the verbs of visual perception which express the assessment of the object of visual perception in English and Russian languages. The verbs are compared from the point of semantics and lexis. The article presents the examples of usage of such verbs and their analysis. Each of these characteristics includes other sub-characteristics. Between the Russian and English verbs of visual perception, there are, of course, differences in the intensity of the formation of individual characteristics of a person, which we talked about during the analysis, but the main frame of these characteristics is common.*

**KEYWORDS:** *Visual Perception Verbs, Assessment, Perception Object, Sight, Psychophysics, Vision, Semantics, Comparison, Lexis, Perception.*

### INTRODUCTION

Perception is traditionally considered an object of research in psychology, where there are various approaches to determining the nature of perception, however, the study of the linguistic picture of the world is also inextricably linked with the study of the psychophysical activity of a person, which is formed in a certain ethno cultural environment.

There is a point of view that the perception of the world is determined by "innate tendencies and mechanisms" (Shiffman, 2003) and that "perception is the result of the learning process, which is based on interaction with the outside world and the experience gained in the course of this interaction" (Shiffman, 2003).

M.Wartofsky considers perception as a kind of cultural artifact: "Any human being grows up with certain culturally conditioned ideas about the world and about its people. We can never be

free from this kind of cultural baggage ... which in its own way colors the way of our perception”(Wartofsky, 2007).

At the same time, a certain constancy of perception is obvious (Rubinstein, 2002), which is expressed in a certain coordinate axis (size, shape, color, taste, smell, etc.), and the comprehension of the realities endowed with these characteristics is already under the influence of many personal factors, such as ethnicity, social role, emotional state, character and temperament of a person. As H. Schiffman notes, “interest in controversial issues and problems associated with sensation and perception goes back to the origins of the intellectual history of mankind. Even the ancient Greek philosophers reflected on how exactly we cognize what is outside our bodies, that is, how we cognize the world around us (Schiffman, 2003).

In linguistics, the projection of the psychophysical properties of a person, which form his ability to perceive, onto the linguistic system is investigated and the way of structuring the corresponding linguistic units is understood. Such units form a functional-semantic polycentric field of perception (Geras, 2008). The procedural nature of perception determines the choice of the preferred linguistic means of its expression - verbs, the corresponding group of which has received the qualification of perceptual.

### Main part

The study of assessment is closely related to the human ability to carry out rational and emotional activity (Avramova, 2004), therefore, there is no doubt about the analysis of the verbs of visual perception within the framework of the issue of the relationship between vision and a person as an intellectually active being. For further reasoning we would like to preface the remark of M.I. Popova:

*[...] An important feature of perception is the interpretation and assessment of the information received from the point of view of the observer, who places himself at the center of the universe, involuntarily or voluntarily making himself “the measure of all things” (Popova, 2006).*

There is no doubt that on the basis of visual stimuli, a person analyzes something, makes an assessment, establishes the nature, essence of something. This sign of the linguistic picture of the world is very noticeable in the meanings and use of the verbs of visual perception in both Russian and English.

Considering the issue of analyzing and assessing the components of the surrounding reality in relation to the verbs of visual perception, we propose to divide them into two groups. In the first of them, we placed those verbs that express the assessment of the object of visual perception; in the second group there are verbs that express the subject's assessment of the situation of visual perception. This subdivision is, of course, conditional, since, depending on the contextual use of this verb, it may turn out that it combines a double assessment aimed at both the subject and the object of visual perception.

A person with a sense of visual perception not only perceives objects, but also analyzes, evaluates them. Here the following verbs are analyzed: *взглянуть* – give a glance / look, *видеть* – see, *глядеть* – gaze, *любоваться* – admire, *засмотреться* – stare, look, admire, survey, look.

We suggest starting with the verb *присмотреться*—*to examine*. Both verbs imply a detailed analysis, an assessment of someone, something. Evaluation is directed here at the object of visual perception, compare:

*Присмотреться* 'Внимательно наблюдая, понять, изучить кого-, что-л.' *Присмотреться* к делу, к работе. *Присмотреться* к окружающим. *Присмотреться* к новому сотруднику.

Абель надел очки без оправы. Пока он тщательно изучал бумагу, я имел возможность *присмотреться* к нему. Он выглядел очень неряшливо, как бросилось мне в глаза. На нем был помятый джинсовый рабочий комбинезон, и я сразу решил, что для появления в зале суда необходим приличный костюм, который сам по себе поможет ему выглядеть с большим чувством собственного достоинства.

Вся эта история заставляет меня *присмотреться* к нему внимательнее, я испытываю уважение и нарастающий интерес к этому человеку. Мненадоелипростыеисториииплоскиеоднозначныеперсонажи.

*Examine* 'inspect (someone or something) thoroughly in order to determine their nature or condition'

After some time, a dirty, dilapidated polonaise arrived. He slowed down; the driver *examined* the situation and parked his car nearby, completely incorrectly.

So these are my pupils, thought Joseph. He *examined* the encountered ones if they would be good companions in this difficult and dangerous way (KJP);

If I *examined* the revolutionary changes, I could form my own opinion, gather compelling arguments [...]

If we are talking about the use of these verbs, it should be said that evaluation here is closely related to understanding. So, "examined the situation" presupposes a detailed analysis, study, understanding and, ultimately, an assessment of situation, the happening events. The assessment of the pupils in the second sentence is positive.

The English examples we have selected contain, in turn, an indication that, thanks to the sense of sight, the climber is able to assess the terrain, the public opinion research center analyzes and evaluates the family expenses, and representatives of the state treasury should evaluate the sale of textbooks.

In this case, taking into account the volume of our work, we gave only isolated examples of the use of these verbs of visual perception, but it is through the singular that we are able to comprehend the general.

Other Russian and English verbs of visual perception also make it possible to reveal the general rule that visual perception is closely related to evaluativeness. Here is a list of them along with examples of sentences expressing the assessment:

*Peer* 'look with difficulty or concentration at someone or something'

– So, what are you doing here? I asked, *peering* inquiringly into the eyes of the house manager and wondering if there was some kind of trap behind this.

*And he sat on the edge of the chair and peered at me with a frowning condescension.*

In the first sentence, assessment refers to an object of visual perception that causes the subject to mistrust the clarity of the situation. The second sentence contains the subject's attitude to someone (he peered with frowning condescension), this attitude, of course, is associated with an assessment.

It should be noted that some Russian verbs of visual perception have the meaning of assessment, while in English these meanings are represented by different verbs. If we take the Russian verb *рассмотреть* which has a meaning *to look closely, to scrutinize* related to visual perception (VP), and it has the second meaning – *to consider* – not related to VP. As we can see, two meanings of visual perception verb in Russian are expressed by different verbs in English. At the same time Russian verb *взглянуть* in the meaning of assessment is conveyed in English by VP verb *look* with the same meaning.

Assessment directed at an object is expressed by the following verbs:

*Look at / view (взглянуть) 'pay attention to something, assess' – look seriously at the problem: We can look at this problem differently;*

*If we **consider** (Если **рассматривать**) the obtained data as a cut of some indicators characterizing the understanding of parents of their children, then a rather sad picture emerged.*

*Already the first assessments given to this event show that the leaders of the EU countries **consider** (**рассматривают**) "the adoption of the text of the Constitution as a fundamental event that will allow the EU to be more transparent and democratic"*

*If you **look** (Если **взглянуть**) at the matter soberly, nothing and no one forces them to maim children;*

*[...] This completeness and liveliness is necessary so that the judge could **view** (чтобы судья мог **обозреть**) the case from all sides, penetrate into its very essence and form a firm conviction [...].*

In the first sentence, the assessment is negative (as evidenced by the words sad picture), in the second - positive (fundamental event).

The third and fourth sentences contain an indication of a detailed analysis and a general assessment of a difficult situation (look soberly at the case, view the case from all sides).

We should also mention the verb *look* – *смотреть*:

***Look** 'judge, treat someone, something in a certain way; manifest your attitude towards someone, something:*

*To look at someone with surprise, indignation, contempt. Look at someone distrustfully; 'Observe in order to form an opinion about something; to notice ':*  
*To look at the involvement of subordinates. To look at the progress of the pupils.*



*I appreciate the importance of objective historical facts and what makes me **look** pessimistic about human history is what they mean;*

*I asked her not to tell others about my illness; I was afraid that people would start **looking** at me differently;*

The assessment of the object of visual perception is also expressed by the verbs that make up the core of the concept's nominative field, i.e. *see* and *видеть*.

**видеть** 'находить, обнаруживать; признавать, считать кого-, что-л. кем-, чем-л.': *В. героя в ком-л. В. в ком-л. своего преемника.*

*Мы должны **видеть** и в депутатах ГД прежде всего профессиональных партийных работников*

*Они видели пристрастную односторонность в ведении следствия и требовали справедливого подхода к делу (НКРЯ);*

*Каким вы видите процесс отказа ведомств от не своих полномочий? (НКРЯ).*

*see 'consider as someone': To see someone as an enemy, rival, ally, friend (SWJP);*

*Bobkowski mentions him with sympathy in one of his letters to him, and meanwhile he was attacked without mercy, **seeing** him almost as iconoclasm;*

*Simon, a young, bearded boy, turned to Tom Kaney, who helped in editing "The Message", **seeing** nothing wrong with the idea;*

*The matter may drag on indefinitely and the decision to temporarily suspend the film's broadcasting will still be in force. I **see** it as a threat to the freedom of speech - said in April 1998, MP Juliusz J. Braun [...] for one of the newspapers;*

The given dictionary interpretations of the verbs *see* and *видеть*, as well as examples of their contextual use, confirm that both in Russian and in English, these verbs can express an attitude towards someone, something, providing for the presence of an evaluative factor.

Within the problem of assessment in the context of visual perception verbs it is necessary to comment one of the meanings of the English verb *see*, which is:

***See** 'think, suppose, have some definite opinion about smth'.*

*The way I **see** it, you have three main problems. — Как мне кажется, у вас есть три основные проблемы.*

English verb *peek* has a connotation of control from the point of visual perception, however any control to a certain degree expresses some assessment:

***Peek** 'look quickly or furtively'.*

*This time she probably did not manage to **peek** in the mirror before she left and had to check her appearance in [...] a car mirror*

Within the framework of the question of evaluativeness, relating mainly to the object of visual perception, one should also say about verbs of the type: *to stare, to admire, засмотреться, любоваться, наглядеться*.

Most examples of the use of these verbs indicate that the subject of visual perception finds pleasure in what he/she sees, therefore, he/she considers the perceived object of visual perception to be good, positive. We suggest starting with the verb *to admire*.

*Admire* 'look at (something impressive or attractive) with pleasure': *I admire your garden; People admire the officer's carriage; A girl admires the new clothes.*// 'feel pleasure, admiration, observing someone's activities, actions, etc.': *Admire the work of great artist; Admire the game of favourite team.*  
*From Lahti to Kuopio, you will admire the incredible blue of the Finnish Lakes;*  
*Admiring his daughter, he laughed, watching her deftly maneuver between fans that were unaware of each other's existence;*  
*Inorganic, he thought, admiring the pearly pink gloss of one vastness; this vertical breaks the soft line of the mountains, the plane of the lake;*  
*For thousands of years, people have admired the stars and admired the beauty of the starry sky.*

So, the subject of visual perception likes the blue of the Finnish lakes, daughter, the gloss of the expanse of water and the stars. We can compare this verb with its Russian form – *залюбоваться* – *залюбоваться красотой природы; залюбоватьсястройнойёлочкойит.п.*

The evaluative factor can also appear in the contextual use of verbs *заглядеться, засмотреться, наглядеться, насмотреться*.

*Заглядеться* 'get carried away by gazing at someone/something': *заглядетьсяна море; заглядетьсянаребенка; заглядетьсянадевушку;*  
*Засмотреться* 'to forget oneself looking at someone/something': *засмотретьсянапейзаж; засмотретьсянапарня;*  
*Наглядеться* 'fully enjoy watching someone/something.': *наглядеться на картины в музее; наглядеться на закат;*  
*Насмотреться* 'see many, enough': *насмотреться в микроскоп; насмотреться фильмов.*  
*А доченька твоя как хороша! Загляделась! – How cute your daughter is! I got carried away (by gazing at her)!*  
*Я невольнозасмотрелсяна нее: какова хороша! – I forgot myself looking at her: how nice she was!*  
*Я был потрясен и не могнаглядетьсяна открывшуюся моему взгяду красоту – I was amazed and couldn't fully enjoy watching what I saw*  
*Я не мог насмотреться на Камю – I couldn't see enough of Kate*

## CONCLUSION

The analysis of the vocabulary meanings and contextual uses of Russian and English verbs of visual perception carried out in this chapter makes it possible to broadly cover the functioning of the sense of visual perception in the linguistic pictures of the world of Russians and Poles. Thanks to the analysis carried out, we achieve an understanding of the extent to which the concept of visual perception is related to other concepts. At the same time, the key point is the

rich synonymy and polysemy of both Russian and English verbs of visual perception. The starting point of our analysis was the anatomical (perceptual) point of view, then, during the analysis, it turned into a functional point of view (see Bartmiński 1999: 79).

Observing the functioning of the verbs given in this article through the prism of the anthropocentric factor, it turned out that the concept of visual perception expressed at the linguistic level creates a picture of a person as a biological, experiencing, social and intellectually active being. Each of these characteristics includes other sub-characteristics. Between the Russian and English verbs of visual perception, there are, of course, differences in the intensity of the formation of individual characteristics of a person, which we talked about during the analysis, but the main frame of these characteristics is common. This is due to the fact that the analysis of the verbs of visual perception and their role in the formation of the linguistic image of a person is carried out taking into account the general human point of view. National differences, of course, do exist, however, in the context of the use of the verbs of visual perception, a person acts not so much as a representative of a certain nation, but as a representative of the human community in the world, a representative of the species *Homo sapiens*, for which eyes and vision constitute a natural prototypical device, which essentially determines his being in the world around him.

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## LOCALIZATION OF ISBISKAT VILLAGE

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### ABSTRACT

*The article deals with the issues of historical topography and localization of the Isbiskat region, mentioned in Arab sources. The results of archaeological excavations carried out in recent years at the Navboghtepa monument, which is the center of Isbiskat, are also presented. One such town is the Navboghtepa monument, which is located 12 km northwest of the Afrosiyob monument in the ancient city of Samarkand, north of the village of Navbogh, on the right bank of the Siyob canal.*

**KEYWORDS:** *Sughd, Isbask, Navbogh, Kunduz, Sufi, Uzbek Village, Zarafshan, Siyob, Karasuv, Devori Qiyamat, Childukhtaron, Anhar, Samarkand, Localization, Stratigraphy, Planography, Cultural Layer.*

### INTRODUCTION

Sughd is one of the largest cultural centers in Central Asia, where urban culture was formed from the early Iron Age and in later stages of development led to the formation of villages, castles and religious temples outside the central cities. One such town is the Navboghtepa monument, which is located 12 km northwest of the Afrosiyob monument in the ancient city of Samarkand, north of the village of Navbogh, on the right bank of the Siyob canal. The total area of the monument is 6 hectares, which consists of arches, shahristan and rabot parts [1. 80-81;] (Figures 1 - 2).

Written sources, including Ibn Hawkal, note that on the wall of Rabad, which surrounded Samarkand at a distance of 2 miles, there were gates called Gavasad, Isbask, Suhashin, Afshina, Varsanin, Kuhak, Rivdad and Farrukhshid [2. 202;]. Al-Istakhri and al-Sam'ani acknowledged that the gate of Isbask was located in the north-west of Samarkand, 2 miles away from it, and between the gates of Ghadovad and Sukhashin [3. 93;]. At the same time, al-Sam'ani mentioned

that a scholar named Abu Hamid Ahmad ibn Al-Isbisqati lived in the district of Isbask [4. 161-162;]. In Ibn Yaqt's work, this gate is called Isbaskas [5. 221;].

### Main Part

Isbaski gate T.I. Lebedeva localized the Wall surrounding the Samarkand rabbi with the Childukhtaron monument located northwest of the Wall of the Judgment Day [6. 13-14;]. The monument is currently located in Navbogh village of Samarkand district. Some researchers have localized Isbiskat with the Durmontepa monument, located east of Juma in the Pastdargom district [7. 56;]. However, in Arabic sources, Isbiskat is mentioned as a district (village), which is located 2 miles from Samarkand [8. 208;]. It is also mentioned in the foundation documents of the XV-XVI centuries that it was located near the village of Isbask-Motrid. Isbaskni V.L. Vyatkin mentioned that Kunduz was located near the villages of Sufi and Uzbek Kenti. In our opinion, the center of the village of Isbiskat, mentioned in Arabic sources, can be localized with the Navboghtepa monument. The village receives water from the Siyob and Karasuv canals. The Zarafshan River flows through the northern part of the village. Navbogh village was a part of Anhar district in the late XIX century [9. 41;], and its name is also mentioned in a 1891 map of the Samarkand region. In the etymology of the name Navbogh - the words "nav, nov, nova" in Sogdian "new" [10. 92;], i.e., "new garden".

The monument consists of two parts at a distance of 20 m from the other. The first hill is triangular in shape and faces north to south. The total area of the second part is 220x140 m.

Navboghtepa was founded in 1987 by T.I. Lebedeva, E.Yu. Registered by Buryakova [11. 127;]. Later, in 2002-2008, as a result of the activities of the joint Uzbek-Italian international expedition, it was re-registered, based on the findings collected on and around the V-VII, XIV-XIX centuries [12. 128;]. The first archeological excavations at the monument were carried out in 2019 in the form of planigraphic (1st excavation (RI) and stratigraphic (2nd excavation (RII) in the Shahristan part and in the Rabod part.

Excavation 1 (RI) is located in Shahristan on the northeastern side of the memorial arch, with an area of 5x5 m (figure- 3). The grass layer at the top of the excavation was removed. As a result, a medium-density soil layer was observed in the first tier, between which glazed and unglazed ceramic fragments, glass and metal fragments were noted. Two holes were observed at the excavation site.

The first pile was found on the northwestern side of the excavation and has an oval shape, 1.2x1.1 m in size and 0.9 m deep. Among the layers of soft soil and ash inside the jar, along with animal bones, fragments of colored ceramics and glass vessels from the X to XII centuries were recorded.

The second pit was found on the eastern side of the excavation site with a diameter of 0.95 cm and a depth of 1 m. Pieces of ash and raw bricks, as well as fragments of pottery of the X-XII centuries were observed in the middle. Although fragments of raw and baked bricks and pieces of cotton were noted in the excavation area, no construction-architectural remains were found. 2<sup>nd</sup> excavating 1st in the northern part of the pit, i.e. clearing works were carried out on the site formed as a result of excavation of the hill by the local population. As a result, it was found that there were 8 layers between the I tier and the XI tier (figure-4).



An initially light yellow area formed over a layer of loamy soil. Its cross-sectional height is 160-180 cm. A cotton wall has also been erected over the platform. Namely, a solid defensive wall with a platform typical of the early Middle Ages was created.

## CONCLUSION

In short, the center of the village of Isbiskat, mentioned in Arab sources, is the Navboghtep monument, and as a result of archaeological excavations in the upper layers of the monument, handicrafts and remains of crafts from the times of the Samanids and Karakhanids were recorded. The name of the village of Isbiskat also appears in medieval foundation documents.

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Figure 1. View of Navboghtepa from above

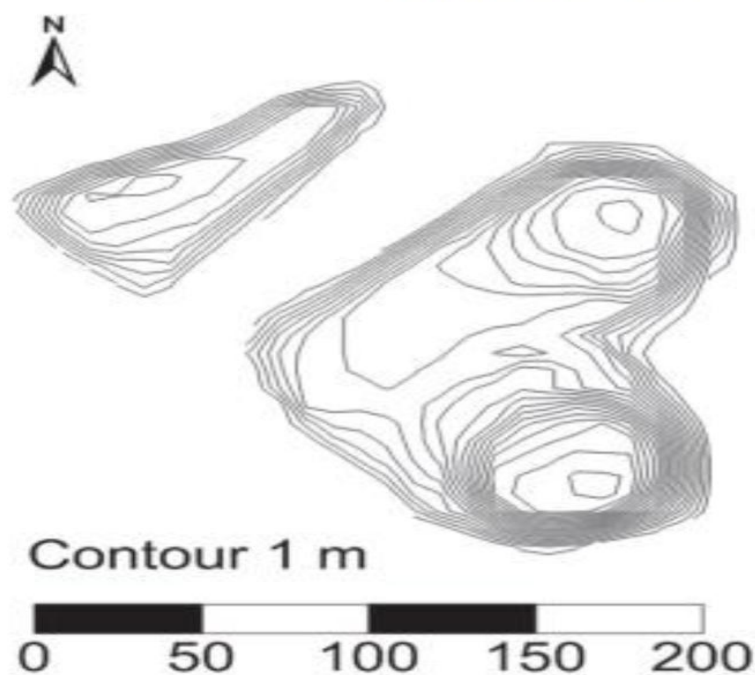
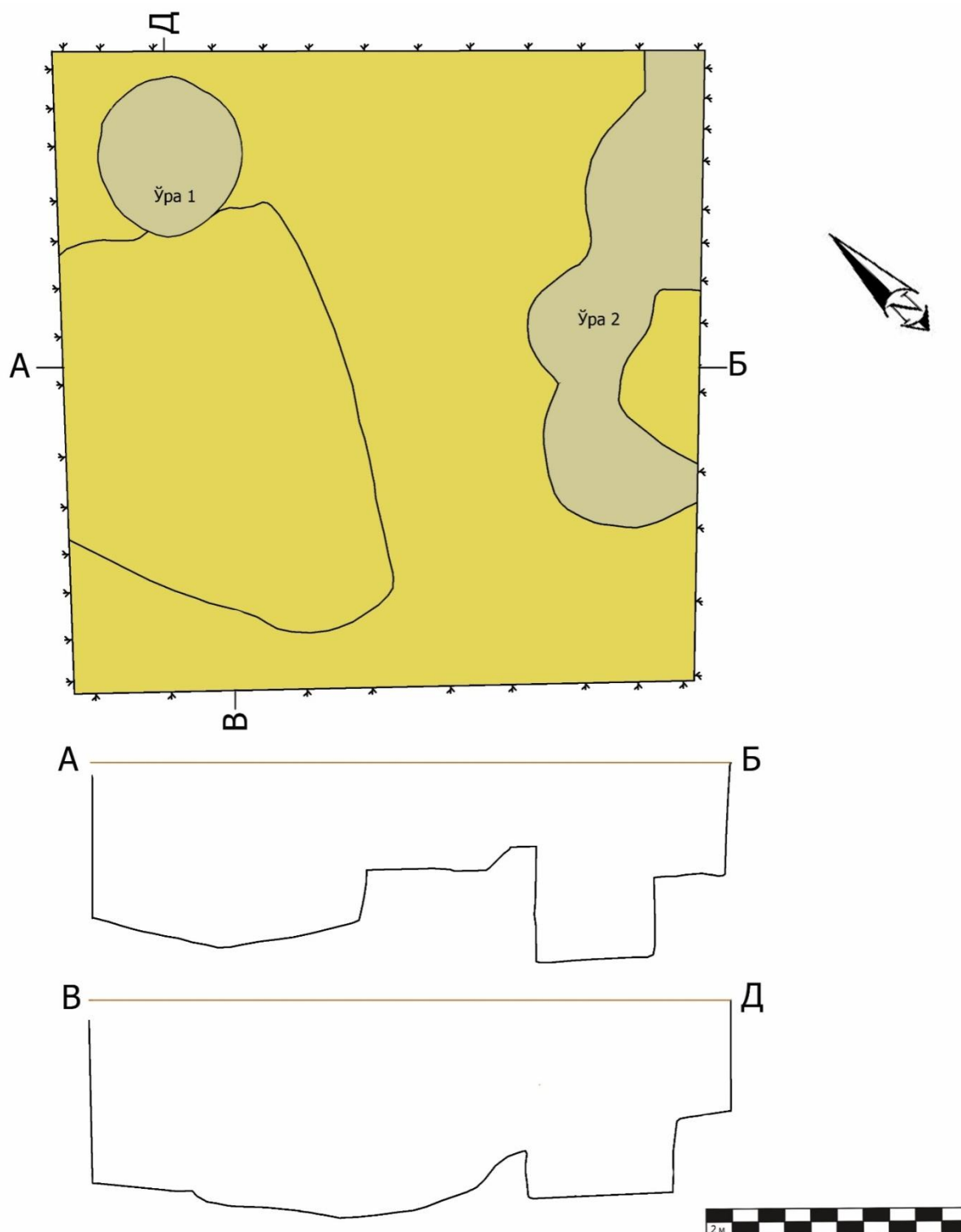


Figure 2. Topographic history of Navboghtepa.



3. 1 - History of excavations

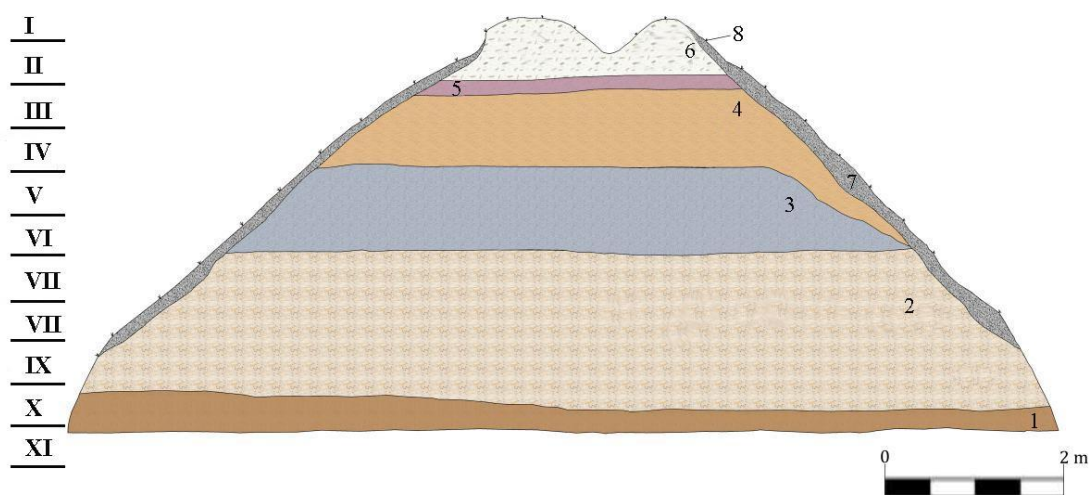
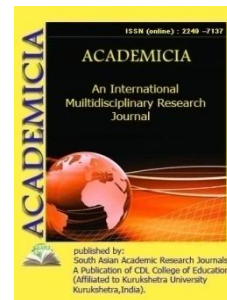


Figure 4. 2 - excavation section.



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## THE ROLE OF MICROORGANISMS IN THE TREATMENT OF WASTEWATER FROM OIL AND GAS COMPANIES

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### ABSTRACT

*In the wastewater of oil and gas enterprises, destructive microorganisms that destroy petroleum, petroleum products, diethylene glycol (DEG), which have a strong negative impact on the environment, have been separated out and, their physiological and chemical properties have been determined. The microorganisms separated out from wastewater belong to the families Pseudomonas, Bacillus and Aspergillus and have been found to be the only source of carbon in petroleum and petroleum products. Due to the constant influx of organic and mineral substances into biological basins, a high rate of microbiological processes was observed. When the*

*wastewater from the Mubarak Gas Processing Plant was mixed with domestic wastewater, it was found to be rich in organic and mineral substances. In such an environment, there are sufficient conditions for the growth and development of heterotrophic bacteria and bacteria assimilate water-soluble organo-mineral substances during development.*

**KEYWORDS:** *Oil And Gas, Microorganisms, Waste Water, Household Water, Heterotrophs, Bacteria, Morphological And Cultural, Hydrocarbon Oxidizers.*

## INTRODUCTION

One of the most pressing environmental problems of the 21st century is to value every drop of fresh water and respect for it. Because clean water is as important to human life as it is to production. After all, industry, agriculture and production cannot be imagined without water.

### Main part

There are currently several oil and gas fields in the country, and the oil produced from them is used for the welfare of our country. We know that in nature there are different levels of environmental pollution as a result of the impact of oil and related processes. Water is one of the key factors in ensuring human health. Not only harmful substances have a negative effect on the human body, but also the fact that the natural components of natural waters (Cuprum, Zinc, iron), necessary for a normal human life, are less or more than the norm. Human health also depends on the quality of drinking water. According to some experts, 50% of all diseases of the world's population are associated with the quality of drinking water they consume [1,2].

Together with water, a person receives from 1 to 25% of daily minerals. Chemical elements in the form of minerals that enter the human body through water are absorbed faster and easier than elements that enter food through food [3].

Water pollution from industrial and domestic waste is also one of the main causes of water scarcity. Water pollution is the presence of various chemical compounds that reduce its quality. For reuse, each m<sup>3</sup> of contaminated industrial and domestic waste must be mixed with 10 m<sup>3</sup> of fresh water. Sources of pollution of surface and ground waters are numerous and varied [4,5,6,7]. The pollution of the environment by oil and petroleum products from oil and gas companies is part of a complex chain that, in turn, affects the composition of water and soil, as well as soil microorganisms, flora and surrounding water bodies [8].

Contamination of water bodies under the influence of various factors is one of the technical, ecological-biological and urgent problems of our time. When solving the issue of providing the population with high-quality drinking water, of course, it is necessary to take into account the microflora of water bodies and their impact on water. In addition, pathogenic microorganisms, which are considered much dangerous from an epidemiological point of view, enter water bodies along with wastewater. All this requires careful laboratory monitoring of water bodies in order to protect public health and improve their water supply. The participation of the general public, the development of environmental education and training are essential for ensuring the rational use of water and protecting water bodies from pollution. In this regard, the protection of water bodies remains an urgent issue for mankind, which is required by the development of mankind throughout the world. To protect water bodies from pollution, it is of paramount importance to

limit the discharge of wastewater from industrial and municipal enterprises into the freshwater environment.

## METHOD AND MATERIALS

In the wastewater of oil and gas enterprises, destructive microorganisms that destroy petroleum, petroleum products, diethylene glycol (DEG), which have a strong negative impact on the environment, have been separated and the Muborak Gas Processing Plant was chosen to determine their physiological and chemical properties.

For microbiological analysis, samples of water in wastewater were taken from the filtration zone of the plant and the workshops of the plant. When analyzing the water samples taken, the methods generally accepted in microbiology were used, that is, methods of inoculation, cultivation and isolation of active microorganisms in elective nutrient media. When sampling water in industrial plants, special attention was paid to key environmental factors such as air temperature, water temperature, water purity and pH of the environment.

To study the microbial cenosis of wastewater from the Mubarek gas processing plant, 32 water samples were taken from the plant's workshops, including household and industrial water (workshops No. 1,6, 9,14), installation and equipment for complex gas purification.

To determine the purity of wastewater, the following groups of microorganisms were grown in the appropriate nutrient media and their number was determined: Meat-peptone agar was used to determine the total number of heterotrophic microorganisms, Vinogradsky's nutrient medium was used to identify nitrifying bacteria, and Raymond's nutrient medium was used to grow hydrocarbon-oxidizing bacteria.

When determining the total number of saprophytic bacteria, water samples were cultured several times by inoculation into peptone agar with fish and meat peptones, as well as into liquid elective media. The cultured microorganisms were grown in a thermostat at 280 ° C for 48 hours. For the cultivation of denitrifying bacteria, Giltay agar medium was used. In this case, bacterial growth is observed with the release of a certain amount of gas. When observing this process, special attention is paid to bacteria that grow in an oxygen-free solid agar medium in test tubes.

Destructive microorganisms that decompose oil and oil products were studied in the following order:

1. local strains of bacteria were isolated from wastewater from a gas processing plant;
2. The highly destructive bacteria were isolated by adaptation and immobilization on carriers.

Pure cultures of microorganisms were isolated from one cell colony using several transplantation methods. Isolated pure cultures were stored in liquid and solid nutrient media with oil, diethylene glycol, and gas condensate.

The experiments used mainly the bacterial species *Pseudomonas* and *Bacillus* and their associations (collections).

To determine the effect of oil and oil products on the viability of bacteria-destructors when mixing in different amounts, we used the method of inoculation of a culture suspension treated on a Petri dish in a solid artificial medium. The bacteria grown on Petri dishes were grown in a thermostat at 280 ° C.



To determine the physiological conditions for the growth of destructive bacterial cultures, 0.5-2% oil was added to the mineral medium and grown in a stationary (constant) mode at a rate of 180 volumes per minute at 28-300 ° C for 24-72 hours.

To identify fungi in wastewater, water samples were planted in Chapek culture medium and the fungi were identified. In the study of destructive bacterial selection as a result of a gradual increase in the concentration of oil and oil products in the nutrient medium, pure cultures of microorganisms were adapted to high concentrations of toxins. (oil from 0.5 to 2.0 vol. /%, diethylene glycol from 0.5 to 10.0 vol. /%). The morphological-cultural and physiological-biochemical properties of cultures of pure microorganisms that break down the extracted oil were studied by methods adopted in microbiology [9, 10, 11].

Identifiers Bergeys (1986) and Berg (1980) are used for identification of isolated hydrocarbon-oxidizing bacteria based on morphological-cultural and physiological-biochemical research results. [10].

The optical density of the growth rate of destructive bacteria in the culture liquid was determined on a photoelectric colorimeter in an FEC-2.

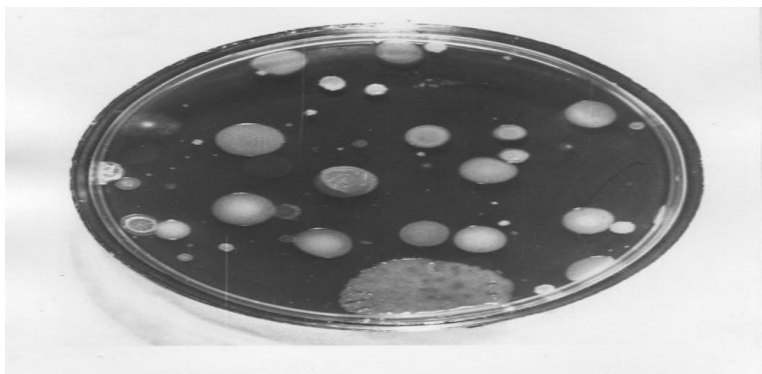
Potentiometric ionometry EV-74M revealed changes in the acidity of the environment and their oxidative potential.

The destructiveness of bacteria in relation to diethylene glycol was determined by gas chromatography on a CHROM 5 chromatograph (Czechoslovakia).

Microbiological analysis of wastewater containing oil products and diethylene glycol was carried out jointly with employees of the Central Laboratory of the Mubarek Gas Processing Plant.

### Results and analysis

Refineries are water intensive industries. Wastewater from oil and gas enterprises is associated with progressive water and soil pollution. At present, a separate topic is their purification by biological methods, that is, with the participation of microorganisms. Industrial wastewater contains oil, petroleum products, diethylene glycol suspensions, emulsions and water-soluble ones. At the first stage of the work, oxidizing microorganisms were isolated from the waste of the oil and gas industry and their microbiological aspects were analyzed (Figures 1., 2.).



**Figure: 1. Colonies of microorganisms growing on fish peptone agar.**



**Figure: 2. Microscopic colonies of fungi growing on Czapek's nutrient medium.**

Bacterial species of the genus *Pseudomonas*, *Bacillus* and microscopic fungi of the genus *Aspergillus*, *Cladosporium* are the most typical representatives of microorganisms living in polluted water and soil. [12, 13]

Microbiological analysis of wastewater samples taken from a gas processing plant for the purpose of research showed that the same amount of bacteria oxidizing hydrocarbons in wastewater and in water in the evaporation zone. From March to autumn to November, the number of bacteria in fresh water ranges from  $10^2$  to  $10^6$  cell/ ml, the number of microscopic fungi ranges from 10 to  $10^3$  cell/ ml, the number of hydrocarbon bacteria ranges from  $10^2$  to  $10^3$  cell/ ml. From May to September, their number increases by 1-2 times (Table 1).

**TABLE 1 MICROBIOLOGICAL CHARACTERISTICS OF WASTEWATER SAMPLES FROM GAS PROCESSING PLANT**

Name of samples taken	Number of microorganisms, vol / ml			
	Heterotrophic bacteria	Microscopic fungi	Hydrocarbon oxidizing bacteria	Actinomycetes
Samples of water from the Mubarek Gas Recycling Plant	$10^4$	$10^3$	$2 \times 10^3$	10
Sewage pumping station	$10^5$	$10^2$	$5 \times 10^3$	10
Evaporation field	$10^6$	$3 \times 10^3$	$10^4$	-

As can be seen from the table, a certain number of different groups of microorganisms are found in the toxic waste waters of enterprises.

The fish is always creamy in peptone and starchy ammonia environments and has a large number of brightly colored small colonies, after the fifth day of the experiment, some of them turn dark brown, and these pigments also pass into the agar medium. Spore colonies appear as mycelium on top of the agar. In addition, we observed the growth of individual bacteria around the colonies with the formation of light areas ranging in size from 0.3 to 1.0 cm.

Experiments were carried out with the participation of isolated bacteria to determine the resistance of oil and oil products to various concentrations. During the experiment, unstable bacteria die during transplantation, therefore our study was carried out only in the presence of 3 resistant microorganisms, that is, 3 bacterial strains and 2 strains of microscopic fungi.

According to the literature, the main bacteria involved in the decomposition of oil and oil products are aerobic and facultative aerobic microorganisms. [14, 15]

Of these, *Pseudomonas* and *Bacillus* are the most common bacteria in the decomposition of toxic substances in water and microscopic fungi include *Aspergillus* and *Cladosporium*. [16, 17]

In our subsequent research, we observed their characteristics as well as the growth of microorganisms in oil and oil products (gas condensate). (Table 2)

**TABLE 2 GROWTH OF BACTERIA AND FUNGI IN WASTEWATER POLLUTED BY OIL AND GAS INDUSTRY**

Pollutants	<i>Bacillus</i>	<i>Pseudomonas</i>	<i>Aspergillus</i>	Bacterial organizations
Oil	++	+++	++	+++
Gas condensate	++	++	+	++

**Note:** not well developed - +; average - ++; good - +++

As can be seen from the table, the activity of pure offspring of microorganisms is manifested differently in different hydrocarbons. Bacteria of the genus *Pseudomonas* grow well in both oil and gas condensate, and the bacterial community grows well only in oil. When we grew 1-2% of bacteria in a nutrient medium in Raymond, their number was  $10^8$  cell/ ml in 3 days, and their initial number was  $10^6$  cell / ml.

*Pseudomonas* bacteria thrive in petroleum products, while *Bacillus* bacteria thrive in processed gas products. Bacteria and fungi found in the wastewater from a gas processing plant have been shown to be effective in degrading oil and gas condensate and degrading it on a daily basis (Table 3).

**TABLE 3 BACTERIA AND MICROSCOPIC FUNGI BREAK DOWN OIL AND GAS CONDENSATE BY DAY**

Microorganisms	Oil			Gas condensate		
	Days					
	3	7	15	3	7	15
Bacteria of the genus Pseudomonas	+	++	+++	-	++	++
Bacteria of the genus Bacillus	+	+++	+++	-	+	++
Aspergillus авлоди замбуруглари	-	+	++	-	-	+

**Note:** not well developed - +; average - ++; good - +++

The table shows that bacteria belonging to the genus *Pseudomonas* grow well in oil and gas condensate, The growth of microscopic fungi was slower than that of bacteria and only at 15 days of development was their growth better.

**CONCLUSIONS:** Based on the results of research on the identification of microorganisms in the effluent from the workshops of the Mubarak Gas Processing Plant and the study of their importance in wastewater treatment, the following conclusions were drawn:

1. Wastewater samples from the Mubarak Gas Processing Plant were found to contain mainly the spore-forming bacteria *Bacillus* and the non-spore-forming bacteria *Pseudomonas*, which produce a blue-green pigment.
2. *Pseudomonas* bacteria are well absorbed by oil products, and microscopic fungi - by gas processing.
3. Unlike microscopic fungi, bacteria did not lose their ability to break down oil and oil products, and gas processing products during our research
4. Seasonal dynamics of the number of bacteria in the wastewater of the Mubarak GPP depending on the season, i.e. change in the number of microorganisms in spring, summer and autumn, i.e. the number of bacteria ranged from  $10^2$  cell/ ml to  $10^6$  cell/ ml, the number of microscopic fungi from 10 cell / ml to  $10^3$  cell/ ml, and the number of hydrocarbon-oxidizing bacteria from  $10^2$  cell/ ml to  $10^3\%$  / ml.

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## THE PLACE OF THE “HAND” AND THE THEME OF MEDICINE IN THE SOURCES OF ISLAM AND CHRISTIANITY

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### ABSTRACT

*The human head has unique sensory organs. For example, the nose is a sensory organ, such as the ability to smell, see the eyes. It also has sensory features in the legs and arms. A person feels changes in the liver, kidneys, pancreas, heart and other organs in their body, their activity. At the same time, external factors - smell, taste, time, place, people, age - old, woman - man, child - adult - perceive millions and billions of similar and different emotions and receive them as information. The current situation on the planet Earth, the state, the city, the societies in which we live, evokes various emotions and sometimes affects the human emotion and destroys it. More or less a person tries to control these emotions, but cannot fully control them. At this point, the increase in body temperature is an absolutely normal reaction of the sick person to the unhealthy state of the human body through the senses. Body temperature accurately shows who, how, when and with what extent and to what extent it has affected the human heart. An increase in human temperature is not only associated with illness, but also with violations of moral norms, mistakes, and anger. Therefore, "thermo" is the level of angry emotions, and "meter" is the radius of emotions.*

**KEYWORDS:** *Islam, Christianity, Medicine, Medicine Of An-Nabawi, Imam Bukhari, Bioenergy, Hand, Sunnah, Sahih Al-Bukhari, Kitab At-Tibb*

### INTRODUCTION

It is not difficult for a person to recover from an illness. However, when the body temperature rises, especially in these children, many panic and all activities related to consciousness are



inhibited. In this case, one must be able to control oneself. Because it is the person in this balance who comes to the rescue first. We know that human palms and fingers are very sensitive. We get a lot of new information in life through the inspection, feeling, touching and feeling of our hands. This makes us capable of so many things. It helps a person achieve sincerity and confidence with what they want. On the contrary, the insecurity within us stops him from moving and drives him away from the goal.

When a person's palms join together and contract, and the palms begin to heat up. But, in fact, the temperature of both hands is 36.6 degrees. The question arises as to why. Between the palms, a person's existing thoughts collide, and they, too, are heated. The more the palms are squeezed and held, the warmer they become. Human emotions and psyche are not stable. As time goes on, seconds, minutes pass, emotions collide with emotions, thoughts collide with other thoughts and exchange. One thought multiplies by another, one by two, two by two, ten by ten. It is their movement that causes our palms to heat up.

The palm of the human right hand has a plus charge and the left palm has a minus charge. Therefore, the combination of the two palms has properties such as revitalization and protection in the body. Today, leaders in various fields of medicine are turning to religion and religious sources along with biology, anatomy, chemistry, physiology to treat or prevent disease. Indeed, the study of the points that unite religion and medicine is developing rapidly.

### **MAIN FINDINGS AND RESULTS**

In the study of bioenergy in human hands discussed above, scholars focus on some aspects of Christianity and Islam. In particular, the religious source of Christianity in the Bible is as follows:

But Jesus said, "Someone touched me." I felt a force come out of me. (Luke 8:46)

And Jesus took the damsel by the hand, and said, - Little girl, arise, and I will shew thee. The girl came to life. He got up at once ... (Luke 8:54, 55)

And he put forth his hand, and touched him, saying, I will be thou clean. The man with the skin disease was immediately relieved of his pain. (Matthew 8: 3)

The fever subsided as Jesus touched her hand. And she arose, and ministered unto him. (Matthew 8:15)

Why don't your disciples follow the traditions of our ancestors? Why don't they wash their hands before eating? (Matthew 15: 2)

These examples also show the importance of the hand in healing methods in Christian sources.

Islam also emphasizes medicine. The Sunnah of the Prophet (peace and blessings of Allaah be upon him), especially the issues raised in medicine al-Nabawi, are still recognized today by modern medicine.

Medicine an-Nabawi is treated according to the principles of disease, along with verses from the Qur'an, the hadiths of the Prophet (S.A.V.), and prayers, along with natural herbs, consumer products, and medicines. The doctor must also have mastered the correct method of treatment. It was narrated on the authority of Amir ibn Shuayb (may Allah be pleased with him) from the

Prophet (peace and blessings of Allah be upon him): “A person who does not have a medical education is responsible (for any harm) when he provides medical care.”

Allah says in Surat al-Baqara 269: “He gives wisdom to whomever He wills. Whoever is given wisdom has indeed been given much good. Only the wise will take notes.”

In the study of medicine an-Nabawi, much attention was paid to prevention, rather than treatment of the disease. The basis of prevention is cleanliness, hygiene, washing hands before eating, eating with the right hand, and a number of hadiths in medicine al-Nabawi on such issues. In particular, there are a number of hadiths from the Prophet (saas) regarding eating with the right hand and starting deeds with the right hand. In particular, 'A'ishah (may Allah be pleased with her) narrated: He loved to start from the right, which is all right. ” The Prophet (peace and blessings of Allaah be upon him) also ate with his right hand when he ate and licked and cleaned the fingers of his right hand after eating.

The question of why Muslims use the right hand more than the left hand has been sought by scholars in scientific research and studies. According to him, if a person takes an unfamiliar object in his right hand or does something for the first time with his right hand or right foot, the left hemisphere of the human brain is responsible and activated for these actions. This means that when a person performs an action, he first activates the left hemisphere of the brain. Below we review scientific findings about the right and left hemispheres of the brain.

Recent scientific studies have shown that human hands (especially the right hand) contain enzymes present in human saliva. In short, the process of digestion begins with the fingers as soon as a person touches food while eating. Scientists demonstrate the effect of the right hand on the digestive process in the following simple ways:

1. Fill two identical glass jars with water, one of which is filled with the right finger and the other with the left finger, so that changes in the water are observed for some time. As a result, it can be seen that the changes in the water in which the right finger is placed are greater than in the vessel in which the left finger is placed. Scientists have concluded that these changes are due to digestive enzymes.
2. In the next step, different vegetables are evenly stuffed into the above bowls, as well as the fingers of the right and left hands are stuffed again. After a while, it can be observed that the vegetables in the bowl with the fingers of the right hand are much softer than those of the left. From this it can be seen that our right hand has more digestive enzymes than our left and that is why according to the sunnah we are commanded to eat food with our right hand.
3. The sunnah of licking the fingers after a meal by scientists is also very useful, and this process is also helpful in digesting food.

When it comes to the human brain, scientific research suggests that exercise can help maintain the health of the human body. There are different types of exercises for each part of the human body, and if these exercises are performed regularly, this part of the body will be more active than the others. There are exercises that also develop the human brain. The human brain is made up of two hemispheres, the right and left.

In 1960, the American psycho-biologist Roger W. Sperry developed the "Right and Left Hemispheres of the Brain, the Concept of the Development of Thought." At the end of his

research, he discovered that the human brain is made up of two parts that perform completely different activities (functions). According to him, the left hemisphere of the brain is responsible for the activity of the right side of the body, and the right hemisphere of the brain is responsible for the activity of the left side of the body (this process is called the cross-sectional system).

The human right hemisphere simultaneously imagines information and responds to it with emotions. It focuses first on the information as a whole and then on the individual details. The right hemisphere of the brain is also often referred to as the analog brain. It mainly responds to a person's three-dimensional perception, creativity, artistic perception, and activity.

It can be seen that the right hemisphere of the human brain is more prone to imagining things or receiving information emotionally. The important thing is that both of these processes take place at the same time. The right hemisphere is mainly adapted to activities in a wider area (which can be done in a few steps) and is responsible for processes such as recognizing people's faces and working with music. He performs a number of mathematical but also approximate and comparative operations. The right hemisphere of the brain also helps a person understand images correctly and perceive what they see. The most important feature is that it is important in speech, especially in interpreting text and in human tone of voice.

The left hemisphere of the human brain analyzes information verbally and analytically sequentially. It also examines the fragments first, then combines them into a whole. Sperry was awarded the Nobel Prize in 1981 for this discovery. However, these studies later refuted the simple assumption that the brain was first divided into poles.

The right hemisphere is called the "analog brain," while the left hemisphere is called the digital brain. This "digital brain" controls reading and writing, arithmetic, and logical thinking.

The left hemisphere is responsible for verbal representation of objects and re-editing of data, analysis and study of work, orderly sorting of data, and continuous performance of actions.

In general, the left hemisphere of the brain dominates in the processing of information heard in speech. It is also responsible for performing logical and precise mathematical calculations. If a person tries to remember a piece of information, it is the left hemisphere that finds it and transmits it from memory. As mentioned above, the right hemisphere of the brain controls the muscles of the left side of the body, while the left brain controls the muscles of the right side.

According to the observational research of psycho-biologists, people with right-handed dominance are more logical and deep-thinking, advanced in mathematics, master of calculations, active in language acquisition, orderly use of words in speech, good analysis of various activities and data, as well as beautiful calligraphy people. Left-handed people are creative thinkers who express themselves fully, that is, who pay attention to all aspects of information at the same time, who are innovative and artistic, who have a wide imagination, often unattractive, and who are systematic and consistent.

From the above considerations, it can be concluded that when a person uses his right hand more in accordance with circumcision, at the same time he exercises the left hemisphere of the brain more, resulting in increased mental intelligence, clarity of thinking ability. This is one of the foundations of the Sunnah of the Prophet (S.A.V.) and medicine an-Nabawi. However, it should be noted that a person who prays uses both hands at the same time, that is, he knows both the

heart and the mind of the worshiper during prayer, so that both hemispheres of the brain work equally with ordinary hands.

The field of medicine al-Nabawi, which studies the hadiths of Kitab at-Tibb in the Sahih al-Bukhari collection, has been studied on the basis of a number of sources. For example, the verses of the Qur'an, the hadiths of the Prophet (peace and blessings of Allaah be upon him), the folk medicine of the Arabian Peninsula at that time, and the medical knowledge that came from the communities of other nations in Mecca and Medina during the time of the Prophet (peace and blessings of Allaah be upon him) serves as sources. In this study, the hadiths of the Prophet (S.A.V.) are taken as the main source. Imam Bukhari collected 129 hadiths directly related to medicine in his collection Sahih al-Bukhari. Imam Bukhari divides medicine into two books, Kitab at-Tibb and Kitab al-Maraz (Book of Diseases). However, Sahih al-Bukhari contains other hadiths that are partially related to medicine al-Nabawi. It should be noted that in other authentic collections of hadith, medicine has a special place for al-Nabawi. Many muhaddith scholars have collected hundreds of hadiths related to medicine an-Nabawi. However, scholars such as Abu Nuaym (336 / 944-430 / 1038), Ibn Qayyum (d. 751/1359) and Imam Jalaliddin Suyuti (d. 911/1505) summed up the medicine of the Prophet. They also researched and wrote reviews from a medical perspective. Even today, this topic has not lost its relevance. Separate articles and pamphlets have been written by many scholars on the subject. Ibn Qayyum, in his Tibb an-Nabawi, singled out many of the diseases used by the Prophet (peace and blessings of Allaah be upon him). He also interprets each of the medical knowledge of his time with separate hadiths. In reviewing the hadiths in the Sahih al-Bukhari collection, it is necessary to study al-Nabawi's medicine, which is appropriate for every age and place, using modern medical knowledge and the Sunnah of the Prophet (peace and blessings of Allaah be upon him). We can draw a firm conclusion in this regard.

The classification of the Prophet's (S.A.V.) Sunnahs related to medicine requires the acquisition of knowledge primarily about changes in time and space. For this purpose, Imam Jalaliddin Suyuti wrote Tibb an-Nabawi. In his work, he divides medicine into three parts, traditional, spiritual, and prophylactic. According to Imam Jalaliddin Suyuti, medicine was the most developed and widespread form of preventive medicine in its time. There is no doubt that the knowledge of the Prophet (S.A.V.) in this area was undoubtedly inspired by Allah. Imam Suyuti explains measures such as nutrition and physical exercise during the coverage of preventive medicine with hadiths and gives examples from medicine an-Nabawi. The study of medicine an-Nabawi shows that it has a spiritual basis for healing and restoration of health. Also, reading the Qur'an, praying and supplicating, and remembering Allah play an important role in this. Psychosomatic illnesses may be responsible for spiritual and mental approaches. Therapeutic medicine, on the other hand, includes the treatment of various wounds, which consists of the teachings of the Prophet (saas), as well as measures such as consuming honey and black seed for a number of ailments. The application of Ruqyah (recitation of Surat al-Fatihah, Muawwizatayn) has been included in both physical and mental therapy, and the application of Ruqyah is being proven today. Modern medicine has proven that the human psyche controls the immune system, which protects against disease. This is because the hadiths on reciting du'aa are given in chapters 30-33 of the Kitab at-Tibb in the Sahih al-Bukhari collection. For example, A'ishah (may Allah be pleased with her) narrated that when the Messenger of Allah (may peace be upon him) was ill before died, he used to recite the mu'awwizayn and pray for (dam solmoq –

in Uzbek) himself. When his pain became severe, I would bless him and rub his hands with his hands so that he would be blessed. ” Ma’mar said, “How did they dua (dam solmoq)? “When I asked Zuhri, he said, “They would dua (dam solmoq) with both hands and then wipe their faces.”

Ibn Qayyum enumerates many diseases in which the methods of treatment are clearly stated in medicine an-Nabawi. Medicine an-Nabawi instructs to treat the diseases mainly by natural means, in particular, fever, diarrhea, diet, spinal pain, epilepsy, wound erosion, itchy skin, pain in the brain and cerebral hemisphere, inflammation of the lining of the lungs , colds, sore throats, enlargement of the heart area, eye pain, skin rashes, food poisoning, lice and warts, and other ailments are examples of this. Ibn Qayyum also mentioned the following diseases in the Sahih al-Bukhari of medicine, which clearly state the methods of treatment: plague, leprosy, inflammation of the eyes, throat and tonsils, diarrhea, diseases of the abdomen, fever, snake and scorpion venom, food mosquito bites, headaches, nosebleeds, toothaches, coughs, dehydration, fluid fractures, stray dog bites, eye contact, and similar illnesses are also listed. In medicine an-Nabawi, the above diseases are treated in three main ways: natural, spiritual and natural, and spiritual harmony. The above treatments used mainly honey, cold water for fever, diet, milk, camel's milk, hijama, burning methods.

## CONCLUSION

Today, there is a great scientific interest in the study of Medicine al-Nabawi in the fields of hadith and medicine. Engineers and doctors are doing a lot of research together. One of the biggest projects today is the work of major research institutes on the importance of the black sedan. According to the interpretations given to the hadiths by Islamic scholars, modern physicians have come to clear conclusions, especially about the black sedan and other healing herbs recommended by the Prophet (saas). For example, laboratory experiments on a black sedan have led to the scientific conclusion that it cures rheumatism and related inflammatory diseases. The Prophet (S.A.V) said about the usefulness of the sedan 15 centuries ago.

From the above studies, it can be concluded that medicine an-Nabawi is compatible with the real and practical medical system. It is advisable to apply the general principles of this system everywhere and at any time. Also, all the healing methods and medicines recommended by the Prophet (S.A.V) serve against the disease and are beneficial. However, they cannot be applied today without clear empirical research.

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## **SOLID EDGE ST "ISUZU NP 37" PROGRAM TO STRENGTHEN THE MECHANISMS OF THE BUS SUSPENDED RESISTANCE TESTING**

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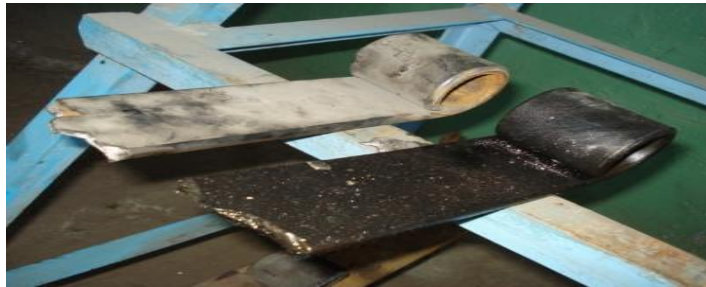
### **ABSTRACT**

*A spring is an elastic device used by vehicles (cars, wagons, tractors) to dampen vibrations caused by uneven roads. As far as we know, springs are the most common as an elastic part of the suspension. The presence of sheets of different lengths and curves causes the sheets to be gypsum closer together when the spring is assembled and the main sheet to be less loaded, as well as holding the sheets as well. In heavy-duty vehicles, an additional spring is attached to the spring in addition to the spring. The reason for its installation is to improve the smoothness of the car by changing the height of the spring to suit the load. The longevity of a spring is directly related to its durability. The article describes the design of the spring of the bus Isuzu NP-37 using the program Solid edge ST, testing its durability. As a result of the calculations, we can see that the spring breaks at a pressure of 2.7062 Pa. It should be required to create an optimal model of the suspension mechanisms of the Isuzu bus based on the operating conditions. The result of the calculation and actual operation was that the spring was broken.*

**KEYWORDS:** *Bus, Computer Program, Project, Suspension, Spring, Spring List, Bending, Bending, Stiffness, Equivalent Spring Tension, Loading, Deformation, Beam, Elasticity, ANSYS 12.0, Fixed Support, Simulation..*

### **INTRODUCTION**

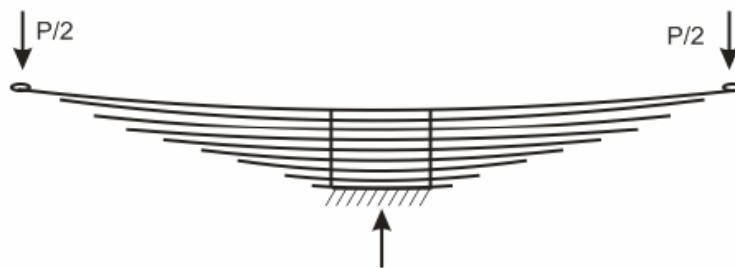
Depending on the nature of the defective spring list, they can be repaired or replaced. Characteristic shortcomings of spring coils include reduced cooling due to loss of spring elasticity. This will cause cracks and break some of the sheets. In addition, their bushing holes, the edges of the ears, and the thickness of the sheets themselves are eaten away. The core lists of the spring work in heavier conditions than the others. That's why they try so hard (Figure 1) [1].

*Figure 1. Spring faults.*

The fracture state of the spring can be attributed to the fact that it exceeds the force acting on the road conditions and the spring, ie the load.

The spring of the Isuzu bus was analyzed by taking into account its fracture state under force and the virginity of the spring. This is done as follows.

Forces acting on the spring:

*Figure 2. Forces acting on the spring.*

We can take the spring in this picture as a beam. The length of the beam is  $L = 1350$  mm, width  $b = 70$  mm and thickness  $10$  mm. Shot in the middle. The spring is subjected to a force  $R = 39839$  N (Figure 2).

Let's go back to the design of the beam and see how the static load acting on the beam affects it. It can be said that geometrically, the stress and the displacement are evenly distributed along the beam. The force acting on a sheet spring can be characterized by bending, bending fr and stiffness sr [2]

The maximum bending and tension of symmetrical semi-elliptical multi-sheet springs are calculated by the following formulas:

$$\sigma_u = \frac{1.5P_p L}{nbh^2}, \quad \sigma_{unepe\partial} = \frac{1.5 \cdot 14541 \cdot 1350}{7 \cdot 70 \cdot 10^2} = 601 \frac{H}{\text{MM}^2}$$

$$\sigma_{u.3.} = \frac{1.5 \cdot 39839 \cdot 1300}{10 \cdot 70 \cdot 10^2} = 1110 \frac{H}{\text{MM}^2}$$

$$f_p = \frac{\delta P_p L^3}{4Enbh^3},$$

$$c_p = \frac{P_p}{f_p} = \frac{Enbh^3}{4\delta L^3},$$

$$f_p = \frac{1.25 \cdot 14541 \cdot 1350^3}{4 \cdot 2.05 \cdot 10^6 \cdot 7 \cdot 70 \cdot 10^3} = 11.13 \text{ mm}$$

$$f_p = \frac{1.25 \cdot 39839 \cdot 1350^3}{4 \cdot 2.05 \cdot 10^6 \cdot 10 \cdot 70 \cdot 10^3} = 19.06 \text{ mm}$$

$$c_p = \frac{14541}{11.13} = 1306.5 \frac{H}{MM}$$

$$c_p = \frac{39839}{19.06} = 2090.1 \frac{H}{MM}$$

## METHODS

Today, the finite element method (CEU) is widely used in solving technical problems and conducting scientific research. Therefore, Solid Edge ST and ANSYS 12.0 from CHEU were used to determine the spring virginity. programs were used [1].

To do this, the spring lists are designed in the Solid Edge ST program (Figure 3):

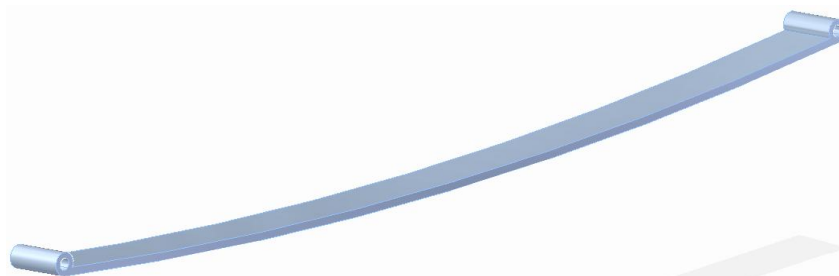


Figure 3. Korennoy list

The remaining lists of Isuzu bus springs were then sequentially designed in the Solid Edge ST program and assembled (Figure 4) [3].

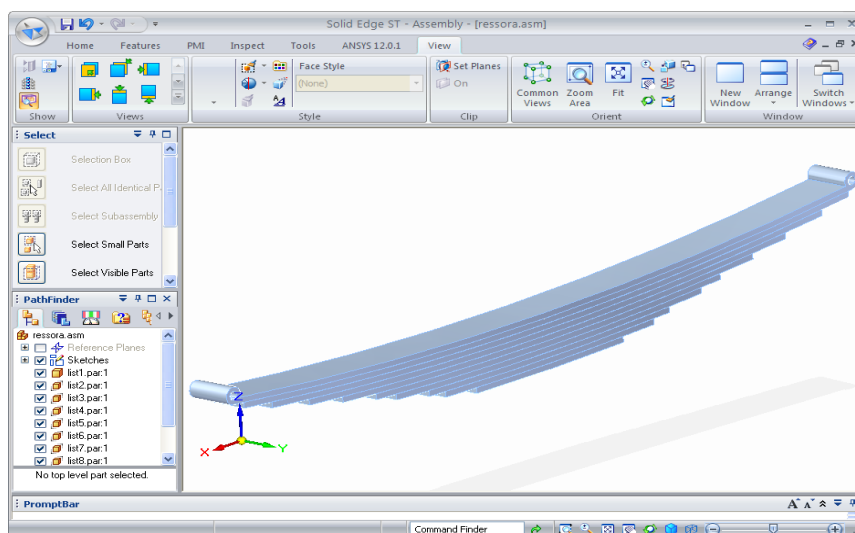


Figure 4. Resource compiled in Solid Edge ST.

Then add the finished spring to ANSYS 12.0. We export to the program:

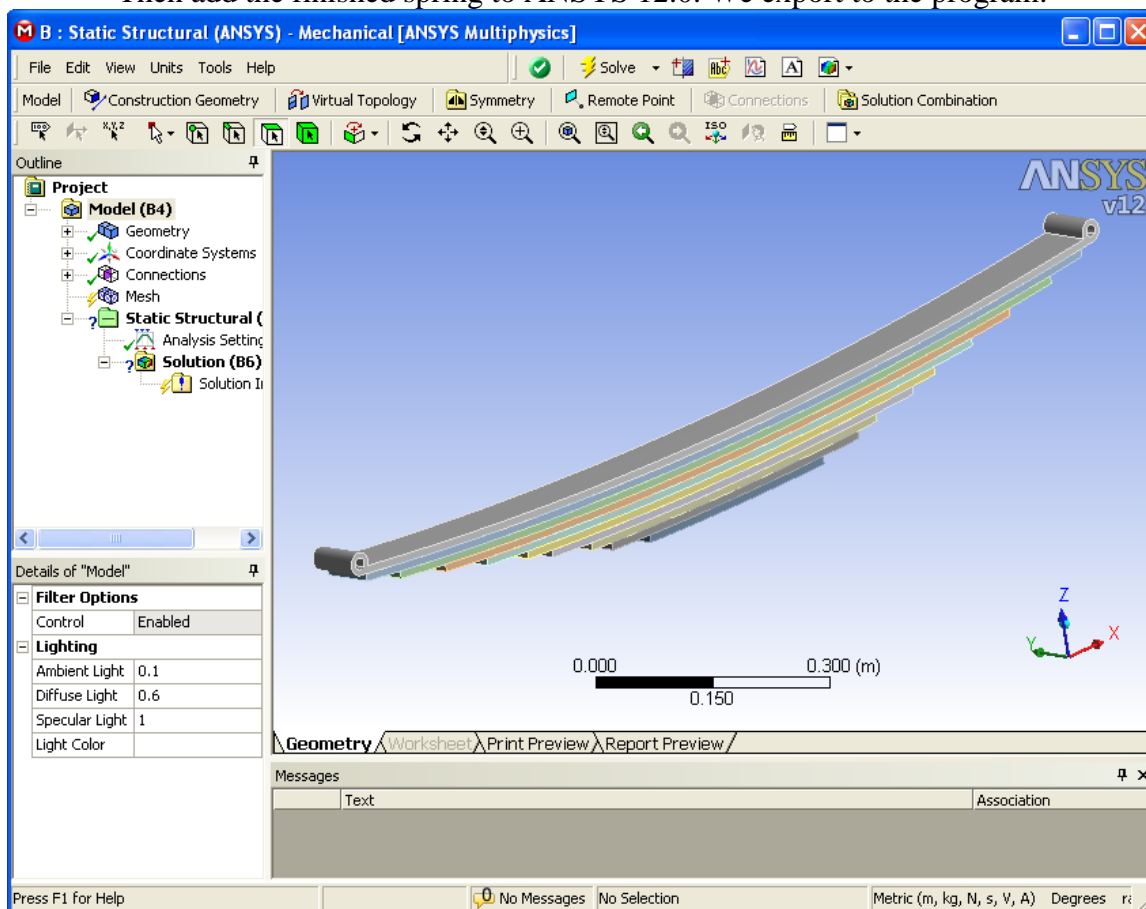


Figure 5. ANSYS 12.0. view of the source exported to the program.

ANSYS 12.0. you will need to attach the tag part of the spring exported to the program. To do this, ANSYS 12.0. In the program, press the Fixed Support button in the Supports section and select the tag part of the spring (Figure 6).

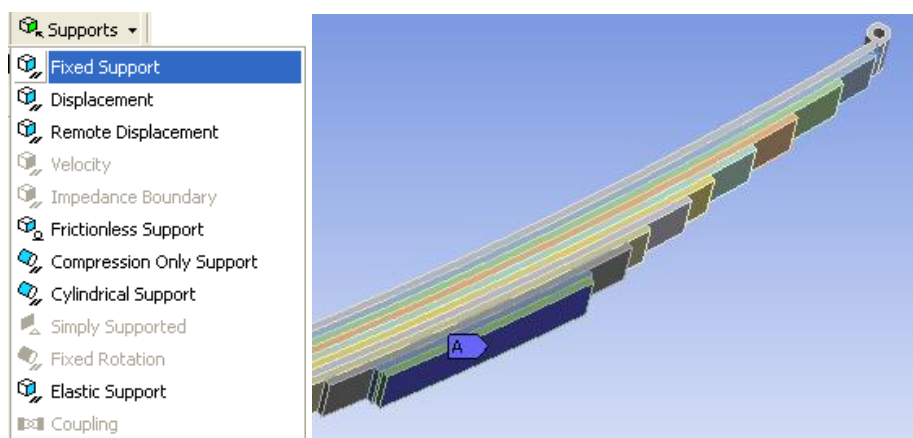


Figure 6. Fixed position of the spring tag part using the Fixed Support button .

A force is then applied to the frame of the spring and simulated. This can be seen in Figure 7.

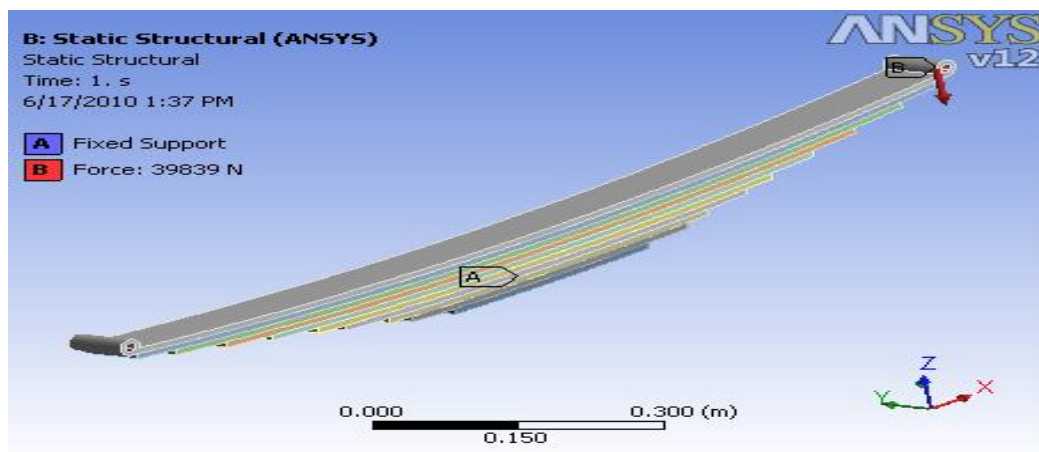


Figure 7. The force applied to the spring and the condition of the fixed spring.

ANSYS 12.0. By simulating the spring in the program, you can get the results of the equivalent stress of the spring, the total deformation and the Safety Factor. The results of this simulation (Figure 8) determine how much force the spring can withstand and where it will break.

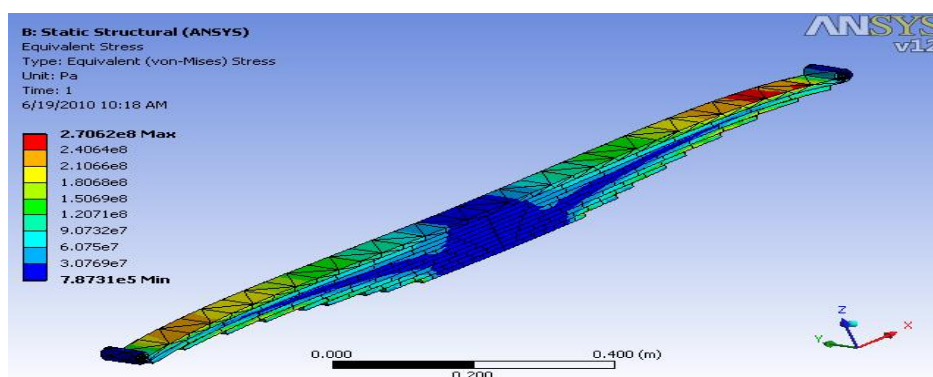


Figure 8. Source simulation view.

## RESULTS

In the Solid Edge ST program, we can see that the computational work breaks when the spring is pressed at 2.7062 Pa. It is necessary to create an optimal model of the suspension mechanisms of the Isuzu bus based on the operating conditions. The result of the calculation and the actual operation correspond to the broken condition of the spring. We can see this in Figure 1 above.

## DISCUSSIONS

Graphite is absorbed to prevent the springs from rusting and to reduce friction between the sheets. Cars have mirror inserts between the sheets. The ends of the spring-loaded main sheet are hinged to the frame, so that its length can change during movement. In heavy-duty vehicles, an additional spring is attached to the spring in addition to the spring. The reason for its installation is to change the spring load to suit the load, thereby improving the smoothness of the car. These factors increase the service life of the spring.

## CONCLUSION

In conclusion, we have considered the durability of the Isuzu NP-37 bus spring by designing it using the Solid edge ST program. We observed that the spring breaks at a pressure of 2.7062 Pa.

As a result, overloading the spring with the maximum weight will cause it to break. It should be required to create an optimal model of the suspension mechanisms of the Isuzu bus based on the operating conditions. The result of the calculation and actual operation was that the spring was broken.

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## ECONOMIC CONDITION OF PANIPAT REGION UNDER THE GREAT MUGHALS

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### ABSTRACT

*Panipat remained a place of strategic location and significance in Indian history. It was on the high road from Sarhind to Delhi and very close to the capital of India during the Great Mughals. Panipat formed a link in marching the armies of invaders or the kings of Delhi for their success and three decisive battles were fought. The economic life of people subsisted on agriculture. Panipat had a few industries on a cottage scale, engaged a minority of population. The rabi and the kharif were the two harvests of the region. Much of the land was irrigated by inundation (salabi) and the richness of soil was remarkable. There were three types of soil sandy, clay and kallar. The irrigation system of Panipat area can be divided in two main categories i.e. river works and lift irrigation. Due to uncertainty of rain the people restored the artificial methods of irrigation and the chief of which was the wells, a traditional method and as old as the farming. The methods employed for irrigation was rahat (arhat), well-gear and charas. A channel was excavated that diverted water by way of Panipat and sonipat to the north western part of the subah of Delhi. To pay revenue to the government zabti system was in use. Peasant's income consisted of agricultural produce, part of which they consumed while the rest was sold or bartered to buy things like salt, clothes, utensils and money to pay the revenue. In the village society the local elite groups had achieved a remarkable control over the surplus. Famines were frequent in those days due to lack of artificial irrigation, droughts, floods or heavy rain-falls, improper means of communication. The government policies of prevention were not adequate enough. Wool spinning and weaving had been one of the major cottage industries. Panipat has been an important blanket weaving centre. Drums, ropes, scale-pans, oil jars (kuppas and kuppis) were also made at Panipat. Special kind of glazed-art pottery was made at Panipat.*

*Kagazi pottery was made by kuzgars in and around Panipat. Makers of this pottery were different from kumhars. Saltpeter was manufactured here. For transporting merchandise the oxen and camels were used but most of the people moved from one place to the other on foot. Panipat was on the trade route (land) of Lahore to Fatehpur. There were two categories of the towns, one was hatt or markets where rural commodities were brought and sold and the other where both rural as well as urban commodities were brought but sold in other regions. Panipat was a big town. The rural market was very much a feature of the intra-local trade of the period. A considerable traffic was also carried on by the cultivators themselves. Delhi traders often sent their agents for purchasing of cotton, ghee and other commodities from villages. This local traffic was of immense advantage to the farmers who could eliminating the agency of middle men, the local dealers, and always get a good price for their produce. So, one of the specific features of the medieval Indian economy was the trade relationship between rural and urban areas. The traditional village community was based on connection of agriculture and crafts and it was supplied to the urban market in large scale by the peasants.*

**KEYWORDS:** Strategic, Trodden, Appearance, Inundation, Interruption, Emptied, Gallon, Perd, Palanquin

## INTRODUCTION

Panipat remained a place of strategic location and significance in Indian history. It was in the year 1580 when the entire territory under the mughal authority, was parceled out in the twelve divisions called subahs by the mughal Emperor Akbar. Panipat was included in the subah of Delhi. But during the British period it was under the province of Punjab. After the formation of Haryana it was included in district Karnal. At present it is a district headquarter in Haryana State. It was on the high road from Sarhind to Delhi and very close to the capital of India during the Great Mughals. Infect the whole of the tract from Punjab to Haryana up to Delhi had been the cockpit in Indian history. It was a place of high antiquity. It formed a link in marching the armies of invaders or the kings of Delhi for their success and because of its nearness to Delhi it decided the fortune of India again and again. While tracing the geography of Panipat the main point strikes in the mind is that, was there any geographical factor, involved in the location of Panipat. The possible routes to Hindustan through its North-west frontier were the Khybar and Bolan routes. The Khybar route has been more frequently trodden. It leads directly between the desert and the mountains up to Delhi and panipat had the strategic location on the high road from Sarhind to Delhi. In marching army and communication Panipat formed the link with their homelands. The geographical identity of Panipat has kept on changing in the various periods of history. It was a place of great importance because of three historical and decisive battles. Babur with mughal army marched on Delhi, mounting his horse at Ghraunda-sarai, Babur led his army to Panipat, which he selected for the battle-field, as the town would cover one of his flanks. On 21 April, 1526 Ibrahim Lodhi forces advanced to the attack, were utterly routed and persuaded by Babur's army to Delhi while the conqueror remained and encamped for a week to the west of Panipat. He considered the place a fortune one and treated the people well. Then he made Muhammad Angluli, who had assisted him with troops, governor of Panipat. After defeating him the power of Lodhi dynasty was destroyed and transferred the empire of India from Afghan

dynasty to the Mughal dynasty. In 1556 in the second battle of Panipat Akbar defeated Hemu the Hindu general of Adil Shah, the ruler of Delhi. In 1761 in the third battle of Panipat Marathas were defeated by Ahmadshah Abdali.

The economic life of people of Panipat, was likewise the other parts of Northern India, subsisted on agriculture. The cultivation depended mostly upon rainfall and partly on wells. There were two harvests the rabi or spring and the kharif or autumn. The autumn harvest was being nourished with less rain on the other hand the spring crops were grown even if there was no rain falls. Much of the land was irrigated by inundation (salabi) and the richness of soil was remarkable. The soil was classified in three categories, sandy, clay and kallar or rehi. The sandy soil was also called retli soil. This kind of soil was mostly found near the bank of Yamuna River. Little cultivation was possible in the sandy soil areas. The second type soil clay was also called kankar which was found in Naili and in some patches of Panipat area. The clods of clay were not easily broken and did not yield the autumn crops. The land could only be ploughed immediately after the heavy floods. This soil was suitable for paddy if properly managed. The third type of soil kallar or rehi was found in stretches of varied extent almost through-out Panipat area. The appearance of the landscape of this type of soil was just like a white floor with brownish-black background having alkaline salts of three to four inches depth over the surface.

The irrigation system of Panipat area can be divided in two main categories i.e. river works and lift irrigation. Due to uncertainty of rain the people restored the artificial methods of irrigation and the chief of which was the wells. Under the great Mughals like other parts of North India people of Panipat mostly depended upon the well irrigation. A rich underground water reservoir and nearness of the water table made well irrigation more feasible in the area. It was a traditional method and as old as the farming. Two types of wells were found in the region, kachcha wells and pakka wells (brick-lined wells). Another method employed for irrigation was rahat (arhat), well-gear or the Persian wheel. It consisted of a continuous chain of buckets passing over a vertical wheel fixed over the top of the of the well and rotated by means of a wooden and an iron gear which wore by a pair of bullock walking round a circular called perd. This device was extensively used here. The other method used in the region was the charas or mot and it suited to lift the water from deeper wells. It consisted a large leather bag(charas) holding thirty to forty gallons of water, fastened to one end of a rope which passes over a small strong wheel(bhaun) fixed over the well. When the bag has been lowered, the other end of the rope is attached to the yoke of a pair of bullock that then walk down a ramp of a length approximately equal to the depth of the well. The driver used to sit on the rope near the yoke to keep it in position. By the time the bullock arrives at the end of the ramp, the bag has been drawn up to the top of the well; its water is emptied into the cistern by a person who used to stand nearby. This method was also in use in Panipat as well as in the adjoining areas.

It is also pertinent to say that some canals were excavated during the mughal period and arrangements were made to distribute water from canals to irrigate land. During Akbar's period there were some inundation channels of the river Indus. Firuz Shah constructed the canal called canal of Firuz Shah. It was the oldest canal of the area and incidentally irrigated the tract from it passed through. It was re-excavated in Akbar's reign to supply the water from Yamuna to soils the Chitang on to Hansi and Hisar. A channel that diverted water from Hansi-Hisar by way of Panipat and sonipat to the north western part of the subah of Delhi was also excavated and it covered a distance of 78 miles. The canal flowed throughout-skirts of the city and called Shah-

Nahar or Nahar-i-Faiz and entered Delhi. The canal proved boon for the cultivators along its route. In 1639 Emperor Shahjahan visited Punjab, the subahdar of Punjab and Kashmir, Ali Mardan Khan suggested for the digging of a canal which was known as Shah-Nahar. After giving the permission by the emperor canal was constructed and later on, its water was diverted to Delhi the capital city. The water was led along the drainage line through Panipat and Sonipat to Delhi. Its water flew with few interruptions from 1707-1740 and it gradually silted up during the decline of the Mughal Empire. The principal spring or rabi crops were wheat, kur-rice, barley, poppy, saffron, linseed, mustard, carrot, onion, muskmelon, ajwain etc. And the autumn or khraif crops were sugarcane, indigo, pulses, jowar, lobiya, hinna, etc. and hemp or bhang was also cultivated. Betel leaf or pan was grown practically all over India. A considerable traffic was also carried on by the cultivators themselves.

The details regarding revenue administration of panipat is not found as such, however, a picture of revenue administration of panipat can be traced on the basis of revenue administration of subah of Delhi. The sub-division of the land for the revenue purposes was called dasture, but it went out of use in the official histories after Akbar. Zabti system was implemented in the productive portion of Northern India. In this system Akbar fixed his claim one-third of the gross produce. And his government officials determined the average yield of every crop grown in the region to realize the revenue. The main feature of ten year of scheduled rates, which has been given in Ain record, is that the demand rates of all crops were fixed in cash not in grain. The parganas were grouped as assessment circles with a dasture for each circle. There was a wide gap between jama and hasil. In this time assignees were the most important class of intermediaries between the emperor and the peasants. In this area likewise other parts of Delhi subah revenue was paid mostly by crop-sharing and by bigha. Considered in relation to the total revenues Panipat area was the one of the highest. Under the system it would have been hard to make a living by growing only grains and oil seeds. The superior crop like cotton paid the peasants better than food grains. On the other hand peasant's income consisted of agricultural produce, part of which they consumed while the rest was sold or bartered to buy things like salt, clothes, utensils and money to pay the revenue. In the village society the local elite groups had achieved a remarkable control over the surplus. Famines were frequent in those days due to lack of artificial irrigation, droughts, floods or heavy rain falls, improper means of communication and even the government policies of prevention were not adequate enough. During these difficulties free kitchens were opened in the affected areas and sometimes revenues were also remitted by the Government.

The main occupation of the region was agriculture however, a few industries and that on a cottage scale, engaged a minority of the population. Agriculture production, particularly raw material helped in the growth of industry in this period and also led to the growth of trade and trading centers in the region. The state extended its patronage to manufacturers. Akbar took special interest and paid much attention to various stuffs. He employed skilful masters and workmen to teach people the important methods of manufacturing. Arrangements were made for importing new material and to create the demand of home industry. Akbar had also ordered to the people of certain ranks for the purchase of certain articles. Price of such things depended upon the raw material and artistic skill spent upon them. So these crafts could never flourish without imperial patronage. The craftsmen and the peasants produced these commodities for the

nobility and the rich people who could pay enough prices of the goods. As a result the economy extended during medieval period in Haryana region.

Wool spinning and weaving had been one of the major cottage industries of the area. Panipat has been an important blanket weaving centre. The weavers used handspun yarn. The wool was brought here from Punjab, Rajasthan and the south. The blankets of ordinary quality were exported to the other regions of India. Drums, ropes, scale-pans, oil jars (kuppas and kuppis) were also made at Panipat like other parts of north India from hides of cattle, horses and camels and the skin of goats and sheep etc. Betel nut cutters (sarotas) were made in fanciful forms, the handles being of brass with quaint projections, in which small mirrors and pieces of coloured glass were fixed. Scissors are similarly ornamented; the handles were made of brass with bits of coloured glass rudely simulating jewels set therein. These articles were made for export. Panipat has been noted for small wares in metals of various kinds. A peculiar kind of bead- like ornament known as motis or pearls, skillfully made in thin silver was one of the specialities of the place. There was no chasing of ornaments of any kind, but silver was of good colour and the beads were perfectly round. There were glass-blowing factories at Panipat and a certain amount and special variety of glass-blowing was done here. The glass was used for mirror-worked walls and also sewn into phulkaris. Panipat was also noted for kumkuma. Brass, an alloy of zinc and copper were made here. Panipat had been famous for the manufacturing of copper and brass Utensils and these were largely exported to the market of Delhi. Panipat had been famous for its Pottery. The village pottery was as old as the country itself and the ordinary vessels for villagers i.e. earthen buckets for Persian wheels and small bricks were made by village potters. Special kind of glazed-art pottery such as tea-pots, cups and other fancy articles were made at Panipat. Kagazi pottery was remarkable for its thinness and was made by kuzgars in and around Panipat. Makers of this pottery were different from kumhars. The industries had great importance at that time and there were a number of potters who had changed their profession to agriculture.

The area was well known for several occurrences of saltpeter. It was manufactured around Panipat by the indigenous process. It was used for preserving meat and fish and chiefly employed in lac and cochineal dying, as a flux in glass making. Different mineral products found in this region were very useful. One of the important mineral products of the plains, found in most of the areas, was kankar or conglomerated nodules of the lime stone that was used for metalling roads. Carbonate or barilla of rods was made from the ashes of the lana plant and those of the kangankhar. It was also found in the crude form called sajji from leh or roda-soils by washing. Sajji was used in washing and dying clothes. It was also applied to injuries sustained by camels and horses and was used to clarify sugar.

There were different trade routes in India that linked the different trading and commercial centers. From Lahore many roads branched off to different towns and countries. The land routes were demarked by avenue of trees. At intervals there were walled enclosures of bricks and stones where travellers and merchants could stay in the night in security. On the road from Agra to Lahore pillars were built at every kos ( kos minar) and a well at every three kos with trees on both sides of the roads. Sarais were also erected along the high-way for the stay of travelers. The usual means of conveyance were horses, bullocks-cart and occasionally camel-carts. For transporting merchandise the oxen and camels were used but most of the people moved from one place to the other on foot. They travelled only on rare and special occasions i.e. paying visit to holy places, in the functions of the close relatives and on the death of a relative or a friend and



that too in groups. Rich people used palanquins and litters for their women. There were no permanent bridges on the rivers. Panipat was on the trade route (land) of Lahore to Fatehpur. There were two categories of the towns, one was hatt or markets where rural commodities were brought and sold and the other where both rural as well as urban commodities were brought and sold in the other regions. Panipat was a big town of this region. The rural market was very much a feature of the intra-local trade of the period. The commodities i.e. all kind of handicrafts, articles, grains, vegetables, fruits and many other goods were needed in village shops were produced by the local peasants and artisans and merchants, at small rural market called hatt, hawked these commodities. There was agriculture and non agriculture production, called rare commerce. The local trade was principally conducted through the village dealers who dealt with the bigger traders at the mandis of Panipat, Karnal, Kaithal, etc. A considerable traffic was also carried on by the cultivators themselves. Delhi traders often sent their agents for purchasing of cotton, ghee and other commodities from villages. This local traffic was of immense advantage to the farmers who could eliminating the agency of middle men, the local dealers, and always get a good price for their produce.

In internal trade in the good season surplus grain of Kaithal was sent to Delhi through Panipat and from this area jowar, bajra, sarson, til, moong were sent to the outside markets. The perfume of rose flowers and rose water was produced at Pinjore and exported to Delhi and Agra through Panipat. Copper and brass Utensils were largely exported to the market of Delhi. So, one of the specific features of the medieval Indian economy was the trade relationship between rural and urban areas. The traditional village community was based on connection of agriculture and crafts and it was supplied to the urban market in large scale by the peasants. They were mainly engaged in agricultural pursuit which in turn sustained industrial production and trade to a large extent.

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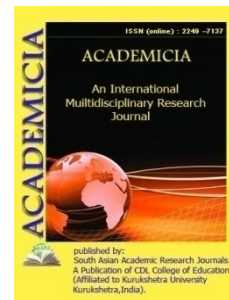
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## THE ELEMENTS THAT MAKE THE VISUAL EXPRESSION OF THE FEATURE FILM

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### ABSTRACT

*The article considers the elements of visual expression used in Uzbek feature films and creating the artistic content of the film. Uzbek cinema has more than a century of history. Between these years, the era of production of silent black and white films to digital high-tech films began. The visual expression of films shot at different periods was inextricably linked to image processing technology.*

**KEYWORDS:** *Close-Up, Light And Colour, Mise-En-Scene, Montage, Perspective, Symbol And Gestures (Metaphor), Time And Space, Visual Expression.*

### INTRODUCTION

This is the most powerful influence tool that was invented in the early days of cinema, this is a close-up. The close-up was mainly a means of influencing the viewer by the creators in the era of silent films. The composition of a large frame plan, based on the task assigned to it, is reduced to an image taking into account the precision of the selected lens. This is the most powerful influence tool that was invented in the early days of cinema, this is a close - up. This tool causes the viewer a strong emotion, an important message - if there is a human face, it shows aspects of his facial expression that cannot be displayed in the most subtle and average general plans. For example, a close - up of the hero in the film "Ikkinchi xotin" ("Second Wife"), shot by the cameraman Dobrzhansky in 1924, in the hope of seeing the child "Adolat" (Rachel Messerer),

was based not only on the editing connection but also on the fact that the viewer became a partner and participant in the event in the desire of the actress.

In the era of silent films, they were mainly used as a means of influencing a widescreen plan. Despite the numerous implementations of the means of expression, in 1966, director A. Khamraev's appeal to the excessively a close - up of the Princess (SayyoraIsoeva) in the film "Laylakkeldiyozbo'ldi" shows that the viewer will remain an effective means if a close-up is applied. And yet, if you look at the fact that the film was shot on a wide-format film, then it was difficult to correctly and based on the necessary details correctly fill the wide-format personnel composition. Even though the director has several elements of visual expression at hand, the image of the Princess's face in this form shows that the close - up is always relevant. In this regard, S. Eisenstein claimed that "The main task of close-ups, not scaling, but a demonstration, express and show. It is much more significant in semiotics than the general and average plan and is an incomparable form of image language on the screen. The usual close-up serves as the culmination of the phrase in the assembly and allows you to increase dramatic tension". [1, 5].

## MATERIALS AND METHODS

The mise-en-scene in front of a film camera is more inextricably linked with the operator than with the mise-en-scene on the stage of the theatre. No episode takes place without a camera (that is, a cameraman) filming from a point of view. The creation of a mise-en-scène is built with full coverage of the elements of visual expression (lighting, decor, texture, clothing, makeup, editing). Mise-en-scene - (fr. Mise en scene - the location on the stage), represents the interaction of actors and their surrounding material environment on the set, in nature or the pavilion. It is permissible to interpret the mise-en-scène as a fixed "section" of a certain moment of movement. But it is more accurate and theoretically significant to interpret the mise-en-scène as a dynamic space-time unit that represents a specific author's idea in a certain section of the film. In fictional cinema, mise-en-scène is one of the most important directorial tools for defining the ideological and figurative content of a drama. A mise-en-scene is a director's interpretation of a work in many ways. But unlike the theatre, which directly determines the final look of the mise-en-scene, the mise-en-scene in the cinema is a prerequisite for the construction of a permanent mise-en-scene (a term proposed by S.M. Eisenstein). That is, a view added to a sequence of frames included in the composition on the vertical surface of the screen.

Therefore, when developing a cinematic mise-en-scène, the director, artist and cameraman take into account not only the movement of the actor but also the movement or stability of the film camera, the type of lens used, the shooting angle, the dynamics of lighting, etc. [2].

A. Tarkovsky - "When creating a mise-en-scene, the director must proceed from the psychological state of the main characters, find and reflect this situation in the entire internal dynamic structure of the situation and return it to a single reality, as if directly observed, and its textured uniqueness. Only in this way does the mise-en-scene combine the accuracy and ambiguity of the original truth. The mise-en-scene personifies not thought, but life "[3].

The relationship between mise-en-scène and cinematography is different. The mise-en-scene can end with a frame shot with a still, panoramic or moving camera. Can be the basis for a sequence of scenes recorded by one or more cameras from different points; the frame can combine several mise-en-scenes steps by step or simultaneously (simultaneously). In the process of development, the film has mastered various forms of mise-en-scène. From the earliest years of the silent film

era, great filmmakers, using advanced stage experience, began to eliminate the one-sided design of the traditional *mise-en-scène* for the “stage mirror,” while moving the *mise-en-scène* both within the frame and by moving the point of view.

Movie *mise-en-scène* has always depended on the improvement of technologies used by the creators. After all, the convenience of technology (capture of cameras from a tripod), an increase in quality indicators (standards of film sensitivity) allowed artists to create interesting and meaningful *mise-en-scènes*.

For example, in the 1966 film “Insight” (“Прозрение”) directed by Sh. Abbasov, the camera in the hands of the operator randomly moves along an unlimited trajectory, showing the tricks of dogfighters. Or, for example, in the film “Laylak keldi - yoz bo’ldi” directed by A. Khamraev, there are many deeply meaningful, absolutely stable, balanced scenes, including the episode of Mehriniso's mother and her husband (Hikmat Latipov). When we divide the frame into two equal parts, the left side of the frame composition is the old woman and her husband, sitting on a box away from the camera. Why he is so far away becomes clearer at the end of the episode, when the old man leaves the room and is left alone. To the right of the frame is a clock hanging on the wall and an empty plate on the table, next to the camera. The two details on the right complement each other. In many films, the clock in the frame represents life. Likewise, a clock hanging on the wall fills the conversation between them with a sign that Mehriniso is approaching the end of his mother's life. A plate next to the camera indicates that the filtered food has run out, and the light in the frame is illuminated in proportion to the old woman's handkerchief to maintain balance. In the *mise-en-scène* of the objects in the frame, we can also see that the opposite perspective, that is, the gaze and the conclusion, are inverted. In the end, if they are reversed, the progress line (i.e., the growth line on the chart always runs from left to right) will be oriented. With regard to the placement of the actors, as already mentioned, we observe a regression line. As for the exposure of the frame, the clock and the plate on the right also complement the words of Mehriniso's mother. This placement method also shows the reverse perspective mentioned above. The old woman is in the last place in the arrangement of the actors of the *mise-en-scène*. The viewer's attention is also drawn to the portrait lighting in the control panel from right to left, and Mehriniso's mother is the best lit. All pins (two straight lines connecting parts) in the centre of the frame connect the shelves. Despite the stagnation of such a seemingly simple episode, it is full of inner excitement and contradiction. We will discuss this episode in more detail in the following chapters.

### **Editing.**

It is impossible not to agree with the widespread misconception that montage is the main form-forming element of a film. According to this idea, the film is supposedly created on the editing table. Any art requires assembly, assembly, disassembly and alignment of parts. So what is the role of editing? Editing has a concept often described by proponents of the concept of “editing cinematography”, but rather divides time-filled footage into parts. In general, playing with concepts is the prerogative of cinematography as a whole; therefore there are no concepts of the essence of cinema in editing. The language of cinema is the absence of language, concepts, and emblems. Any film is completely embedded in the frame, and we think it's safe to say how talented the person who made it was just by watching one frame. To grasp the law of proportions, the ratio of frames is sometimes difficult (especially when an episode is filmed

indistinctly) - this is a laborious process of finding the principle of connecting frames, and not just a mechanical connection of parts on the timeline. During this process, gradually, step by step, the essence of the object embedded in the material becomes more and more evident while the photography is still in progress. There is a kind of feedback here: the structure placed in the frame appears in the editing as separate properties of the material placed in the frame during photography. In editing, the material expresses its nature, which is reflected in the nature of the combinations themselves, in their casual and emotional logic [4].

Partly the fact that editing is a very important means of expression in cinema belongs to L. Kuleshov. Ricotto Canudo and Louis Delluc, who wrote about cinema before Kuleshov, were only approaching an understanding of editing, thinking about movement and rhythm.

L. Kuleshev's invention is significant in that he looked to the future, and not to the experience of pre-revolutionary Russian cinema. In the articles of 1917-1919 and the study "Flag of Cinematography" (1920) L. Kuleshov gave a theoretical substantiation of the importance of editing. Soon Dziga Vertov came closer to understanding the role and uniqueness of editing, combining chronological images of filmmakers on the front side. In his zealous manifestos of 1922-1925, he described the propaganda possibilities of editing structures. L. Kuleshov, experimenting with fragments of the old tape, discovered the effect of assembling frames, which gives them a different meaning, changes their content.

Then he comes to the surprising conclusion that with the help of montage it is possible to create events that do not exist, and even images that do not exist. ("The Kuleshov Effect"). For all groundbreaking films of the 1920s, the opportunity to master the endless magical possibilities of editing is unique.

It is no coincidence that film historians call this period "montage".

The experience of staging four classic films – "Uprising", "Potemkin", "October", "Old and New" - allowed Eisenstein to express the opinion that "Cinema is, first of all, editing". Everyone who wrote about the film came to the same conclusion - V. Pudovkin, S. Vasiliev, S. Timoshenko, B. Balash and many others. The montage has been mentioned only silently in general theoretical books on the spirituality of the art of cinema in recent decades. There are no special studies other than interesting ones based on the experience of L. B. Felonov's work. Also, the word "editing" is rarely used in monographs and film reviews by directors. Most worrisome is the fact that, except Andrei Tarkovsky, Gleb Panfilov, Otari Ioseliani, Aleksandr Medvedkin, Vadim Abdurashidov, Tengiz Abuladze, Eldar Shengelay, Nikita Mikhalkov and some others, editing opportunities in the creative practice of most filmmakers are practically absent. Some producers leave the task of recruiting to editors who are not usually looking for creative solutions. The length of editing works, the length of remarks, the performance of actors, musical tones are often determined by uncreative considerations, the influence of rhythm, tempo, asynchrony, in a word, the problems of editing images are forgotten. This is the boring, lengthy, meaningless nature of contemporary feature films and documentaries [5].

Our opinion is confirmed by the film "Ikkinchi khotin" ("Second Wife") (1927) directed by M. Doronin and V. Dobriansky, filmed in the first silent periods, which was not included in the substantive element of the film. The subsequent introduction of JUMPCUT into the stylistics of films used by the creators of the new French wave brought a unique aesthetics into the internal structure of Uzbek feature films. Rapid, Stopshot, internal frame assembly, incl.

**Angle.**

(FR. *raccourcir* — to shorten). The basic concept of directing and cinematography is a significant, but little-studied, formative phenomenon and is associated with the technical organization of space-time filming in the framework of creating a metaphor as the basis of an artistic image. The analysis of special literature and experiments on film production revealed the following features in the meaning of the relationship between the cameraman's (cinematographer's) perspective and the metaphorical (content) perspective. The connection between the cinematographic (operator) angle and the metaphorical (content) angle as the main link for cinematography has been shown by many well-known cinematographers, including cameramen V. S. Nielsen V. N. Zheleznyakov, V. Storaro Yu. A. Zhelyabuzhsky and others [6].

An example of the dialogue between Baikaro and Sardor in the film “Alisher Navoi” (1948) directed by K.Yormatov and cameraman M.Krasnyansky is the most meaningful and meaningful of the angular images. It is in this episode that we observe how the angle is a significant and influential element. In the movie “Sinfdoshlar” (Classmates) (2013) directed by Kh.Nasimov and cameraman B.Qodirov, a camera installed around the eye of businessman Allahshukur (S. Khamrakulov) descends to the ground after rumours to show on the screen that he is disrespectful to his neighbours. It is a visual expression of the goal that the creative team wants to convey to the audience.

**Light and colour.**

Light and shadow are the bright expressive means of “cinema”. The operator, using light, conveys the texture, size, shape of the photographed object. The light amplitude is measured by the intensity of the light and is applied to take into account the drama of a particular episode, as well as the genre of the film.

The ability to combine different light intensities allows the operator to create the necessary climate of events (mysterious, festive, poetic (lyrical), tense and others). Light, shadow, colour, foreshortening, close-ups are used by the operator together to create a cinematic image of the characters and scenes of the film [7].

Cinematic theory suggests that viewers who watch a dimly lit film will interpret overly dark, gloomy and contrasting images with feelings of danger, abstraction, depression, mystery, and evil. Characters in this order should be interpreted as malicious, deceitful, and untrustworthy characters.

Comedy filmmakers use bright lights, less contrasting and flowing shimmering scenes to create an emotional relationship of joy, light, honesty, and a sense of happiness. The characters depicted in this way are interpreted as kind, interesting, heroic characters. Purely realistic lighting. Filmmakers use this lighting approach to enhance the plot, characters, theme, style, and overall mood of a film. “We can say that the technical capabilities and expressiveness of the director's or cameraman's work are primarily manifested in the lighting” [8]. Several elements of visual storytelling are as effective and powerful as light and colour (which will be discussed in more detail in the following chapters). The above elements can affect the viewer on a purely emotional level. This gives these elements an additional opportunity to influence the audience to one degree or another, at the same time, the consciousness of the audience interprets the presented story at a completely different level of consciousness [9].



As a means of signifying light, we point out that at the end of the conversation between grandfather and Zuhra in the film “Tohir va Zuhra”(“Tahir and Zuhra”)one candle in the frame (placed closest to the camera) destroys Zuhra's future.The frequent exchange of light and shadow resulting from the flickering of a candle performed by Muminmirzo in Alisher Navoi's film further increased the fear and panic in the audience.The use of light and colour as a means of visual expression, taking into account the drama of the film, we will see in more detail in “Insight” (“Прозрение”) by Shukhrat Abbasov, “Inson qushlar ortidan bormoqda”(“A man follows the birds”) by Ali Khamraev, “Triptix” and in the following chapters.

### **Symbols and gestures.**

In every frame of an episode of films shot by experienced artists, there are also meanings that directly express the meaning of the event and, therefore, arise as a result of thinking about it and are visible to a discerning audience.In addition to the interesting and authentic development of the outstanding aspects of films that are considered good films, they evoke inner feelings and some thoughts.The role of symbols and gestures in awakening these feelings and thoughts is invaluable.The use of symbols in films is to create a frame that impresses the viewer more than a simple understanding of the appearance, the content of the plot.In the images, we see explicit or hidden symbols of the elements, depending on the purpose, application of the creators (artist, operator, director).This is a symbol that we can openly see in the film, for example, the life of Justice (Rachel Mexerer) in “Ikkinchi khotin”(“Second Wife”), a bunch of peppers hanging from a pole, or hidden gestures that form in the mind of the viewer while watching a film. Although hidden gestures are not presented as a single image, they are formed in the mind of each viewer with the participation of all means of visual expression during the episode. Colour is also important in expressing characters. Each colour has its meaning. For example, in the drama of a colour plot, contrast can be a means of creating contrast. The scene of the wedding of Amu Darya (DiloramKarimbayeva) in the film “Inson qushlar ortidan bormoqda”(“A man follows the birds”) is mainly in the predominance of red and turquoise colours, while in the same film Farrukh (JakhongirFayziev) is depicted alone in the snow, colorless nature. In the film “Triptix” we do not see bright colours. This is a visual reflection of creativity, manifesting post-war difficult times.

### **Time and space.**

Einstein said: “The experience we teach gives us only a one-time criterion that distinguishes three types of perpendicular criteria that allow us to find a good path in space. We attach only one important to the concept of time and consider it as a space between the past and the future...” [10, 11].In fact, a concise lens is an insurmountable and irreversible force in a specific sense: it cannot return to giving up smoke or lead.But when a person quot; turns to its internal sensory quot; then the work goes in a completely different way; here its blurry, diverse, and sometimes contradictory effects do not obey a single and certain criterion.Often in the memory of a person immersed in our time, the flow of time stops... irregularity, the uncertainty of the feeling of time experienced to proceed from the fact that we perceive “our image” with the help of very complex, diverse and inaccurate internal feelings.” In such a thin, unstable and at the same time sinister system, a person first received weapons and the potential to control modernity: in fact, a movie set can not only accelerate or slow down the course of events, but also return the course of events, and the first steps of cinema - from such a potential film set. [10, 11]

As Balasz points out, editing gives us three concepts of time: the time the film is shown on the screen (the length of the film), the time of action (the length of the film's plot), and the time of sensation (the perception of different levels of subjectivity and subjective duration perceived by the viewer). It is necessary to distinguish between date and duration, studying the ways of expressing time in cinema [12]. Cinema, literature, theatre, television belong to the genre of contemporary art. "When you start moving the camera during the filming process, neither the events nor the people can be nothing more than a fable - but at the same time there is a space limited by the frame and the slippage of the film," says Polish researcher M. P. Pilipyak [11]. Time is one of the key elements of the existence and artistic reflection of the script. Cinematic time has a dual nature, which is also defined as the ratio of the duration of the film (projection) and the time of movement in the film (plot), in general, the temporal category in cinema manifests itself in three different forms:

- 1) physical time is the objective duration of the film, which corresponds to the exact timing (90, 120 minutes, etc.) and the time the film is projected onto the screen.
- 2) Psychological time is the subjective length of the film, which reflects the degree of the viewer's involvement in the viewing and cannot be measured. Besides, psychological time usually does not correspond to physical time. On the contrary, it can speed up or slow down. For example, when the viewer "sticks" to the screen, the tape appears to be moving quickly. The opposite may be true. That is, the viewer looks at the clock every minute, comparing his perception of the slow pace of events in the film with its exact duration;
- 3) Artistic time by its nature is the most significant and complex ordered event, and this is a spiritual phenomenon.

Artistic time is inherent in any narrative that "records the film, directs it to another scene, tells the story of action time, which creates a sense of another world. It seems to us that this time has the same logic as the time in the calendar "[12, 14].

Artistic time is a way of organizing plots, choosing and combining fairy-tale material, forming the structure of certain parts of a film. Shortening and lengthening, slowing down and accelerating, stopping and a sudden "jump" forward - all these are the qualities of artistic time that open up wide opportunities for building an expressive, imaginative field of filmmaking [1]. The category of time in cinema is not limited in duration but includes structural relationships such as the ordering of events, their sequential appearance. Consequently, the next stage of artistic time in cinema can be defined as a sequence of events. There are several ways to combine events into one screen label:

1. Chronological method - the sequence of events in the plot consists of the sequence of situations from their creation to resolution (S. Eisenstein's armour "Potemkin").
2. Simultaneous method - events occur simultaneously, but are displayed sequentially on the screen; this multi-tonality is achieved both due to compositional and dramatic solutions ("Toqatsizlik" by D.W. Griffith, "Mystery Train" by D. Jarmusch) and due to multiple screens ("Qoch Lola, qoch" by T. Tikver).
3. Nochronological method - the order of events is formed by introducing retrospective episodes (memories), introspection episodes (fantasies, dreams). (B. Bertolucci "Конформист" ("Conformist"), A. Rene "Хиросима, менинг муҳаббатим" ("Hiroshima, my love")). It is difficult to compare the sequence of events over time using the achronological method. The episodes, filmed at different times and in different places of the day,

combined with the general mood, the viewer cannot understand their temporal principle (“Andaluziya ko’ppagi” by L. Buñuel). These four ways of organizing the sequence of events (with the exception of the chronological method) in their pure form are very rare in the art of cinema ... The next stage of artistic time in cinema is the time of events. The time of this event reflects the natural coordinates in which this or that plot develops, as well as the seasons, time of day. In other words, the time of the event is similar to the objective time in which the main character is present and moves.

Finally, you need to set aside narration time. This creates a kind of stereoscopic effect because the moment of the story is always secondary to the moment of the event is told. The time of the narration always coincides with the time of the author or the main character, if the story is conducted on his behalf. Thus, artistic time in cinema is formed by the interaction of four layers, each of which reflects one of the aspects of the development of the plot in time and the uniqueness of the story. Due to the interconnection of the four layers “... the viewer forgets where he is: but loses this connection and plunges into the world of narration, which is another layer, and builds and imagines its continuation, entering the time layer of the fable presented to him.” The concept of space in the cinema is not synonymous with the category of time by analogy; it also includes the auditorium, i.e. a specially adapted room for watching films in the cinema (classic cinematic communication). This is the place where the screen and the object of the hall are objectively present (according to Hegel's definition). But unlike theatre, there is a psychological process of comparing the viewer with the character on the screen about the real space in the hall (the effect of complete darkness) and the outcome of the event, which is called the “attractive” power of cinema. In general, the artistic space in the film is formed by combining the micro-spaces in the frame into a single macro-space of the film. At the same time, this space is the result of creating the viewer's imagination, which, when viewing the film, uniquely connects individual frames. The artistic space of a Film work and artistic time consists of several mutually intertwining layers, which include:

1. Space of events - is directly related to the plot of the film and characterizes the place of movement (exteriors, interiors, Plein air). At the same time, it should be noted that there is a certain contradiction between the venue and the narrative: showing the scene slows down the story, and, conversely, the emphasis on the rapid development of the action limits the role and weight of the venue.
2. Expressive space, or inner spiritual space of the protagonist - an audiovisual image of the character's psychological state. Italian master (teacher) M. Antonioni is a master of creating expressive space on the screen. With the help of colours, characteristic landscapes, musical minimalism, the Italian director always expressively and vividly expresses the mood of his characters on the screen.
3. The symbolic space is the author's space of the film. It is framed by the director as a transition from a clearly visible space to an abstract, modelled space. Such migration is carried out with the help of allegories, metaphors, and emblems [1].

Control by creators of the concept of time and space in cinema began to manifest itself in films made during the era of the first silent films. Moreover, the elements of visual expression were an additional medium. For example, if editing was used to shorten lengthy scenes, the talent of the creators and technological advancement was a sign that time had passed from replacing ordinary daylight with evening light. While the time in “Nasriddin Buxoroda” is a multi-day event, in the film “Alisher Navoi” Navoi is portrayed as a student, minister and enlightened old man in three

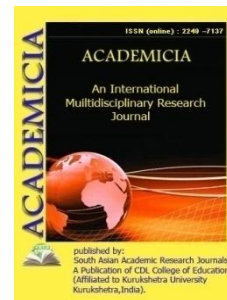
different periods. Replacing daylight with evening light can also indicate a time shift. The camera shoots the same scene first in daylight and then in evening lighting. But this alone is enough to show the passage of time. The public understands that time has passed. Then you can introduce the characters into the scene and continue moving [14].

## CONCLUSION

In conclusion, it should be noted that the elements of visual expressiveness in the composition of feature films have not yet been fully studied. The range of expression elements used in films is much wider than we mentioned. Various technological innovations in filmmaking are currently taking their visual expression to a new level. The creative team (director, cameraman, artist) develops new methods of influencing the audience, based on their volume and capabilities. This helps to improve the aesthetic level and competitiveness of feature films. This will provide an opportunity for a deeper study of the subject in the future and a new scientific approach.

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## THE INFLUENCE OF CORROSION OF THE MATERIAL OF THE PIPE BARREL AND IMPREGNATION ON THE BEARING ABILITY OF PILES

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### ABSTRACT

*The effect of concrete corrosion on the bearing capacity of short driven reinforced concrete piles in saline soils is substantiated. Based on the results of experiments on testing corrosion products, shear resistance  $f_0$  in the thickness of the soil layer in which active corrosion of concrete is expected is determined. Given the influence of the corrosion process on the load-bearing capacity of piles in medium, highly aggressive environments, primary and secondary methods of protection are recommended.*

**KEYWORDS:** *Aggressive Environment, Concrete Corrosion, Bearing Capacity Of Piles, Resistance To Corrosion Products, Primary And Secondary Protection Of Concrete.*

### INTRODUCTION

Corrosion of the surface of the material of piles affects their bearing capacity. Moreover, the influence of the factor depends on the degree of stress-strain state of the near-pile space, the material of piles, the aggressiveness and temperature of the medium, as well as the rate of filtration of ground or surface water. The work indicated [1] that in the process of interaction between an aggressive environment and cement stone, calcium oxide is neutralized, which is 60 ... 70% in cement stone, as well as oxides (silica, alumina and iron oxide), which provide a significant effect on the shear resistance of corrosion products. Based on this, it should be expected that the desired values of the concrete corrosion resistance to shear are conveniently determined in laboratory conditions by testing corrosion products on a single-plane shear device taking into account the methodology [2].

### MATERIALS AND METHODS

The studies were conducted in an aggressive environment characteristic of the soils and groundwaters of Central Ferghana. The composition and content of aggressive ions in the



solution are as follows:  $SO_4^{II} = 3520 \text{ mg/l}$ ;  $Cl^- = 105 \text{ mg/l}$ ;  $HCO_3^- = 10 \text{ mg/l}$ ;  $Ca^{II} = 230 \text{ mg/l}$ ;  $Mg^{II} = 30 \text{ mg/l}$ ;  $Na^+ + K^+ = 3485 \text{ mg/l}$ .

Below are the results of experiments on testing corrosion products of the material of the base.

**TABLE 1. TESTING CORROSION PRODUCTS**

№ experience	Shear resistance $\tau$ ( $f_0$ ) at $\sigma$ MPa			
	0	0,1	0,2	0,3
1	0,064	0,13	0,17	0,17
2	0,060	0,102	0,200	0,200
3	0,073	0,120	0,143	0,250
4	0,080	0,102	0,175	0,220

Based on the obtained data, the values of shear resistance  $f_0$  of concrete corrosion products within normal pressure  $\sigma = 0-0.3 \text{ MPa}$  can be represented as follows:

$$f_0 = 0,05\sigma + 7 \quad (1)$$

From expression (1), it can be noted that with an increase in compressive stresses, the effect of concrete corrosion products on the bearing capacity of a pile decreases. If we take into account that the most active corrosion processes occur in the aeration zone (zones of alternate wetting and drying), then the influence of the above factor occurs within certain limits along the length of piles. It is obvious that the predicted area of active corrosion along the length of piles should be assigned according to the lithological structure of the soil, the level of groundwater (including the predicted) and the aggressiveness of the environment. Based on this, determining the resistance along the lateral surface of piles  $f_0$  in the area of active corrosion of concrete in accordance with the lateral pressure of the soil at the contact of piles with soil at the considered depth.

Pile resistance in the area of possible corrosion damage of concrete  $\Phi_K$ , taking into account (1), can be written as:

$$\Phi_K = m_K u_K (0,05\sigma + 7) l_K \quad (2)$$

$m_K$  – a safety factor of 1.2;

$u_K$  – pile perimeter taking into account the predicted corrosion of concrete, m;

$\sigma$  – normal pressure acting on the lateral surface of the pile shaft in the considered layer depth;

$l_K$  – thickness of the soil layer in which active corrosion of concrete is expected, m.

Given the influence of the corrosion process on the bearing capacity of piles in medium, highly aggressive environments, methods of their protection are used. The primary protection of concrete and reinforced concrete in aggressive soil environments is to increase the ability of concrete, reinforcement and reinforced concrete to resist the effects of a corrosive environment by changing the composition and structure of concrete before or during the manufacture of structures. This is achieved by the selection of stable starting materials, concrete compositions, additives, types of reinforcement and concrete, methods of manufacturing and calculation of structural elements.



Secondary protection consists in increasing the corrosion resistance of concrete after its manufacture by partially or completely filling the pore structure with various chemically resistant materials (surface or full impregnation), using surface protective coatings or by artificially lowering the level of aggressive groundwater.

Currently, for the anticorrosive protection of reinforced concrete piles, foundations, and other underground structures in natural highly aggressive soil environments, impregnating compositions based on styrene-indene resin, pyroplast and K\* polyisocyanate, urea-formaldehyde resin, Hydrocex Penetrating, bitumen, etc. are widely used. Depending on the type of groundwater aggressiveness, Portland cement is usually used as a binder for concrete intended for subsequent impregnation. In areas with saline soils and highly mineralized groundwater, sulphate-resistant Portland cement should be used for concrete.

Reinforced concrete piles exposed to dynamic shock loads during driving must be made of dense concrete with a water resistance grade of at least B-6 since a decrease in the initial density of concrete leads to a sharp decrease in the number of impacts before failure and an increase in micro-damage in the concrete of piles after driving.

When carrying out impregnation in areas with a hot climate, it is necessary to provide measures that protect the impregnation baths from direct heating by sunlight, since under these conditions the possibility of evaporation of the solvent increases and, as a result, the viscosity of the impregnating composition increases. The maximum temperature of the impregnating composition should not exceed 25 °C.

The surface of reinforced concrete products before impregnation is pre-cleaned and dust-free by compressed air.

Before impregnating products in bathtubs, a laboratory test of the impregnation regime is carried out on cube samples with an edge of 10 cm. If, after impregnating for 8 hours when splitting control samples, the depth of the impregnated layer is at least 10 mm, then the products are impregnated.

## CONCLUSION

The influence of impregnation on the resistance along the lateral surface of piles is established by the results of tests of piles [1]. It is known that when testing reinforced concrete piles with various anti-corrosion coatings after driving, the protective properties of anti-corrosion coatings are reduced. In turn, protective coatings will have various effects on the process of immersion of piles in the ground, and for “hanging” piles on the value of the bearing ability of the structure as a result of changes in soil friction along the side surface of the pile. It is known that hanging piles protected with bituminous mastics in clay soils reduce the bearing capacity compared to unprotected piles by more than 30%, and when piles are coated with urea-formaldehyde resin up to 20% [3].

Based on the data obtained, parameters taking into account the effect of impregnation of sandy and clay saline soils are proposed to be taken in the range of 0.8-0.9. Here the lower limit of the parameter corresponds to saline sands.

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## THE SPIRITUALITY IN THE WORKS OF AHMAD A'ZAM

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### ABSTRACT

*The article examines the features of the work of Ahmad Azam, the non-standard style of the writer, his mood and feelings. This style led to the emergence of a new direction in modern Uzbek literature - the postmodern style.*

**KEYWORDS:** Literature, Ahmad A'zam, Novel, Postmodern, Worldview, Non-Objectivity, European Literature, True Literature Sample, Goodness And Evil.

### INTRODUCTION

Literature educates a person directly and indirectly. He cultivates his taste, his worldview, his level, his attitude to man, nation, world, good and evil. So, if I read Kafka, it means that his views directly "infect" me, and his conclusions about society and the person affect my level, my taste, and perhaps even shape it. We can say that Kafka can be replaced by any talented writer.

This is the task of literature. Regardless of whose work you are reading, the task of a work is whether it is a true example of literature. For example, literary scholars say that a person who remembers Navoi gazelles and sings them will have a delicate character. Navoi affects not only taste, but also the human psyche, upbringing and worldview. If we look at the work of Ahmad Azam, this situation is obvious. In his works, we see the features of European literature. The inner psyche of a person is clearly reflected.

### MATERIALS AND METHODS

The work of the Japanese writer KaboAbe had a great influence on the formation of the poetic style of Ahmad Azam. His novels "Qumdagixotin" ("The Woman in the Sand") and "Yashikodam" ("The Man in the Box") attracted the attention of many readers for their unconventional approach to human life and work. In all his works, large and small, Ahmad Azam, like Kabo Abe, observes the movement, the psychological evolution of the character.

History does not play a significant role in the work of Ahmad Azam. We do not see a traditional plot in his work. ...[1,2]

The unconventional nature of the writer's style is that it often focuses on understanding and listening to the subtleties of the human mind, foundations of states of mind and experience that defy common sense. Therefore, the stylist's ability to perceive reality and a person, to find truth in their hearts and express it figuratively in words is the art of creating individual tasks. "Style always proceeds from the entire existence of the writer-poet, and in each of his works he revives the living light of this unique world - humanized feelings, shares them with many, acts as an educator of good feelings".[5]

His novel "Ro'yoyohud Gulistongasafar" ("A Dream or a Journey to Gulistan") begins with the author's memoirs and enters another world, the writer's style is like a rainbow, focuses on social and spiritual problems of society, tries to find solutions. one of the life-giving features of thought is the transition from observation to reflection into the realm of imagination.

In the creation of the novel, we see the living influence of the works of F. Kafka and A. Kamyu, representatives of absurd literature. It is in this direction that a new concept has entered modern literature - the term postmodern. The term was coined in the 1970s by the American theologian H. Kons to use the term "postmodern theology" in his study of religion in Latin America. The term "postmodernism" became widespread after Jenks's book "The Language of Postmodern Architecture". The author gives a completely different meaning to this term, which has long been used in different senses.[3] He notes that postmodernism marks the beginning of a new era in the history of architecture, and that the use of previous methods in architecture, if necessary copying from the past, giving a new look to existing buildings with minor changes can be considered creative. Such approaches have been used in architecture, possibly since the 1970s, in all fields of art and literature. Since 1979, when Lyotard's book "The Postmodern Situation: A Lecture on Knowledge" was published, the term has also been used in a philosophical sense.

In the same way, Ahmad Azam made a significant contribution to Uzbek literature. Post modernism is an expression of the creative pain and suffering of today in the state of mind, thinking, paper, construction, cinema and stage in a state of globalized civilization. In general, postmodern artwork uses situations such as imagination, dreams, and the unconscious as an object and means of depiction to create a postmodern landscape of chaos, chaos, transience and ignorance of the world. So we can see this in the work of Ahmad Azam. His novel "Ro'yoyohud Gulistongasafar" is an example of this. In this play, he says: "Time is infinitely greater than we know it, and it is infinite within.[4]

On the way to Jizzak, three or four seconds later, he moved to Gulistan, where the servant fell in love with Gulia, unknowingly stuck a stick into Gulia's nest and again went the same way. I came back or they sent me because I was useless and again I entered with ease. But why is it shown on the speedometer, and it doesn't make sense for a girl to get pregnant in a second or two? "

It is clear from this sentence that the use of the correct word in a play is often aimed at creating an artistic situation that is only a one-time use of the same situation, that is, to create a one-time text. Such literary creativity is more often expressed in verbal games in artistic discourse. There are also cases of dreams and fantasies in the play:

"This is all my dream, so my conscience does not torment, I again went to Gulistan in a dream, I fell in love with a girl, I return to my dream and live to see its continuation. My whole life is a long dream, a dream of myself. So, my family, my children, my relatives - whose dream is this?"

## CONCLUSION

Style is a product of the writer's active attitude to the social events of his time, the main factor indicating creativity, its difference from other writers. The more talented the writer, the brighter his style, the more he monitors the psychological progress, the state of lateness in his works. In the works of Ahmad Azam, the event does not occupy such a significant place. In his work, we do not see the traditional plot.

The unconventional nature of the writer's style is that he often focuses on understanding and listening to the subtleties of the human mind, the fundamentals of the state of mind and experience, which do not yield to common sense. This style led to the emergence of a new direction in modern Uzbek literature, the postmodern style. Thus, style is the art of a writer to perceive reality and a person, to reveal the truth in their heart and express it figuratively through words - it is the art of creating tasks in an individual ("original") way.

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## RESEARCH OF SORPTION PROPERTIES OF HIGH SILICON ZEOLITES FROM BENTONITE

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### ABSTRACT

*During the study, textural characteristics and surface morphology of high-silica zeolites obtained from local natural raw materials were studied. Effect of kaolin and bentonite activation on colloids and sorption capacity was investigated. The experiments determined the wetting temperature, the amount of adsorbed bound water and the effective specific surface area. Field of study of process parameters (temperature, heating rate, etc.) Determined experimentally. The obtained regression equation allows the calculating value of selected criteria at any combination of investigated factors in the studied range, to analyze the influence of intensity of each factor on process parameters and to determine optimal conditions for the process.*

**KEYWORDS:** *Kaolin, Bentonite, Experiment, Temperature, Regression Equation, Surface, Sorption Vessel, Adsorption Bound Water, Porosity, The Heat Of Wetting.*

### INTRODUCTION

In recent years, natural and artificial zeolites have been widely used in hydrocarbon processing. Adsorption methods are one of the most common hydrocarbon purification methods in the industry.[1-6] Their use allows returning to the production of several valuable compounds. The study of zeolites is devoted to many works. Zeolites are a micro porous substance with the correct crystal structure and a controlled size not exceeding 2 nm. Zeolitic scaffolds are lattices



consisting of tetrahedral T-atoms (T=Si, Al, etc.), Connected by atoms in oxygen. More than 200 types of synthetic zeolites of various structural types are currently known [7-9]. However, no more than 10% of all known structures are produced in industry, and only 5 structural types are used as catalysts [10-13]. The most important requirements for adsorbent materials are high specific surface area, selectivity and ease of regeneration [14-15]. The adsorbent must also be inexpensive and harmless, non-corrosive, capable of maintaining its adsorption properties for a long time and having high mechanical strength. One of the most common adsorbents is activated carbon, which is available in various brands. One of the most important directions today is the development of environmentally friendly sorbents, preservatives and catalysts based on local raw materials [16-27].

## MATERIALS AND METHODS

The dynamic activity of adsorbents is always lower than the statistical one, depending on the operating conditions of the adsorbent. The dynamic activity of adsorbents is a key indicator of adsorber size and sorption cycle time. [24-31]

Adsorption experiments were carried out as follows. The  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$  system was heated in a muffle furnace at  $400^\circ\text{C}$  for 2 h and then cooled in a desiccator. The natural gas purification process was carried out in a flow-through apparatus. The dynamic activity was calculated using the following formula:

$$A_g = C_0 \cdot W \cdot \tau$$

where  $C_0$  is the initial concentration of  $\text{H}_2\text{S}$ ,  $\text{CO}_2$  and  $\text{NO}_2$  in the solution g / 100 g; consumption of W-gas, m / s; time of the protective action of the  $\tau$ -adsorbent, the height of the layer of the  $h$ -adsorbent, m. We use adsorption isotherms of  $\text{CO}_2$ ,  $\text{H}_2\text{S}$  and  $\text{NO}_2$  on activated carbon (SKT); We studied zeolite NaX and  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$ . [31-43]

**TABLE 1. Isotherms of adsorption of activated carbon  $\text{CO}_2$ ,  $\text{H}_2\text{S}$  and  $\text{NO}_2$  (SKT); Results of studies of zeolite NaX and  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$ .**

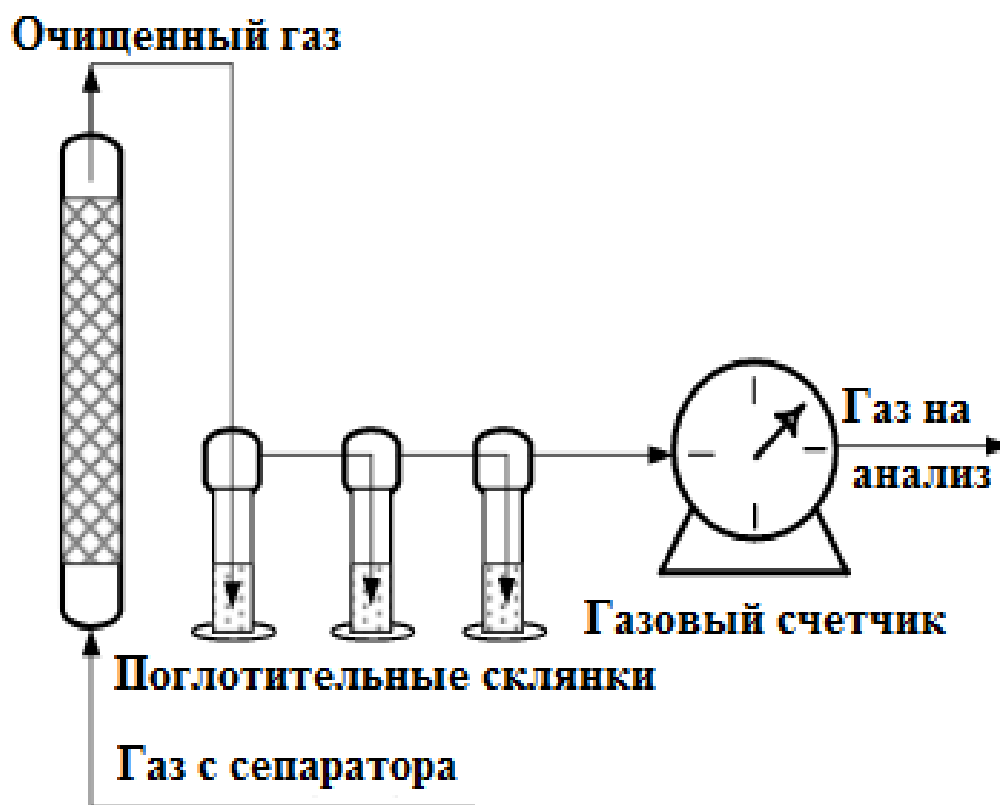
Adsorbents	Activated carbon (ACT)			Zeolite NaX			$\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$		
Components	$\text{H}_2\text{S}$ ,	$\text{CO}_2$	$\text{NO}_2$	$\text{H}_2\text{S}$ ,	$\text{CO}_2$	$\text{NO}_2$	$\text{H}_2\text{S}$ ,	$\text{CO}_2$	$\text{NO}_2$
Static activity, g/100g	9,22	7,23	7.02	12,78	10,95	9,95	16,46	13,98	12.84
Dynamic activity, g / 100 g	7,02	5,36	5.03	9,96	8,74	8.06	14.6	11,64	10.92

Model compounds of the following composition were prepared for absorption into the  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$  system:

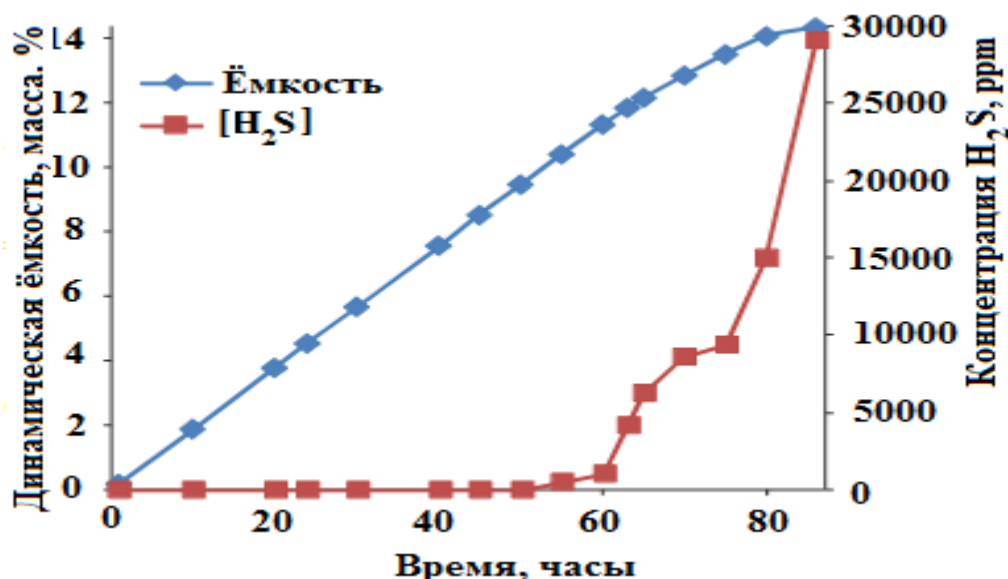
**TABLE 2.  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ composition of model mixtures designed to study absorption in the system.**

Content	Mass composition, in%		
	№1	№2	№3
Hydrogen sulfide	2,85	3,05	2,80
Carbon dioxide	-	2,90	5,93
Nitrogen	97,15	94,05	91,25

Experimental tests were carried out at the Bukhara refinery at a semi-industrial plant with a mass fraction of hydrogen sulfide of 2.9% and a mass fraction of sulfur in mercaptans of 0.5%. The absorption process was carried out by supplying petroleum gases to an adsorber with an adsorbent height of 100 cm and a diameter of 5 cm. To potentiometric determine sodium sulfide and mercaptides, a Drexel flask filled with a 10% sodium hydroxide solution was installed at the outlet of the reactor.

**Figure 3. An experimental adsorption device for purifying petroleum gases from hydrogen sulfide.**

Studies have shown that the total sulfur content of  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ for hydrogen sulfide is 14.3% (by weight). The sulfur capacity is 11.3% at a dynamic concentration of 1000 ppm. From the experimental data, it can be concluded that in a unit with a gas flow rate of 4000  $\text{m}^3/\text{day}$ , this sorbent can be used continuously for 1.5 weeks.



**Figure 4. Changing the dynamic capacity of the chemisorbed  $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$  at the outlet of the adsorber over time.**

To confirm the possibility of using  $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$ , the experiment was tested at the Bukhara Oil Refinery at a pilot plant filled with a 2-ton adsorber with a diameter of 1.2 m and a height of 8 m. When we tested the gas containing 3.5% of  $H_2S$  on weight on an industrial facility, concentration of hydrogen sulfide at the exit in 24 hours after the beginning of an experiment made 180 ppm of the adsorber. According to the tests, the dynamic capacity of  $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$  with respect to hydrogen sulfide was 2.76% by weight. The total dynamic capacity of the adsorbent by  $H_2S$  was higher than 20-25%. Sorption isotherms were used to calculate thermodynamic and equilibrium adsorption constants per sorbent  $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ - CO_2, NH_3, H_2S$ .

For this, sorption values (1/g) and reverse (1/c) concentrations were calculated, isotherms of the linear Langmuir form were compiled. Table 3 below shows the thermodynamic characteristics of adsorption of  $CO_2, NH_3, H_2S$  sorbent  $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$  at various temperatures.

**TABLE 3. thermodynamic characteristics of adsorption of  $CO_2, NH_3, H_2S$  to a sorbent of  $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$  at various temperatures.**

Sorbates	Temperature			$-\Delta H$ , kJ/mol	$-\Delta G_{295}$ , kJ/mol	$-\Delta S$ , kJ/mol	G, g/g
	295	323	335				
$SO_2$	1,0	3,70	20,0	61,50	1,129	17,05	0,64
$H_2S$	1,50	4,10	25,0	57,71	1,220	15,43	0,30
$CO_2$	1,10	3,95	23,50	62,66	11,52	174,03	0,38

Sorption isotherms were used to calculate thermodynamic and equilibrium adsorption constants on the  $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$  sorbent  $CO_2, NH_3, H_2S$ . To do this, linear Langmuir isotherms were built by calculating the inverse values of sorption (1/g) and concentration (1/s).

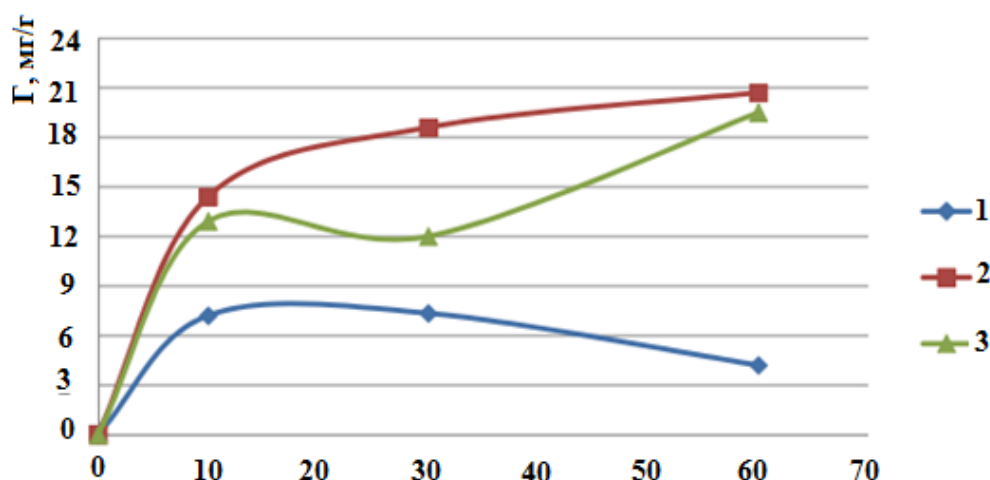


Figure 5. Kinetic curvature of carbon dioxide sorption, where: 1-natural bentonite; 2-bentonite is a high silicon zeolite treated with a 1% solution of hydrochloric acid and sodium carbonate; 3- high-silica zeolite treated with bentonite with a 10% solution of sulfuric acid and sodium carbonate.

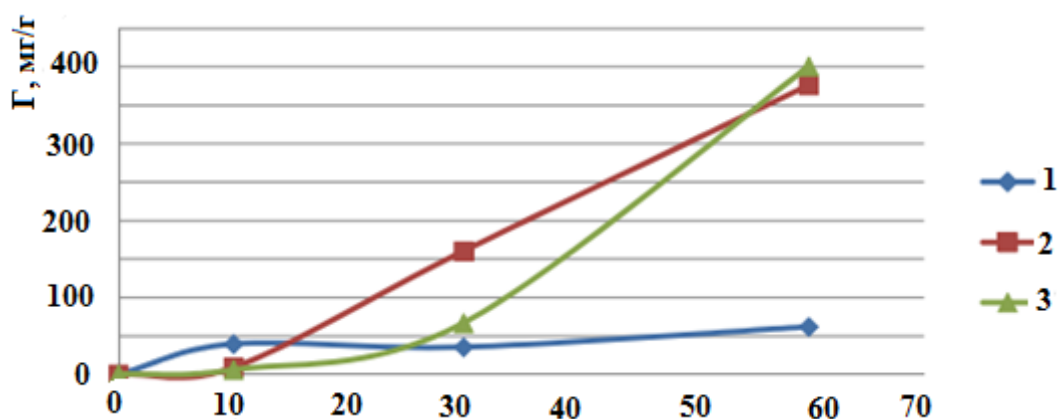


Figure 6. Kinetic curvature of hydrogen sulfide sorption, where: 1-bentonite is natural; 2-bentonite is a high silicon zeolite treated with a 1% solution of hydrochloric acid and sodium carbonate; 3- high-silica zeolite treated with bentonite with 10% solution of sulfuric acid and sodium carbonate.

## CONCLUSION

Thus, sorption, texture and physicochemical characteristics of a high-silica zeolite obtained from bentonite and kaolin were studied. Based on the obtained results, adsorption of gases  $\text{CO}_2$ ,  $\text{H}_2\text{S}$  and  $\text{NO}_2$  by absorption of a mixture of salts  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ into a synthesized sorbent was studied. According to the results of the experiments, the dynamic capacity  $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ with respect to hydrogen sulfide was 2.76% by weight. The total dynamic capacity of the adsorbent by  $\text{H}_2\text{S}$  was higher than 20-25%.

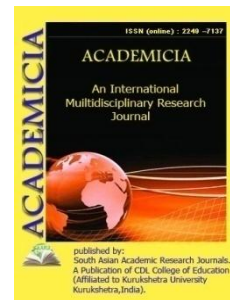
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## PHOSPHORIC-POTASH FERTILIZERS BASED ON SULFURIC ACID PROCESSING OF PHOSPHORITE FLOUR AND POTASSIUM CHLORIDE

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### ABSTRACT

*For the scientific substantiation of the technology for producing PP-fertilizers, the process of decomposition of unprotected phosphorite flour with concentrated sulfuric acid at its norm of 50-90% of stoichiometry for producing monocalcium phosphate was studied. The resulting dry decomposition product was treated with a saturated potassium chloride solution. Studies show that an increase in the sulfuric acid norm leads to an increase in the commercial properties of granulated PP fertilizers.*

**KEYWORDS:** *Biogenic Elements, Complex Fertilizers, Solubility, Potassium Metaphosphate, Sulfuric Acid, Decomposition, Granule*

**ABBREVIATIONS:** *SC - Soda-Calcified, PP-Phosphorium-Potassium*

## INTRODUCTION

Phosphorus and potassium are the most important biogenic elements necessary for all organisms. To date, much is known about them: chemical and physical properties, a fundamental role in plant physiology, the most important compounds in the form of which they participate in vital processes. These elements form the basis of mineral fertilizers, without which agriculture cannot exist. With crops, intensive removal of nutrients occurs. The deficiency of these elements in soils needs to be replenished by adding fertilizer, taking into account the digestibility of various forms of active substances, which is largely determined by the degree of their solubility.

The production methods and technology of complex phosphorus-potash fertilizers have been quite well studied, but their industrial production faces several difficulties. Thus, the production of potassium orthophosphates (mono- and three potassium phosphate) by neutralizing orthophosphoric acid with hydroxide or potassium carbonate is associated with the isolation of chloride compounds, which create difficulties in their subsequent processing.

## MATERIALS AND METHODS

The most concentrated PP fertilizer is potassium metaphosphate ( $KPO_3$ ), containing 39,87 %  $K_2O$  and 69.1%  $P_2O_5$ , i.e., consisting almost only of nutrients. Despite the high nutrient content, good physical properties, potassium metaphosphate has not yet found wide use due to the high cost of its production.

However, there is still an unresolved problem - the disposal of the resulting hydrochloric gases, which is one of the main reasons that hinder the production of potassium met phosphate from potassium chloride. Nitrogen fertilizers introduced for autumn ploughing are almost completely lost. Therefore, it is not advisable to add nitrogen-containing fertilizers during this period. They are usually introduced when growing almost all crops during sowing and feeding. The most effective agricultural technique is the application of single phosphorus fertilizers for autumn ploughing. When growing all crops except rice, the main part of the annual norm of phosphorus fertilizers (60-70% for cotton, 50% for corn, 75% for vegetable and potatoes, 100% for cereals) is added during this period. The rest of the fertilizers are usually added with sowing and during the feeding of plants. The most effective period of potash fertilizer application is also during the autumn ploughing period. When growing cotton, maize usually contributes 50% of the annual norm of potash fertilizers and the rest during the growing season, and when growing the rest of the crops, the full annual norm of potash fertilizers is introduced under the ground. Thus, the bulk of phosphorus and potash fertilizers must be introduced under autumn ploughing.

In the republic, the range of complex fertilizer is extremely limited, i.e. there is practically no production of complex fertilizers, in particular PP with a given composition and properties and satisfactory technical and economic indicators, effective in growing all crops. Therefore, an important problem remains the development and introduction of fundamentally new, more economical (non-traditional) technologies for processing low-grade local phosphorite and potash ores, including off-balance-sheet raw materials, into high-efficiency complex fertilizers with the best quality indicators. For the first time, a high-tech intensive technology for the production of single and complex fertilizers based on the sulfuric acid decomposition of high-carbonate phosphorites in the presence of potassium chloride has been developed. The technology originality lies in the fact that decomposition of the non-enriched phosphorite flour is carried out with concentrated sulfuric acid with intensive stirring for 5-7 minutes. Then products of

sulphuric acid decomposition are mixed with potassium chloride, granulated and dried. To save deficient sulfuric acid, the non-enriched phosphorus was treated with concentrated sulfuric acid at its norm of 50-90% of stoichiometry to obtain monocalcium phosphate. The results of the analysis (Table 1) show that the decomposition products of phosphorus with sulfuric acid contain 12-15%  $P_2O_5$ , the decomposition coefficient of phosphorus is 60-93%.

**TABLITSA1. CHEMICAL COMPOSITION OF SULPHURIC ACID DECOMPOSITION PRODUCTS, %**

Norm $H_2SO_4$ , %	$P_2O_5$	CaO total	$CaSO_4$	CaO Assi.	$CO_2$	$H_2O$
50	14,51	36,28	35,57	14,64	6,63	1,03
70	13,46	33,66	46,18	19,02	3,65	1,82
90	12,74	31,85	56,17	23,13	1,58	1,45

The resulting dry product was treated with a saturated solution of potassium chloride. The latter is both a nutrient component of a complex fertilizer and a binder solution for the granulation of products of sulfuric acid decomposition of phosphate flour. The results of the chemical analysis are shown in tables 2-3-4. The resulting complex fertilizers based on the decomposition of phosphate rock with sulfuric acid at its rate of 50% are poorly granulated. The granules are of low strength. An increase in the rate of sulfuric acid leads to an increase in the commercial properties of granular PP fertilizers.

**TABLE 2. CHEMICAL COMPOSITION OF PP FERTILIZERS OBTAINED BY DECOMPOSITION OF PHOSMUCH SC 50% NORM, %**

Ratio		P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO total	CaSO <sub>4</sub>	CaO Assi.	CO <sub>2</sub>	H <sub>2</sub> O
P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O							
Before drying								
1	1	10,42	10,42	26,06	25,55	10,52	4,74	12,93
1	0,7	11,34	7,93	28,36	27,81	11,44	5,16	10,97
1	0,5	12,09	6,04	30,23	29,64	12,20	5,52	9,16
After drying								
1	1	11,68	11,69	29,21	28,64	11,79	4,86	2,41
1	0,7	12,36	8,62	30,82	30,23	12,43	5,21	3,23
1	0,5	13,01	6,49	32,52	31,87	13,12	5,63	2,32

**TABLE 3. CHEMICAL COMPOSITION OF RK FERTILIZERS PRODUCED BY THE DECOMPOSITION OF PHOSMUCH SC 70 % NORM, %**

Ratio		P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO total	CaSO <sub>4</sub>	CaO Assi.	CO <sub>2</sub>	H <sub>2</sub> O
P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O							
Before drying								
1	1	9,79	9,78	24,51	33,61	13,84	2,65	14,42
1	0,7	10,62	7,43	26,56	36,45	15,01	2,88	12,48
1	0,5	11,10	5,54	27,77	38,10	15,69	3,01	12,23
After drying								
1	1	11,65	11,66	29,13	40,01	16,47	2,74	3,57
1	0,7	11,82	8,25	29,51	40,53	16,67	2,95	2,75
1	0,5	12,47	6,22	31,20	42,81	17,63	3,13	4,29

**TABLE 4. CHEMICAL COMPOSITION OF PP FERTILIZERS OBTAINED BY DECOMPOSITION OF PHOSMUCH SC 90% NORM, %**

Ratio		P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO total	CaSO <sub>4</sub>	CaO Assi.	CO <sub>2</sub>	H <sub>2</sub> O
P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O							
Before drying								
1	1	9,35	9,34	23,38	41,24	16,98	1,16	14,28
1	0,7	10,12	7,08	25,30	44,61	18,37	1,25	12,27
1	0,5	10,74	5,37	26,85	47,36	19,51	1,33	10,52
After drying								
1	1	10,62	10,63	26,57	49,86	19,28	1,22	2,59
1	0,7	11,24	7,86	28,11	49,56	20,41	1,31	2,52
1	0,5	11,67	5,84	29,18	51,48	21,19	1,39	2,72

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## REVIEW ON THE TITLE OF PARTICIPATORY (QUALITATIVE) POVERTY ASSESSMENT

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### ABSTRACT

*A PPA is a process that starts with grass-roots participatory analysis and dialogue, and culminates in better policies and more effective action for poverty reduction. A PPA is not just a new type of study of poverty and its causes. The principles that makes the participatory approach different from other research approaches. First, the PPA methodology engages respondents actively in the research process through the use of open-ended and participatory methods. The rationale for Participatory Poverty Assessments (PPAs) is that for the policies to work, the voices of poor and marginalized people and their understandings of poverty need to be included. There are different key Principles of Participatory poverty assessment Learning and Action.*

**KEYWORDS:** *Grass-Roots, Dialogue, Culminates*

### 1. INTRODUCTION

A Participatory poverty assessment (PPA) is the approach to analyzing and reducing poverty by incorporating the views of the poor. PPAs attempt to better understand the poor, to give the poor more influence over decisions that affect their lives, and to increase effectiveness of poverty reduction policies. PPAs are seen as complements to traditional household surveys by helping to interpret survey results, and aim to capture the experiences of the poor by being more open-ended (Mitekaro, 2016).

A Participatory Poverty Assessment is an iterative and participatory research process that seeks to understand poverty in its local, social, institutional, and political contexts, incorporating the perspectives of a range of stakeholders and involving them directly in planning follow-up action. PPAs can also include decision makers from all levels of government, civil society, and the local



elite in order to take into account different interests and perspectives and increase local capacity and commitment to follow-up action. Because PPAs address national policy, micro level data are collected from a large number of communities in order to discern patterns across social groups and geographic areas. It is carried out by different bodies like NGOs, academic institutions, government extension workers, or local consulting firms. They use a variety of participatory research methods, including community mapping, flow diagrams showing links and causes of deprivation, seasonal calendars, matrix analysis, and rankings of wealth or wellbeing (Narayan, 2002).

The principles that makes the participatory approach different from other research approaches. First, the PPA methodology engages respondents actively in the research process through the use of open-ended and participatory methods. And the second one is it assumes that the research process will empower participants and lead to follow-up action. PPAs continued to be designed and carried out with the principal objective of supplying more accurate information to policy makers; others placed equal emphasis on strategies for increasing the participation of multiple stakeholders, encouraging national ownership of the process, and supporting policy influence beyond the Bank. There are several examples of these latter processes, each of which used a different model to generate information and to influence policy (Chambers, 2012).

## **2. MAIN DISCUSSION**

### **2.1. Concept of Participatory Poverty Assessment**

The definitions PPAs have been carried out in many countries in Africa, Asia and Latin America during the 1990s. The term PPA has been used to describe a wide range of processes, and is defined in various ways by different commentators. But the two well-known definitions are shown below, one from the World Bank, and one from the Department for International Development United Kingdom these definition are a PPA is an iterative, participatory research process that seeks to understand poverty from the perspective of a range of stakeholders, and to involve them directly in planning follow-up action. The most important stakeholders involved in the research process are poor men and poor women. PPAs also include decision makers from all levels of government, civil society and the local elite, thereby uncovering different interests and perspectives and increasing local capacity and commitment to follow-up action. PPAs seek to understand poverty in its local social, institutional and political context. Since PPAs address national policy, micro level data are collected from a large number of communities in order to discern patterns across social groups and geographic areas, and across location and social group specificities (Narayan 2002).

The second well known definition of participatory poverty assessment (PPA) is an instrument for including the perspectives of poor people in the analysis of poverty and the formulation of strategies to reduce it. Its purpose is to improve the effectiveness of actions aimed at poverty reduction. PPAs are generally carried out as policy research exercises, aimed at understanding poverty from the perspective of poor people, and what their priorities are in terms of actions to improve their lives. PPAs can strengthen poverty assessment processes through: broadening stakeholder involvement and thereby increasing general support and legitimacy for antipoverty strategies; enriching the analysis and understanding of poverty by including the perspectives of the poor; providing a diverse range of valuable information on a cost-effective, rapid and timely

basis, and creating new relationships between policy-makers, service providers and people in poor communities (Toulmin& Quan, 2000).

A participatory poverty assessment, or PPA, has been defined as an instrument for including poor people's views in the analysis of poverty, and in the formulation of strategies to reduce it. A PPA is a process that starts with grass-roots participatory analysis and dialogue, and culminates in better policies and more effective action for poverty reduction. A PPA is not just a new type of study of poverty and its causes. It aims to achieve four things: better understanding of poverty, new constituencies for anti-poverty action, enhanced accountability to poor people, more effective policies and action (Booth, 2003).

## **2.2. Rational and Approach for Qualitative Poverty Assessment**

Governments and their development partners formulate and implement a range of poverty reduction policies, frameworks and strategies. The rationale for Participatory Poverty Assessments (PPAs) is that for these policies to work, the voices of poor and marginalized people and their understandings of poverty need to be included. Failure to respect and respond to how poor people experience poverty and what they see as causing it can contribute to poverty reduction interventions missing their targets. They are three cases for their use became apparent:- Poor people have the right to participate in the design of policies targeting them, PPAs generated new insights about poverty, PPA processes opened spaces for poor people to influence policy. In many cases the process of carrying out a PPA built new relationships between government, aid actors, civil society organizations (CSOs) and ordinary people. PPAs are not only used to design appropriate policies, but can also help in implementing and monitoring them, providing a baseline for follow-up studies (Gilmour and Stancliffe, 2004).

### **2.2.1. Key principles of participatory poverty assessment learning and action**

According to Chambers (2006) key principles of Participatory poverty assessment Learning and Action are the following:-

#### **2.2.1.1. The right to participate**

That all people have a right to play a part in shaping the decisions that affect their lives sounds obvious, but is not easy to achieve. Maximizing the participation of the less powerful is a key feature of PLA.

#### **2.2.1.2. Hearing unheard voices**

Using PMs involves seeking out unheard voices and creating the safe spaces that allow them to be heard. It is often people who have the least say in decisions about their lives that are most affected by using the methods.

#### **2.2.1.3. Seeking local knowledge and diversity**

Local people have their own expert knowledge of their community, and this should be the starting point for outsiders using PMs to work with them. But it is also crucial to recognize that there are always different perspectives and realities within communities, with every individual bringing their own unique experiences and interpretations.

**2.2.1.4. Reversing learning**

PMs are about letting go of preconceptions in order to learn from the wisdom of community members. This means being prepared to unlearn what has already been learned.

**2.2.1.5. Using diverse methods**

Using a range of PMs Helps draw in as many people as possible to undertake learning and analysis on an equal basis.

**2.2.1.6. Handing over the stick (or pen, or chalk)**

The phrase ‘handing over the stick’ came out of some of the early work using PMs with communities in South Asia and Africa. It involves those considered ‘expert’ – or powerful, or of higher status – sitting back, keeping quiet and allowing space for others to participate. Thinking about the relationships between more and less powerful people, and what those relationships imply for who can speak and who cannot, is an important aspect of using PMs.

**2.2.1.7. Attitude and behavior change**

Changing the attitudes and behaviors of the powerful is a vital aspect of participatory practice. As this principle PRA approaches and methods spread, the prime importance of facilitators’ behavior and attitudes became clear. Again and again, outsiders wagged their fingers, criticized, lectured, interrupted, suggested what should be done, put forward their own ideas, and contradicted and put down local people. All these were inhibiting. All made local people appear, to outsiders and themselves, incapable. So the new imperatives became to establish rapport, to sit down, listen and learn, to be patient, to respect, to facilitate, to be nice to people, to learn not to interview, to know when not to speak and when not to be present. The task for outsiders became to hand over the stick, to empower local people, to enhance their confidence, to enable them to define, express and analyse their reality, and not to reflect that of the upper (outsider).

**2.2.2. Importance of PPA**

Participatory poverty assessment involves a number of actors and stakeholders from within the community as well as outsiders. And Enable people concerned with the issue at hand to take action after appraising the situation and realizing the development problem or challenge. PPA Explore in-depth information in a holistic manner and Use a number of techniques for data collection, enabling the generation of both qualitative and quantitative data, therefore triangulating the information generated. It makes it possible to measure trends, which cannot be captured by pre-determined indicators. Like the Household Budget survey can only say the percentage of people living below the poverty line, but they do not describe the context specific realities of poverty and the way it is experienced by the poor. Statistical surveys cannot go beyond the indicators. Have the function of informing policy and decision makers on the day-to-day realities/experiences of poor people in a powerful and accurate manner, thereby drawing their attention to policy gaps and impact. PPAs provide a great opportunity to CSOs. CSOs may use PPAs in the monitoring of the PRSP, in the process; CSOs may generate case studies, which may be used for advocacy purpose to influence policy (Chambers, 1998).

### 2.2.3. Characteristics Qualitative Approach

The characteristics of qualitative approach according Carvalho and White (1997) describes in different nature that makes it different from quantitative poverty assessment approach these are the following:-

- ✓ **Definition given for poverty** -Poor people define what poverty means, broader definition of deprivation resulting from a range of factors (not simply lack of income/consumption) adopted.
- ✓ **Philosophical underpinning: qualitative approach Rejection** of the positivist paradigm: there are multiple forms of reality and, therefore, it is senseless to try to identify only one
- ✓ **Determination of poverty: qualitative approach determination** through an interactive internal–external process involving facilitator and participants.
- ✓ **Nature of variables for which data is collected: Qualitative approach** Perception variables reflecting attitudes, preferences, and priorities. The number of similar responses with respect to each variable can be numerically added–up, but the variables themselves cannot be quantified.
- ✓ **Interview format:** - Open–ended, semi–structured, interactive
- ✓ **Sampling technique:** Purposive sampling

### 2.2.4. Participatory poverty assessment methodologies

Participatory methodologies involve active exchange of ideas and role taking and play, based on equitable and institutional partnerships between researchers and representatives of target groups. Participation begins with initial identification of the problem, diagnosis of the problem and design, actual research/analysis, report preparation and dissemination of findings. Where the target populations are rural communities, for example, their consultatively selected representatives work together with the researchers to formulate the training and data gathering methodologies, leaving none of the tasks exclusively in the hands of the “experts”. As such, there are no experts.

Participatory approaches simply imply equitable incorporation of the target group representatives in the delivery process, without undue dominance on the part of the facilitators. Participatory analysis or research promotes collaborative action between communities and other target groups with governments, donors and resource persons. It promotes ownership for intervention, promotes collaboration and cooperation between researchers, practitioners and lay people.

Common participatory approaches to poverty assessment, among others, include the following:

#### 2.2.4.1. Focus Group Discussions (FGDs)

This approach begins with selection of social groups, with specific social category delineation. Participants’ composition is guided by homogeneity, cohesiveness and knowledge of the issues involved. Examples of these groups include: groups of women only; groups of men only; groups of youth (girls or boys only); groups of female elders; and, groups of male elders, among others.

It is important to separate the groups in order to pertinently capture and reflect the views and experiences of particular social categories such as sexes and age-groups, as will be found in given poverty set-ups. Ideal group size is 10, but can vary between 5 and 12. Discussion topics

include identification of major problems in the area (e.g. poverty in terms of definition and coping strategies) and proposed solutions.

Discussion is moderator-facilitated/generated through raising pertinent/topical issues for debate, keeping discussion interesting, encouraging non-talkers and controlling dominant individuals. FGDs are a good pre-research method for identification of main study indicators, post-research explanation of trends and variances, reasons and causes through participants' mutual stimulation and exchange of views, and they can act as change agents changing group members' opinions through direction, intensity and content of the discussion. They are also a good source of valuable information on dominant values, beliefs and norms.

#### **2.2.4.2. Timelines**

These are lists of key events in the history of the communities or target groups that facilitate identification of the past trends and problems facing the group, focusing more on those related to poverty. Key among these would include droughts, famines, and unpredictable commodity price fluctuations and inflation. Useful timelines for the last 30 years or so in the history of the areas in question could be reconstructed with facilitation of key informants and talented community members.

#### **2.2.4.3. Trend analysis**

These differ from timelines in the sense that they address the key changes that have taken place in the area in question, in relation, for example, to affordability of essential goods and services. Participating group members should also be asked to provide underlying reasons for such variations. This helps in identification of goods and services important to them and how the changes relate to poverty onset, experiences and outcomes.

#### **2.2.4.4. Gender analysis**

This approach can take the form of visuals depicting household properties and roles performed by women and men, such as cultivation, baby care, herding, shoe repair, laundry, carpentry, and tailoring, ploughing and house construction. More telling would be ownership visuals depicting farming tools (pangas, jembes, shovels and axes), houses, ornaments, cattle, land, radio, children, money, utensils, cattle and money. The reasons given for different associations and categorization of ownership, use and roles are important for inferences regarding gender differentials in terms of poverty and its impacts.

#### **2.2.4.5. Social mapping**

This represents a geographical representation of the locally available community resources and services. The villages or represented community members are in small groups instructed to draw the social maps of their areas. Small coloured Manila paper markers are then used to show households and key resources, located in different places. Various features to be included could include roads, swamps, valleys, rivers, wells, boreholes, mountains, schools, churches and health facilities. The combined visual impacts and analysis tells a lot about poverty presence or absence.

#### 2.2.4.6. Seasonal calendar

This consists of community or village-based seasonal calendars drawn by the community representatives, indicating seasonal variations on an annual/12 month calendar, with specific reference to poverty or other strongly notable community livelihood features. The seasonal calendars can be used to indicate visual appearances of when the highest and lowest supplies regarding rainfall, certain or all food commodities, incomes, diseases, and other acute problems are/were recorded, followed by poverty-related analysis based on the information extracted from the exercise.

#### 2.2.4.7. Wealth ranking

This is often based on social mapping, following which households are identified alongside various socio-economic groups. The households or individuals owning them are therefore ranked according to community perceptions of wealth and the lack of it, to identify the rich, poor and the very poor individuals and households

### 2.3. Case studies from Ethiopia.

This part reflects different case studies conducted in Ethiopia for the purpose of reducing poverty and bringing development especially in rural development (Gebreselassie *et al.*, 2012). These case studies are:

**Case study 1.** Income generating activities (IGA) shows how the intervention can increase people's incomes, improve their livelihoods and impact on other human development outcomes, such as improved health and education

#### **Income generating activities in Oromia and Somali Regions**

The project was a co-operation between Islamic Relief and Pastoralists Concern Association Ethiopia (PCAE). The project aimed to increase IGA among cooperatives established between 2008 and 2009, to complement agricultural production and provide a buffer against possible food shocks.

The evaluation found:

- 12 cooperatives were successful in supporting members through IGA on resins and gum processing and trade.
- 14 cooperatives supported small scale irrigation and agricultural product marketing. 655 beekeepers were assisted through IGA.
- 9 cooperatives were supported through IGA to improve milk quality, availability, processing and Commercialisation.

The evaluator noted that some IGAs would take longer than two years to come to fruition. For instance, while most co-operatives had begun to generate income this had not always had an impact at the individual household level.



**Case study 2.** How combining bridge construction with the provision of technical skills and community participation can result in improved access to services and markets as well as maintenance systems in place for sustainability.

**Building pedestrian bridges in Arsi and Bale Zones Oromia Region**

Helvetas, the CSO, worked with Oromia Rural Road Authority and the local communities between 2007 and 2008 to construct two suspension bridges. The main objective of building the bridges was to end social isolation of remote communities by providing access to health and education services and markets, to mobilize the community to participate in the activity and also to give local technicians the skills and know how to make further constructions. Each community was asked to contribute to the construction with a symbolic 8,000 Birr per bridge.

The evaluation found:

- ✓ Two out of the three planned bridges were completed in Workesa in Arsi and Worga in Bale. The third was not constructed due to problems in reaching agreement with the local community.
- ✓ The Workesa Bridge is 65 meters long and gives access to social services and markets to 8,000 rural people, saving several hours of walking.
- ✓ The Worga Bridge is 45 meters long and serves 5,000 rural people saving at least 2 hours of daily walking.
- ✓ Government technicians in both sites are able to make repairs.
- ✓ Local committees are responsible for the maintenance.

The project demonstrates the ability of CSOs to respond to the local situation and act as a catalyst for social mobilization, bringing together communities and the Government to pursue locally agreed objectives. The potential savings for the people of these remote communities are considerable, given that walking time can be used for farming and other socially and economically productive activities.

**Case study 3.** Shows how support to the agricultural value chain results in improved food security and has the potential to realise greater benefits over time, especially if emphasis is given to assessing demand and marketing.

**Linking poor households to micro finance and markets: Oromia, Tigray and Amhara 2008 - 2010**

This project falls under the national Productive Safety Net Program (PSNP) and aimed to link poor households to markets, through the development of different types of commodity value chains. The evaluation covered the work of three CSOs: CARE, REST and SCF UK.

The evaluation in East Hararghe found:

- 500 households were supported under the honey value chain, 1,600 under cereals and 1,800 under white pea beans.
- Households received assets, including modern bee hives, and support for production.

The evaluation noted that there needs to be a longer time span for impact to be fully realized from the value chains and that the emphasis has to shift from production to assessing demand and marketing. It also noted that food security had increased as a result of the project but that greater benefits would probably be realized over time.

## **2.4. Strength and Weakness of Qualitative Poverty Assessment.**

According to Carvalho and White (1997), stated that the qualitative poverty assessment has its own strength and weakness. Therefore following are the strength and weakness of participatory or qualitative poverty assessment.

### **2.4.1. Strength of qualitative poverty Assessment**

#### **2.4.1.1. Richer Definition of Poverty**

The qualitative approach is particularly suited for identification that is to address the question "who are the poor?" It can more readily measure the wider dimensions of poverty, including for example, vulnerability, lack of dignity, and autonomy. Most importantly, the qualitative approach allows the community itself to analyze its own poverty and determine what the most important manifestations and solutions to poverty are for them. At the project or local level such information may be critical for the design of projects and policies aimed at reaching the poor.

#### **2.4.1.2. Explaining Causal Processes**

The qualitative approach enables causality to be introduced between variables. Some of the variables used in the qualitative approach tell about the processes through which people became poor and about their vulnerability in the future (Baulch, 1996). Moreover, qualitative work is particularly suitable for uncovering the reasons for the observed levels of supply response or service up-take by beneficiaries. As the example the qualitative work for the country Zambia and Kenya Poverty Assessment highlighted the rudeness of health staff and problems in fee exemption schemes as an important factor which discouraged the use of health facilities.

#### **2.4.1.3. Accuracy and Depth of Information**

The qualitative approach can draw out accurate responses to certain questions. People are more appropriate to talk candidly in a conversational setting than to an enumerator conducting a pre-worded questionnaire. The information obtained through qualitative work may be more accurate because the interviewer develops rapport and trust with the interviewer (Salmen, 1995). The researcher can ask follow-up questions, and probe for responses. Non-verbal responses can be recorded which may supplement (or even contradict) verbal responses. Moreover, some things that cannot be asked in preset questionnaires may emerge automatically in conversations during qualitative research. In many instances, especially when an interpretive understanding of a phenomenon or process is required, qualitative methods are more successful in obtaining relevant data, ideas, or recommendations. In addition, the open format of the interview under the qualitative approach allows adding or dropping questions according to the context. The qualitative approach provides flexibility to the investigator to explore new ideas and issues that may not have been anticipated in planning the study.

### **2.4.2. The Weakness qualitative Approach**

#### **2.4.2.1. Inability to generalize beyond the research area**

The small size of the population covered the use of non-probability sampling to select that population, the changing content and focus of each of the interviews depending on circumstance, and the open-ended nature of responses often make aggregation and summarization of qualitative data difficult. Qualitative data can give a relatively accurate picture of the prevalence

of a phenomenon but not necessarily of its extent or pervasiveness. For example in South Africa qualitative poverty study discusses the difficulties faced in generalizing the results of qualitative work. Qualitative research can run the risk of being excessively specific to local conditions and needs. As a result, while the recommendations which are made may be appropriate to the particular circumstances in a community or to a particular issue, they are not readily generalizable to the national or cross-sectoral level. Special efforts may be required to analyze the key findings of the Participatory Poverty Assessment and interpret these into issues to be brought into the process of policy formulation (Julian, 1996).

#### **2.4.2.2. Difficulties in Verifying Information**

In view of the subjectivity involved in collecting and analyzing the data under the qualitative approach, the data cannot be easily verified. The subjectivity results from the nature of the information sought, non-structured interview formats, and the flexible response-recording and response-analysis methods. The chances that the moderator may bias results by providing cues about the desirable types of responses and answers are higher under the qualitative approach than under the quantitative method.

#### **2.5. Policy implication.**

Policy Implications towards poverty reduction in case of PPA shows that social and economic change is occurring in Ethiopia, but at quite a leisurely pace, and hedged about with a considerable amount of social and administrative unwillingness to allow greater social and economic diversity, and more spatial mobility across the country. Rapid enough economic change of the type that will deliver rising living standards will require more responsiveness and flexibility than this. Freedom of action for economic purposes should not be confused with political dissent. Above anything else, economic change needs government that works with, rather than against, people's energy and enthusiasm to construct better lives for themselves and their families. The PPA brings to the forefront some important policy challenges that Ethiopia is likely to confront as the government seeks to move forward with its poverty reduction agenda in the future. These challenges can be grouped as follows: land shortage, low mobility and low non-farm dynamism in rural areas, gender equality and future options, livestock disease and veterinary services and rural-urban transitions & urban economic growth According to Ellis and Woldehann (2005).

This synthesis offers a review of experiences in applying participatory approaches to macro-level policy formulation, implementation and monitoring in poverty reduction. The participatory experiences are drawn from research initiatives, donors' country strategies, aid coordination processes, policy advocacy campaigns, institutional change processes, budgetary analysis and formulation and citizens' monitoring mechanisms. The review highlights significant challenges that must be overcome in order to establish participatory, sustainable, country-owned poverty reduction strategies (Bird, 2013). The policy has been informed by a set of guiding principles based on the major elements of the new conceptual and strategic framework.

### **3. CONCLUSION**

A Participatory Poverty Assessment is an iterative and participatory research process that seeks to understand poverty in its local, social, institutional, and political contexts. The principles make the participatory approach different from other research approaches. First, the PPA

methodology engages respondents actively in the research process through the use of open-ended and participatory methods and the second one is it assumes that the research process will empower participants and lead to follow-up action. The rationale for Participatory Poverty Assessments (PPAs) is that for the policies to work, the voices of poor and marginalized people and their understandings of poverty need to be included. There are different key Principles of Participatory poverty assessment Learning and Action. These are the right to participate, Hearing unheard voices, Seeking local knowledge & diversity, Reversing learning, Using diverse methods, Handing over the stick (or pen, or chalk) and Attitude & behavior change.

The **Participatory** poverty assessment use various methodologies such as Focus Group Discussions (FGDs), Timelines, Trend analysis, Gender analysis, Social mapping, Seasonal calendar and Wealth ranking. PPA has its own strength and weakness. The strength are Richer in definition of Poverty, Explaining Causal Processes and Accuracy and Depth of Information. Even though the weakness of PPA are like Inability to generalize beyond the research area and Difficulties in Verifying Information. The policy Implications towards poverty reduction in case of PPA shows that social and economic change is occurring in Ethiopia, but at quite a leisurely pace, and hedged about with a considerable amount of social and administrative unwillingness to allow greater social and economic diversity, and more spatial mobility across the country. Rapid enough economic change of the type that will deliver rising living standards will require more responsiveness and flexibility than this. Freedom of action for economic purposes should not be confused with political dissent.

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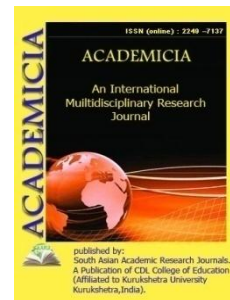
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## EFFECT OF WATER, FERTILIZER (NPP) NORMAL RELATIONSHIPS ON MEDIUM FIBER "PORLOQ-1" COTTON YIELD IN LITTLE GRAY SOIL CONDITIONS

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### ABSTRACT

*This article provides information on the irrigation regime of medium-fiber "Porloq-1" cotton variety in the conditions of light gray soils of Surkhandarya region, the impact of mineral fertilizer standards on productivity. An analysis of the research revealed that because of each agro-technical measure, a slight difference in volume weight was observed at the end of the season. Soil water permeability was determined based on 6 hours of observation.*

**KEYWORDS:** Soil, Cotton, Variety, Irrigation Fertilization Standards, Productivity, Nitrogen Phosphorus Potassium (NPP), Limited Field Moisture Capacity (LFMC)

### INTRODUCTION

Today, the economical, rational and efficient use of available land, water and natural resources plays an important role in the further development of agriculture and deepening economic reforms in our country. In addition, the cotton sector plays a special role in achieving the production of cheap and high quality, competitive agricultural products that fully meet the requirements of world standards.



Therefore, in each region only in the climatic, soil, reclamation, hydrogeological conditions of this region, the selection of fast-ripening cotton varieties and setting their norms of mineral fertilizers is one of the most pressing issues facing the science of cotton growing.

Indeed, one of the most pressing issues today is the development and implementation of new regional and promising agro-techniques for the care of cotton varieties. These issues, according to the results of scientific research conducted by our scientists and experts in the field, it is important to study the impact of water-nutrient (NPP) norms and irrigation regimes on high yields of cotton varieties. It is known from the literature that the results of scientific research conducted by local and foreign scientists show that each cotton variety has different needs for water and nutrients during its growth, development and harvest. Many studies have been conducted over the years by researchers to study these problems.

DeTar, William R. in a study on the effect of cotton on growth-development and yield in sandy soils in different irrigation regimes in the United States, it was noted that maximum values were obtained at high irrigation regimes in sandy soils [4].

O. Cetin and L. Bilgel studied the effect of known irrigation methods on cotton yield, it was observed that the yield was 43.8 c / ha, 36.3 c / ha, 33.8 c / ha when drip, tillage and rain irrigation [5].

In this regard, G. Kurbanova (2002) obtained irrigation of water and fertilizer (NPP) standards for cotton varieties "Akkurgan-2" and "Armugon" in the conditions of barren and barren soils of Surkhan-Sherabad oasis, soil moisture at 70-70-60% and NPK 250; 175; Achieved a high cotton yield at a rate of 125 kg / ha [2].

According to M. Tojiev, in Surkhan-Sherabad oasis, "Akkurgan-2", "Bukhara-6", C-2 and Denov cotton varieties were irrigated with 70-70-60% moisture relative to *LFMC* in the order of humidity, 1-3-2 irrigation system, mineral fertilizers NPP 200 ; 140; 100 and 250; 175; The application of 125 kg / ha emphasizes the expediency [3].

Before the introduction of each new and promising cotton variety created by our breeders in the country, it is necessary to develop a set of optimal care agro-measures, taking into account the biological characteristics of the variety, and only with strict adherence to this set of agro-measures high quality of any new and promising cotton varieties. Irrigation and feeding are one of the main agricultural measures in the cultivation of cotton varieties [1].

Taking into account the above problems, scientific experiments were conducted in 2016-2018 in order to develop and implement optimal irrigation and feeding regimes of medium-fiber "Porloq-1" cotton variety in the conditions of light gray soils of Surkhandarya region.

### **Experimental methodology**

The research was conducted in 2016-2018 on the farm "BEKTEPA MERSAJ", located in Bandikhan district of Surkhandarya region, in the conditions of weak saline gray soils with a groundwater level of 1.5-2.0 meters.

In our experiments, consider that the level of soil fertility, N-150 in the norms of fertilizers from two varieties; R-105; K-75 and N-200; R-140; K-100 kg / ha, with two different seedling thicknesses of 80-90 and 110-120 thousand bushes per hectare were studied.

### Research results

One of the main factors determining soil fertility is its agrophysical properties, namely: limited field moisture capacity (*LFMC*), water permeability, volume weight, porosity, and granularity. The organic dependence of aquatic nutrient regimes on plants on the agrophysical properties of the soil was studied on the basis of field experiments, and high yields were obtained from the studied cotton varieties. In 2018, in the conditions of light gray soils of Surkhandarya region, the weight of soil volume in the spring is  $1.32 \text{ g / cm}^3$  in the 0-30 cm layer,  $1.40 \text{ g / cm}^3$  in the 30-50 cm layer,  $1.46 \text{ g / cm}^3$  in the 0-70 cm layer. The 0-100 cm layer was  $1.39 \text{ g / cm}^3$ . Application - Analysis at the end of the growing season shows that pre-irrigation soil moisture is 65-65-65% relative to *LFMC*,  $0.03\text{-}0.04 \text{ g / cm}^3$  in the 0-30 cm layer of the soil,  $0.07\text{-}0.08$  in the 30-50 cm layer  $\text{g / cm}^3$ ,  $0.03\text{-}0.04 \text{ g / cm}^3$  in the 0-70 cm layer,  $0.01 \text{ g / cm}^3$  in the 0-100 cm layer, irrigation regime in the irrigated variants at 70-75-65%, driving in the 0-30 cm layer 0,  $0.04\text{-}0.05 \text{ g / cm}^3$ ,  $0.08\text{-}0.09 \text{ g / cm}^3$  in the 30-50 cm layer,  $0.05\text{-}0.06 \text{ g / cm}^3$  in the 0-70 cm layer,  $0.01 \text{ g / cm}^3$  in the 0-100 cm layer was observed. When the pre-irrigation soil moisture was 65-65-65% relative to the *LFMC*, the volumetric mass of the soil at 70-75-65% differed by  $0.01 \text{ g / cm}^3$  in the drive and subsoil layers.

An analysis of the research revealed that because of each agro-technical measure, a slight difference in volume weight was observed at the end of the season. Soil water permeability was determined based on 6 hours of observation. In the 2018 experimental field, the water permeability of the soil was determined at the beginning of the season. In 65-65-65% of the experimental field soils, the onset of water permeability was  $315 \text{ m}^3 / \text{ha}$  in 1 hour,  $699 \text{ m}^3 / \text{ha}$  in 6 hours, and an average of  $116.5 \text{ m}^3 / \text{ha}$  in 1 hour.  $167 \text{ m}^3 / \text{ha}$  in 65-65-65% and  $197 \text{ m}^3 / \text{ha}$  in 70-75-65%, respectively. Because of the study, an increase in the volume weight of the soil and a decrease in water permeability were observed with an increase in the irrigation regime from 65-65-60% to 70-75-60%.

"Porloq-1" cotton was irrigated 2 times in 0-2-0 system at 65-65-65% relative to pre-irrigation soil moisture, 3 times at 0-2-1 system at 70-75-65% relative to pre-irrigation soil moisture.

In the experiment, the following indicators were obtained on the norm of mineral fertilizers, irrigation regime and the impact on cotton yield on the three-year average yield. Irrigation of "Porloq-1" cotton variety with soil moisture at 65-65-65% relative to *LFMC*, mineral fertilizers N-150; P-105; Yield in the 1st variant was  $25.9 \text{ c / ha}$ , applied at the rate of  $K\text{-}75 \text{ kg / ha}$ . In the same irrigation order, the norm of mineral fertilizers is N-200; R-140;  $K\text{-}100 \text{ kg / ha}$  was applied, in variant 2 it was  $30.5 \text{ c / ha}$ , and  $4.4 \text{ c / ha}$  of additional yield was obtained due to mineral fertilizers.

Mineral fertilizers N-150 at 70-75-65% of pre-irrigation soil moisture *LFMC*; P-105; In variant 3, applied at the rate of  $K\text{-}75 \text{ kg / ha}$ , an additional cotton yield of  $1.1 \text{ c / ha}$  was obtained due to irrigation compared to 65-65-65% of irrigation. Pre-irrigation soil moisture is 70-75-65% relative to *LFMC*, mineral fertilizer norm is N-200; R-140;  $K\text{-}100 \text{ kg / ha}$ , when applied, in 65-65-65% of the irrigation regime in option 4 (option 2) compared to  $1.5 \text{ c / ha}$ , due to mineral fertilizers (option 3) compared to  $5 \text{ c / ha}$ , high yield obtained.

TABLE 1

B	Norm of mineral fertilizers kg / ha			Irrigation system	Productivity of over the years c / ha				The effect of various factors on productivityc / ha	
	N	P	K		2016 й	2017 й	2018 й	Average	Fertilizer	Water
65-65-65 percentage of soil relative to <i>LFMC</i>										
1	150	105	75	0-2-0	25,4	27,6	24,6	25,9		
2	200	140	100		29,6	33,3	28,7	30,5	4,4	
70-75-65 percentage of soil relative to <i>LFMC</i>										
3	150	105	75	0-2-1	26,6	28,6	25,9	27,0		1,1
4	200	140	100		31.1	34,7	30,1	32.0	5.0	1,5

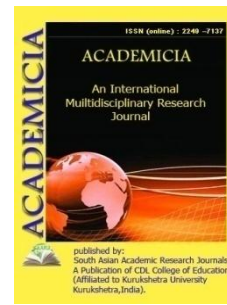
## CONCLUSION

The results of the study show that the highest yield in the "Porloq-1" cotton variety was irrigated at 70-75-65% relative to the soil moisture *LFMC*, mineral fertilizers N-200; P-140; K-100 kg / ha was observed when used in moderation.

Based on the results of the experiment, it can be concluded that in the conditions of light gray soils of Surkhandarya region in the cultivation of high-quality cotton of medium fiber "Porloq-1" cotton yield pre-irrigation soil moisture at 70-75-65% relative to *LFMC*, N-200 with mineral fertilizers; P-140; K-100 kg / ha is recommended for normal feeding and care.

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## THE USE OF METAPHORS AND ANAPHORAS IN THE EPIC "SONG ABOUT GAYAVATA" AND IMPORTANT FEATURES OF POETIC SYNTAX

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### ABSTRACT

*This article describes the harmony of the image of man and nature in the epic "Song about Gayavata" and how this harmony feels each other. It is especially important that integrated into the whole text. The peculiarities of the folklore genre gave the epic a special uplifting spirit.*

**KEYWORDS:** *Apostrophe, Metaphor, Anthropography, Romantic Expression, Folklore Traditions, Emotional Expressive Effect.*

### INTRODUCTION

In The Song of Gayavata, just like in folklore, man lives in harmony with nature, nature breathes, feels, speaks to man:

...the forest and the rivers sang and shouted at his coming [Longfellow 1967:45];

... The squirrel, Adjidaumo, ... Coughed and chattered from the oak-tree, Laughed, and said between his laughing, "Do not shoot me, Hiawatha!" [Longfellow 1967:183];

... The blue-bird, the Owaisse, Envious said, "O Chibiabos, Teach me tones wide and wayward" [Longfellow 1967:77];

And the sun, from sleep awaking, Started up and said, "Behold me!..." [Longfellow 1967:83].

A special type of vivid depiction in the poem — the apostrophe — represents man's attitude toward natural phenomena, animals, birds, and his other creatures as a conscious being. A clearer example of this method can be found in Hiawatha's Sailing in G. Longfellow's poem, in which he

appeals to the nature around Gayavata (birch, cedar, spruce, hedgehog) to make a pie (a long narrow boat).

The anthropomorphization, animation, and anthroposophy in the song are "based on the inner content of the whole text of the image" [Naer 1983: 174]. Metaphor-animations are based on the content of the poem, its folklore background, from which it is derived. The poet presents to the reader the world of his heroes through the way of perceiving their world, being, that is, people who are inspired by nature, who have the idea that not only animals but also plants have human characteristics. The main role of metaphor-animations in the "Song of Gayavata", in our opinion, is to show the harmony of man with nature. This task is inextricably linked with the romanticism of G. Longfellow's work.

Longfellow, a narrow but wide-ranging traditional artistic medium from the treasury of folk poetry, has received a parable, creating a unique twist of parables by illuminating things from different angles and giving them a comprehensive polish.

In the system of figurative expressions of the poem, according to its frequent use, parables come third after epithets and metaphors. (There are about 160 analogies in the song). Longfellow realistic scenes and situations: Picture-Writing, The Famine, Hiawatha's Lamentation - the number of analogies in the described chapters is drastically reduced. In particular, there are no analogies in the Picture-Writing section. The same goes for Hiawatha and Mudjekeewis, The Son of the Evening Star, The White Man's Foot, and more.

The song of Chaybayabos is a vivid example of the widespread use of figurative parables; In this Hiawatha's Wedding Feast chapter, 7 of the 9 verses are built on analogies. This is largely explained by Loenfello-Romantic's propensity for folklore traditions, which are reflected in the language and style of The Song of Gayavata since G. Longfellow saw in Indian folklore the fundamental foundations for the creation of American national literature.

**The following short parables abound in Longfellow's poem:**

**Always coughing like a squirrel** [Longfellow 1967:122];  
**Tall and lithe as wands of willow** [Longfellow 1967:122];  
**And their tails like fans unfolded** [Longfellow 1967:126];

**However, there are also a large number of diffuse (spread) analogies. For example:**

**When thou smilest, my beloved,  
 Then my troubled heart is brightened,  
As in sunshine gleam the ripples  
 That the cold wind makes in rivers.**  
 [Longfellow 1967:118];  
**Came Mondamin for the trial,  
 For the strife with Hiawatha;  
 Came as silent as the dew comes,  
 From the empty air appearing,  
 Into empty air returning,**

[Longfellow 1967:71];

**Poem analogies in terms of location in a sentence are, as a rule, in the end, in the final part of the sentence (93 analogies):**

**... He lay ... like a rock with mosses on it** [Longfellow 1967:42];

**... The sweat of the encounter stood like drops of dew upon him** [Longfellow 1967:71];

**... His strong heart leapt within him, as the sturgeon leaps and struggles, In a net to break its measles** [Longfellow 1967:73];

**The author often uses parables at the beginning of a sentence to give them a strong impression (67 parables):**

**Like a tall tree in the tempest Bent and lashed the giant bulrush** [Longfellow 1967:63];

**Like a ring of the fire around him Blazed and flared the red horizon** [Longfellow 1967:73];

**The analogies often come in pairs, placed side by side, and there are two different analogies between them:**

*1) The second analogy clarifies the first and expands it. This kind of analogy is always associated with repetition in an appropriate way. For example:*

**... his cloudy tresses,  
Gleamed like drifting snow his tresses,  
Glared like Ishkoodah, the comet,  
Like the star with fiery tresses.**

[Longfellow 1967:60];

**Down he hewed the boughs of cedar,  
Shaped them straightway to a framework,  
Like two bows he formed and shaped them,  
Like two bent bows together.**

[Longfellow 1967:83];

*1) The second simulation helps to fully reveal the object being simulated, while at the same time bringing additional features to the perception of it. For example:*

**... Saw the remnants of our people  
Sweeping westward, wild and woeful,  
Like the cloud-rack of a tempest,  
Like the withered leaves of Autumn!**

[Longfellow 1967:194];

**From the brow of Hiawatha  
Gone was every trace of sorrow,  
As the fog from off the water,  
As the mist from off the meadow.**

[Longfellow 1967:196];

In The Song of Gayavata, there is a real series of side-by-side analogies intertwined with anaphora. It should be noted that the traditional folklore methods necessary for the creation of parallelism and repetition, which are widely used in Longfellow's poem, are an important feature



of the poetic syntax of "Song". Such an analogy serves as the main method of image clarity and poetic melody. For example:

**And again the wigwam trembled,  
Swayed and rushed through airy currents,  
Through transparent cloud and vapour,  
And amid celestial splendours  
On the Evening Star alighted,  
As a snow-flake falls on snow-flare.**

The analogy can also encompass, wrap around the author's story, while at the same time completing the narrative in a compositional way. Chapter VII, entitled Hiawatha's Sailing, may be one such example **"Like a yellow of autumn Like a yellow water-lily"** begins and ends the story of Gayavata making a pie (narrow and longboat) with an analogy.

The introduction to folklore in the poem, though rare, reinforces the constant analogies. In particular, the glistening reflection of the river, the lustre, and the hair that Mejekivis has ruined are likened to the light of a comet (... **Glared like ishkoodah, the comet**), (... **Like the sunbeam in the water**), (... **Painted like the leaves of Autumn, Painted like the sky of the morning**).

Folklore traditions are also reflected in the choice of analogies. Their source is, first and foremost, the life of the Indians in the heart of primitive nature. In G. Longfellow's poem, man and nature acquire a whole; which is the specific basis for analogies, such as the transfer of human life, activities, behaviour, the human condition to nature, or, conversely, the transfer of human characteristics to nature.

Just as the poetic revival of the world around is a feature of ancient folk mythology, the sources and origins of G. Longfellow's poem "Song of Gayavata" are Indian myths and legends taken mainly by the American historian and ethnographer G.R. Sculkraft. The main realities of the parables in The Song of Gayavata can be classified as follows:

I. household items of the Indians (53 in total), which include hunting and fishing (a bow, f bow-string, a cord, an arrow, a birch-canoes, paddles), warfare (a war-club, a lance, an arrow), household appliances (a wigwam, a heart-stone, curtains of a wigwam), and b.q.

II. the surrounding fauna and flora (48 in total) - animals (a bison, a panther, a deer, an antelope, a wolf, an otter, a squirrel), birds (an eagle, a flamingo, a crow, a magpie, a robin), insects (a wasp, a spider, a cricket, a battle, a hornet, a dragon-fly), trees (a willow, a birch, an oak tree, a pine-tree), flowers, grasses, shrubs (a water-lily, a lily, prairie, grasses, reeds, rushes);

III. natural phenomena (24 in total) - waters (far-off waters, water, a river, a streamlet), sun and moon, sky, stars, wind, rain, fog, snow, thunder, etc.

Most of the analogies are original, only in the style of the song, without silence, and blend into the author's fluent, calm story about the life and heroism of Gayavata. In addition to individual analogies, Longfellow often uses such traditional analogies: **"... her hair was like the**

**sunshine", "... the singing, fatal arrow, Like a wasp it bussed and stung him" "Light he thought her as a feather".**

The author shows the total animate and inanimate nature in motion and in the process of development - natural phenomena are compared with the life of man and animals. Longfellow Po-Pok-Kiwis dances create spectacular views of rising sandstorms (**... the sand was blown and sifted Like great snow-drifts o'er the Landscape, Heaping all the shores with Sand Dunes – XI, 116), (... And the Fir-Tree... Rattled like a shore with pebbles – IV, 84)**and create other landscapes.

In descriptive analogies, the image of the sun is relatively common and can come as a subject as well as an object of solar analogy. The subject of the analogy is Hiawatha and Mudjekeewis, a vivid expression from Chapter IV:

**Where into the empty spaces  
Sinks the sun, like a flamingo  
Drops into her nest at nightfall  
In the melancholy marshes**

[Longfellow 1967:64];

In this example, the sun is now the object of simulation:

**On their faces gleamed the firelight,  
Painting them with strokes of crimson,  
In the eyes of old Nokomis**

Here the image of the sun is used by the author for a romantic description of the hero's appearance.

The analogies in The Song of Gayavata combine with a system of other figurative expressions and figurative expressions to enhance their emotional and expressive effect on the reader. For example, the analogy highlights a metaphor and concretizes its significance.

**Many a daylight dawned and darkened,  
Many a night shook off the daylight  
As the pine shakes off the snow-flakes  
From the midnight of its branches;**

[Longfellow 1967:178];

Due to the method emphasized by the anaphora and amplified by the analogy, the metaphorically of the passage becomes more pronounced and the impression of the tragic nature of the situation is obtained:

**All the earth was sick and famished;  
Hungry was the air around them,  
Hungry was the sky above them,  
And the hungry stars in heaven  
Like the eyes of wolves glared at them!**

The main task of figurative simulation in The Song of Gayavata is to provide figurative expressiveness. "Analogy," says I.R. Galperin, "is a powerful tool for describing appearances and objects, just like a metaphor, and helps the author's worldview to be strongly expressed by clarifying the writer's attitude to the facts of objective reality" [Galperin 1958: 167].

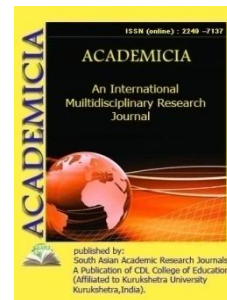
The distinctive style of Longfellow's poem "Song of Gayavata" is evident when observing an expressive medium such as repetition (lexical, syntactic, and phonetic).

The variety of repetition is one of the leading stylistic features of folk oral poetry of different peoples. For example, in folk tales, "repetition is the main principle of building a work, which is primarily associated with the repetition of content" [BES 1998: 521].

Exact repetitions The style of Longfellow's poem provides a variety of folklore. The poet subtly used repetition in putting Indian folk singing poetry into his style.

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## HEART-SHAPED LINDEN (TILIA CORDATA)

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### ABSTRACT

*The article provides an overview of the use of linden in scientific and folk medicine. In the work anti-inflammatory, antioxidant, wound healing, and antitumor properties of linden are investigated. Linden flowers" are used as a bactericidal agent for rinsing the mouth for angina and other diseases. In folk medicine, infusions and teas of linden flowers are well recommended as a diaphoretic, diuretic, weak antispasmodic, secretolytic agent for fever and colds, as well as for inflammation of the kidneys and bladder. These kinds of plants include tannins, carbohydrates, glycosides, essential oils, bitterness, fats, proteins, alkaloids, colorants, vitamins, enzymes, resins, trace elements, and phytoncides. It has anti-inflammatory, antipyretic, diaphoretic, expectorant, diuretic, analgesic effect. There is a moderate bactericidal, anticonvulsant and sedative effect, mild choleric and antispasmodic properties in linden. It promotes the elimination of toxins and metabolites.*

**KEYWORDS:** Medicinal Forms, Tilia Cordata, Pharmacognosy, Heart-Shaped Linden Flowers, Phytopreparations, Biological Active Substances, Folk Medicine.

### INTRODUCTION

To get rid of any disease, a person often makes a choice in favor of drugs that include elements of plants. Since ancient times, people have tried to get cure from what grows around them. Since then, most plants are considered medicinal, having a positive effect on human health. At the same time, each of them refers to flowers, herbs or shrubs. Plants that are used for medicinal purposes contain many chemical compounds that are responsible for healing properties. These kinds of plants include tannins, carbohydrates, glycosides, essential oils, bitterness, fats, proteins, alkaloids, colorants, vitamins, enzymes, resins, trace elements, and phytoncides. One of the most

important issues of modern healthcare is to provide the population with safe, effective, high-quality and affordable medicines.

Currently, the domestic pharmaceutical market is experiencing a significant increase in the supply of herbal preparations, which in turn requires improved quality control of the original plant raw materials and the range of dosage forms made from. In medicinal products, it is difficult to overestimate the role of various phytocompositions, especially in this regard are long-known plants that are re-evaluating their importance and demand.

**Main Part:** The expediency of anti-inflammatory drugs contained phytocompositions confirms the current popularity of herbal preparations. As for medicinal forms, syrups are in great request today. Preparations from medicinal plants have such positive properties as the presence of complexes of biologically active substances.

They are widely recommended in the complex treatment of various diseases, characterized by low toxicity, softness and reliability of action, the possibility of long-term use without the risk of side effects. The components of phytocompositions, each of which has a certain pharmacological spectrum, potentiate the action of each other, usually without causing side effects. One of these objects is the heart-shaped linden flowers. The range of the heart-shaped Linden extends from southern Britain and Central Fennoscandia to the Central regions of Western Siberia, the Caucasus, Bulgaria, Italy and Spain. The Northern range of natural distribution of a Linden heart-shaped: in Norway at 66° nl, in Finland and Arkhangelsk region is near to 64° nl., in Sweden and the Republic of Karelia at 63° nl., in the republic of Komi - about 62° nl., in the Khanty-Mansi autonomous district – Ugra - in the vicinity of 61° nl., in Tomsk region — 57°47' nl. The common lime is a large tree up to 25-30 m with a spreading crown. Young branches are with a smooth bark, old ones are with a deep-spreading gray-black bark. The leaves are alternate, long-stemmed, somewhat unequal, and heart-shaped with a long pointed tip, serrate, dark green above, glabrous, light below, grayish-green, with tufts of hairs in the corners of the veins. Stipules are paired, reddish, falling off early in spring. The flowers are collected 3-15 in half-cones with a large yellowish-green bract leaf, yellowish-white, fragrant. Calyx consists of 5 free sepals; Corolla consists of 5 separate petals. The stamens are numerous, fused into bundles: a pistil with an upper ovary, consisting one column and 5 stigmas. The fruit is a rounded, pubescent single-or double-seeded nut. It blooms in late June; fruits ripe in September.

RAW. Medical uses have dried inflorescences with Linden bracts, called "Linden flowers" (Flores Tiliae). The raw material is whole flowers in half-columns; their peduncle is fused with the Central vein of the bract leaf. The bract leaves are elongated-lanceolate with a blunted tip. The color of the raw material in the mass is greenish-yellow, the smell is weak, pleasant, and the taste is sweet, with a feeling of mucus, slightly astringent.

## DISTRIBUTION AND HARVESTING

It grows in deciduous and mixed forests of the foothill zone, low-mountain and mid-mountain zones. Most often found as a companion breed in mixed and oak forests. It is often bred in parks, on the streets of localities and in roadside alleys.

Stocks of raw materials are significant, but the collection of flowers is very labor-intensive and practically carried out only from the lower branches of detached trees. The collection of flowers

is carried out for 10-15 days during the blooming period of most of them, as the faded flowers turn brown when dried. Expiry date is 2 years.

### CHEMICAL COMPOSITION

Inflorescences contain glycoside tiliacin, containing phytoncidal activity, flavonoid glycoside hesperidin, ascorbic acid (up to 31.6%), essential oil, which includes alcohol farnesol, tannins, saponins, mucus, carotene, sugar, wax. The flowers contain: sugar, essential oil (0.05%), which includes sesquiterpene alcohol farnesol  $C_{15}H_{26}O$  (the main component of the essential oil); polysaccharides, including galactose, glucose, rhamnose, arabinose, xylose and galacturonic acid; triterpene saponins; flavonoids, carotene, flavonoid glycoside hesperidin  $C_{28}H_{34}O_{15}$ , tiliacin glycoside, tannins, ascorbic acid, carotene, wax, mucus, phytoncides, bitter substances close to rutin, retinol, etc.

### APPLICATION

"Linden flowers" have a diaphoretic and bactericidal effect. In medical practice, "Linden flowers" have long been used as an infusion as a diaphoretic for various colds. They are part of sweatshop fees (teas). "Linden flowers" are used as a bactericidal agent for rinsing the mouth for angina and other diseases. In folk medicine, infusions and teas of linden flowers are well recommended as a diaphoretic, diuretic, weak antispasmodic, secretolytic agent for fever and colds, as well as for inflammation of the kidneys and bladder. In all cases, an infusion is used, prepared from a handful of linden flowers, brewed with a glass of boiling water (strain after 10 minutes). It is recommended to take 2-3 glasses of hot linden tea a day. Linden flowers are used to prepare poultice compresses for boils, as well as to strengthen hair. Chopped fresh buds or leaves are applied to burns, inflamed mammary glands, and inflamed skin areas as an anti-inflammatory, emollient. Powder of linden leaves is used to stop nosebleeds. Linden tar is smeared eczema affected areas. Wood in a calcined and finely ground form is taken inside for flatulence and poisoning. Nevertheless, not a single study reflects the technology of obtaining polyfractional extracts based on linden flowers. Therefore, the purpose of our work was to study the presented official medicinal forms of Linden cordate in the pharmaceutical market.

### PHARMACOLOGIC EFFECT

It has anti-inflammatory, antipyretic, diaphoretic, expectorant, diuretic, analgesic effect. There is a moderate bactericidal, anticonvulsant and sedative effect, mild choleric and antispasmodic properties in linden. It promotes the elimination of toxins and metabolites. It is interesting to note that taking linden infusion in healthy people does not cause increased sweating.

### CONCLUSION

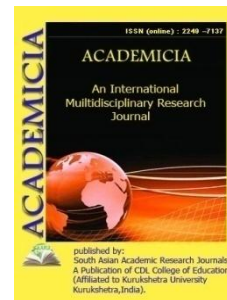
The wide popularity of herbal medicines testifies to the special need to develop natural preparations of linden cordata, including the use of polyfractional extraction.

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## THE CONTENT BASED APPROACH IN TEACHING FOREIGN LANGUAGES AND ITS ROLE IN THE FORMATION OF MULTILINGUAL PERSONALITY

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### ABSTRACT

*Content-based learning has gained broad prominence in the teaching of second and foreign languages. Despite its recorded benefits, many English teachers do not completely leverage its benefits for language learning that in the sense of the material the language being studied and used is taught. In this article, an approach to language teaching based on content and how it can be used to develop a multilingual personality are discussed. This article aims to connect theory to experience, help teachers to identify what can be considered as a content and how CBI can be used in teaching process. Furthermore, it is going to discuss whether content based approach can be one of the first steps of multilingual education. Finally, we are presenting a real-world project tailored for intermediate EFL students. The design and suggested activities might be easily transferable to other settings.*

**KEYWORDS:** *Multilingual Education, Multilingual Personality, Content Based Approach, Teaching Methods.*

## INTRODUCTION

A Czech proverb that translates to 'You are as many times human as you know the languages. Often people find themselves involved in two, three or even more cultures (business trips abroad, tourism, mobility of young scientists, interethnic marriages, etc). Speaking in several foreign languages has become today's key to success in the professional, and personal, sphere. Therefore, multilingualism that becomes an significant factor in social mobility and causes the intent of language education to shift. Now proficiency in language is not a target goal anymore. The purpose is to bring up multilingual personality of a new type. In order to build up multilingual personality multilingual education has to be implemented into National Educational system. Let's face that implementation of this educational system takes a huge amount of effort and time. For the first step the attention should be paid into method of teaching L2. Content based approach of teaching foreign languages is considered to be the most appropriate method to achieve our goal and alternative variant for multilingual education.

**Multilingual education:** Multilingual education typically refers to "first-language-first" education, that is to say, mother-tongue-started education and transitions to foreign language<sup>1</sup>. Since English is distributed worldwide, education mostly aims to teach English but also includes national languages and minority languages. Through education languages are taught, preserved, and improved. Schools should provide lots of opportunities for multilingualism because of the amount of hours and years children spend in school<sup>2</sup>. For minority language speakers or low status languages, multilingual education that aims to preserve and improve the first language along with other languages is correlated with the best results not only in the L1 but also in the L2 and other curriculum areas. Meta-analysis of longitudinal findings on minority children in the United States published by Genesee and Riches (2006) indicates that students receiving some primary-grade L1 reading instruction are at least at the same level quality and even higher success rates in L2 reading in some cases than learners with similar linguistic and cultural backgrounds who did receive only initial English literacy and instruction. Mohanty (2006 ) points out that psychological and educational social aspects exist benefits if the first language and other languages in India are preserved. In addition to this, UNESCO promoted multilingual education for these reasons:

- It sets stable base for learning
- It improves learning outcomes while encouraging dialog and interaction with improved contact and cooperation between learners and teachers comprehension
- By stressing comprehension and imagination rather than repetitive memorization, it increases the standard of education<sup>3</sup>

### Stages of an MLE Program

A broad understanding of the MLE programs (UNESCO, 2003, 2005 ) indicates that teaching should take place in the following stages:

- Phase I-The learning takes place entirely in the home language of the child
- Phase II-developing mother-tongue fluency. Oral introduction L2.
- Phase III-oral fluid buildup in L2. Literacy introduction on L2.
- Phase IV-lifelong learning using both L1 and L2.

In case of Uzbekistan Russian – Uzbek or English – Uzbek classes could be implemented from nursery schooling. However, a big issue would be a great obstacle on this way. Firstly, educators and teachers must be educated in a multilingual/ multicultural environment. Consequently, there is lack of multilingual teachers. This leads to the second issue that teachers should be given appropriate training to enable them to teach in the mother tongue of learners (L1) and in the second language (L2). These changes should be made step by step as it takes long time and foundation. As some researches show that the one of the proper way of implementing multilingual education is Content Based Approach or Content Based Instruction. A strategy aimed at ensuring the 1 + 2 formula (i.e. knowledge of two additional languages in addition to the first language) involves the combination of early exposure to the first additional language, both through conventional formal training and additional hours of integrated language and content (Perez-Vidal, 2009). Today, academic institutions can enhance communication skills in several languages by three obvious means: firstly, through CLIL<sup>4</sup> and ICLHE<sup>5</sup>; secondly, through the organization of group exchanges; thirdly, through the use of the Internet to link local learners to learners from various countries (Prieto – Arranz, et al. 2013). Consequently, in case of Uzbekistan, firstly implementing Content Based Instructions in teaching languages is considered a proper first step to creating multilingual environment and personality.

### **Content Based Approach or Content Based Instruction:**

Content-based teaching has become increasingly common in recent years as a way of learning linguistic skills. Lyster (2011) defines the word CBLT as "an educational approach in which non-linguistic material, including topics such as social studies or mathematics, is taught to students through the use of a language that is not their first language, so that when they are already learning curriculum content, they also learn a foreign languages". Lyster (2011) continues, Although the use of a second language to teach content is no stranger to the educational landscape, content-based language teaching (CBLT), which combines language teaching and subject learning, stands out as a highly effective and efficient way to funnel resources towards language acquisition without placing further pressure on an already heavy school curriculum. It has strong ties to project work, task-based learning and a comprehensive approach to language instruction and has become increasingly popular within the secondary education field of state schools. Students are focused on learning about something during the lecture. From a serious science subject to their favorite pop star, or even a topical news story or movie, this could be anything that interests them. Using the language they are learning to learn, rather than their native language, they learn about this subject as a method to gain awareness and thus improve their language skills in the target language. It is considered to be a more normal way of learning language capacity and one that more closely relates to how we learn our first language originally.

What does a lesson on content-based instruction look like?

Stoller (2002) lists eight practices that allow for natural content integration:

- Extended input, practical output, and language and content understand feedback.
- Gathering, processing and reporting of information Integrated skills (use of reading, writing, speaking, and listening in natural classroom activities)

- Task-based activities and project work, enhanced by the principles of cooperative learning, Strategy training (to produce strategic learners more metacognitively).
- Strategy planning (to develop strategic learners with greater metacognitiveness)
- Visual help (i.e. photos, maps, language ladders etc.)
- Guidance on contextualized grammar
- Culmination of synthesis activities (written and oral knowledge shown)

The creation of a CBI lesson can be approached in many ways. This is one way to go: Preparing

- For classes, select a subject of interest.
- Find three or four appropriate sources addressing different aspects of the topic. These may be web pages, reference books, lecture audio or video, or even actual people.

While having the lesson

- Divide the class into small groups and assign a small research task to each group, and use a source of knowledge to help them accomplish the assignment.
- And after they do their work they form new groups with students that use other sources of information and exchange and compare their information.
- There will then be some output as the end result of this knowledge exchange which may take the form of a community report or some kind of presentation.

F.ex, instead of teaching that bun is bulochka in Russian or bread is xleb, in content based approach it would be “Russian cuisine” and all of the vocabulary related this topic. Giving the grammar topic would be contextualized as well, like

What food would you rather eat in Russian Cuisine?

I would rather have .....

I would rather not have..... (Just tell that it's synonym of prefer )

By these questions and answers students can easily understand and use the structure Would Rather without any grammatical explanation. As well as use different vocabulary from the lesson.

Some issues which can be found in CBI:

- In monolingual classes in particular, overuse of the native language of the students during parts of the lesson can be an issue. Because the lesson isn't explicitly focused on language practice students find using their mother tongue much easier and faster. Seek to share with students the reasoning and clarify the benefits of using the target language rather than their mother tongue.
- It can be difficult to find sources of information and texts that can be understood at lower levels. Even the exchange of information in the target language may cause significant difficulties. One way around this at lower levels is either to use texts in the students ' native language and then get them to use the target language for exchanging information and end product, or to use texts in the target language<sup>6</sup>

**CONCLUSION:**

In this article we have highlighted that multilingual language skills enables people to communicate and work adequately in different circumstances, especially in academic achievements and social purposes. We have noticed the contribution of Content Based Approach of teaching foreign languages to the promotion of multilingualism. It seems to be motivating for both teachers and learners. While for the teacher and the students CBI can be both stressful and hard, it can also be very energizing and gratifying. The degree to which you adopt this approach may well depend on your students' desire, the institution you work in and the available resources within your environment. Try to get the students in there. Get them to help you decide which topics and topics the lessons are based around and find out how they feel compared to your usual lessons. They'll be the test of your performance in the end. The existence of some trends in the process of implementation of these learning methods are true, however languages for everyone and national competitiveness for everyone.

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## MANUSCRIPTION COPIES OF "BIRRUL VOLIDAYN" WORK

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### ABSTRACT

*This article provides information about manuscript copies of "Birrul Volidayn" work, as well as hadiths and treatises on respect for Islamic morality, especially for parents. Accordingly, the last hadith can be understood as follows: A woman is a great conspirator for a man when she prevents him from doing good to his parents, seduces her husband and separates him from his parents. The work is a wonderful collection of small pamphlets of famous scholars on various topics. It carried out by Sayyid Abdulhay Kattani (1302-1382 / 1884-1962) who was Western scholar and historian.*

**KEYWORDS:** *Hadith, Islamic Morality, Abu Abdullah Muhammad Ibn Ismail Bukhari, Manuscript Work, Parents.*

### INTRODUCTION

Respect for parents is reflected in the Qur'an and hadiths. In each period, special attention was paid to this issue. Books have been written on this subject, and a separate chapter or section has been devoted to the collections of hadith.

**Main part:** Books, pamphlets, and works on Islamic morality, especially those devoted to respect for parents, began to be written in the eighth century AD. Our great compatriot, Sultan of Hadith Abu Abdullah Muhammad ibn Ismail Bukhari (194-256 / 810-870), wrote one of the first independent works in this direction. Haji Khalifa said in "Kashfuz-zunun": "this book belongs to Abu Abdullah Muhammad ibn Ismail al-Bukhari, who died in 256". Muhammad ibn Zakrumah Varraq narrated this book from him. This is one of the existing classifications of that person" Ibn Hajar mentioned. In addition, following ancestors Hafiz Ibn Hajar in "Al-Mu'jamu-l-mufahras", "Fatxu-Boriy", Hafiz Shamsiddin Sahavi in "Al-Qovlu-l-badi'u, Ruvdani in "As-Silatu" and Siddiq Hasankhan in "Al-Hittotu" are said that "Birrul Volidayn" belongs to Imam Bukhari.

It has been discovered that two copies of the work are kept in libraries around the world today. The first copy is currently kept in the "Maktabatul Qasri al-Maliki al-Amir" library in Morocco under number 452. The work is a wonderful collection of small pamphlets of famous scholars on various topics. It carried out by Sayyid Abdulhay Kattani (1302-1382 / 1884-1962) who was Western scholar and historian. The collection consists of 270 pages and is written in Nasx.

Publications copied or prepared from the manuscript were found and studied through the websites. According to this, the titles of 26 works are included in the content of the complex together with the name of the author. The table of contents is written in four rows. In a top-down sequence, Imam Bukhari and his "Birrul Volidayn" are ranked 17th. The work begins on page 144 and ends on page 151. Lines are between 20-21. The beginning of the hadiths, حدثنا (haddasana), is highlighted in red. The first page reads:

كتاب بر الوالدين.

تأليف الامام ابو عبدالله محمد بن اسمعيل بن ابراهيم البخاري..:

رواية ابو بكر محمد بن احمد دلويه عنه..:

رواية ابو يعلى حمزة بن عبد العزيز المهلبى عنه..:

(Translation ... "Birrul Volidayn" book.

The work of Imam Abu Abdullah Muhammad ibn Ismail ibn Ibrahim Bukhari:

Narrated by Abu Bakr Muhammad ibn Ahmad Dalliwayh:

Narrated by Abu Ya'la Hamza ibn Abdulaziz Mahlabi.)

Starting from the second page of the collection of pamphlets, two pages of "Birrul voliday" are placed on one page. At the top of the first page is the word بسم الله الرحمن الرحيم (Bismillahir rahmanir rahim). After that, 4-5 lines were left and the hadith began directly:

أنبأنا أبو يعلى حمزة بن عبد العزيز المهلبى أنبأنا أبو بكر محمد بن أحمد بن دلويه الدقاق رحمه الله في شهر سنة 328 حدثنا محمد بن إسماعيل البخاري أبو عبد الله الجعفي قال...

(Translation ... Abu Ya'la Hamza ibn Abdulaziz Mahlabi informed us. Abu Bakr Muhammad ibn Ahmad ibn Dalliwayh Daqqaq (may God have mercy on him) informed us in 328. Muhammad ibn Isma'il Bukhari narrated the hadith of Abu Abdullah Jufi and ... .., - said).

Here are the names of Imam Bukhari, his disciple, and his grandson's disciple. Then, each hadith begins with the word حدثنا (haddasana) by Imam Bukhari.

The first hadith:

حدثنا أبو الوليد هشام بن عبد الملك، حدثنا شعبه، عن الوليد بن العيزار: سمعتُ أبا عمرو الشيباني، يقول: أنبأنا صاحب هذه الدار، وأوماً بيده إلى دار عبد الله- يعني ابن مسعود رضي الله عنه قال: سألت نبي ﷺ: "أي العمل أحب إلى الله تعالى؟ قال: "الصَّلَاةُ عَلَى وَفْتِهَا"، قلت: ثم أي؟ قال: "ثَمَّ بَرُّ الْوَالِدَيْنِ". قلت: ثم أي؟ قال: "الْجِهَادُ فِي سَبِيلِ اللَّهِ". قال: حدثني بهن، و لو استزدته لزداني.

(Translation ... Abul Walid Hisham bin Abdulmalik (h 133-227) narrated the hadith to us.

He said, "Shu'bah narrated it to us." He said, "Valid ibn Ayzar informed me." He said that Abu 'Amr al-Shaybani said, "The owner of this yard told us a hadith," referring to 'Abdullah's yard. He said, "The Prophet, may Allah bless him and grant him peace, was asked, 'What is the most beloved thing to Allah Almighty?' I asked. He said, **"Prayer at the right time."** "Which one after that?" I said. He said, **"Do good to your parents."** "Which one after that?" I said. He said, **"Then strive in the way of Allah."** "They told me this, and if I asked more, they would add it again.")

Imam Bukhari began the "Kitab al-Adab" section of "Al-Jame 'as-Sahih" and "Al-Adab al-Mufrad" with the same document and text. This hadith fully demonstrates the importance of doing good to one's parents. Probably from this point of view, the muhaddith has always put it first.

The latest hadith:

حدثنا آدم بن أبي إياس، حدثنا سعيد، عن سليمان التيمي، قال: سمعت أبا عثمان النهدي، عن أسامة بن زيد، عن النبي ﷺ قال: **"مَا تَرَكْتُ بَعْدِي فِتْنَةً أَضُرُّ عَلَى الرِّجَالِ مِنَ النِّسَاءِ"**.

It is narrated on the authority of Usama ibn Zayd that the Prophet, may Allah bless him and grant him peace, said, **"I did not leave behind me a conspiracy that is more harmful to men than to women."**)

Imam Bukhari used his method in quoting the hadiths in the work. That is, the play narrates hadiths that are directly related to the subject and hadiths that require research. As in "Al-Jame 'al-Sahih", a person who reads some hadiths in "Birrul Volidayn" will not know how to relate them to the subject. But all the hadiths in the work state that doing good to one's parents is one of the best deeds, what to do is good for both of them, what cannot do good to them lead to, and what can prevent them from doing good. Accordingly, the last hadith can be understood as follows: A woman is a great conspirator for a man when she prevents him from doing good to his parents, seduces her husband and separates him from his parents. It is also said that a man should not be prevented from doing good to his parents by listening to his wife.

The following sentences are written at the end of the copy:

آخر الكتاب و الحمد لله على كل حال

عَلِّقَهُ لِنَفْسِهِ الْعَبْدُ مُحَمَّدُ بْنُ مُحَمَّدٍ بْنِ مَنْصُورِ بْنِ عَلِيٍّ الْحُسَيْنِيِّ الْحَلَبِيِّ نَهَارَ الثَّلَاثَاءِ 28 شَوَّالٍ لِسَنَةِ 887  
بَعْلُو جَامِعِ الْأَزْهَارِ بِالْقَاهِرَةِ حَمَاهَا اللَّهُ تَعَالَى. اللَّهُمَّ صَلِّ عَلَى سَيِّدِنَا مُحَمَّدٍ وَآلِهِ وَصَحْبِهِ وَسَلِّمْ.

(Translation ... "The end of the book. Praise be to Allah for all! it (ie, Birrul Volidayn) was poor Muhammad ibn Muhammad Mansur ibn Ali Husseini Halabi on Tuesday, Shawwal 28, 887. Al-Azhar University in Cairo (Allah Almighty) O Allah, peace and blessings be upon our Master, Muhammad, his family and his Companions".

Thus, the work ended. The full name of the calligrapher who copied it is Abu Ja'far Muhammad ibn Muhammad ibn Ali ibn Hashim ibn Mansur Husayn Musavi Halabi Hanbali. He was born in 863. He received his first education in Halab. He then traveled to Damascus, Cairo, Mecca and Yemen in search of knowledge. In 895, he is said to have been alive. The year of his death is not clear.

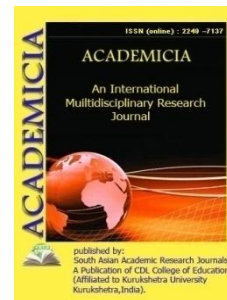
The second copy is kept under number 1545 at the “Al-Jihad al-Libya” Research Center in Libya. It is called the Book of Hadith {كتاب في الحديث}. Its original name and the name of its author are also unknown. However, according to the first copy, this is also a copy of Imam Bukhari's “Birrul Volidayn”, because the hadiths in it correspond to the hadiths of the first copy. This source, like the previous one, begins with a narration by Imam Bukhari from Abul Walid Hisham bin Abdulmalik.

## CONCLUSION

The hadiths that encourage one to do good to one's parents are mainly found in the works of Imam Bukhari, such as “Al-Jame 'as-Sahih”, “Al-Adab al-Mufrad”, and “Birrul Volidayn”. In fact, the scholar could have limited himself to narrating the most reliable, well-known hadiths in “Al-Jame 'as-Sahih”. However, the muhaddithin, who deeply understood how important it is to do good to one's parents, wanted the hadiths on this subject to be in a separate collection. The form of the work is compact and the number of hadiths in it is small, but it is a source that is complete and of high interest in its subject matter.

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## CSR PRACTICES IN STATE BANK OF INDIA AND ITS IMPACT ON CREATING LOYAL CUSTOMERS: A STUDY IN MANGALURU CITY; KARNATAKA

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### ABSTRACT

*The objective of this research paper is to study the perception of customers towards CSR practices and its impact on creating loyal customers. The study found that all the respondents are having moderately positive perception towards the CSR practices of the Bank and the independent impacting variable of customer satisfaction and ethics are significantly influencing on the dependent variable that is customer loyalty. The findings of the study can assist the bankers to concentrate more on CSR practices, so that customers will be having positive approach towards the bank and they will be loyal. The study can assist the scholars in upcoming studies related to CSR and customer loyalty.*

**KEYWORDS:** *Corporate Social Responsibility, Customer Perception, Customer Satisfaction, Ethics, Customer Loyalty.*

### INTRODUCTION

Responsibility towards society is an idea that has been of concern to mankind for many years. Corporate social responsibility is not about money contributed by the companies to charity, it's all about companies overall involvement in community activities that improve the quality of people's lives. In the international business community, CSR has become one of the prominent subject and progressively becoming a mainstream activity. Over the last two decades it has become an increasing concern to the business world. It is not an option but it is mandatory for all the business entities to maintain high ethical standards.

The concept of CSR has evolved considerably since the time when concerns for society first surfaced in 1950 (O'Riordan and Fairbrass 2008; Carroll 1999; Freeman 1984). Frederik (1960) referred to CSR as willingness of the business entity to use the resources for the wide benefits of the society and not for achieving personal goals of the company. World Business Council for Sustainable Development (WBCSD) (2003) defined it as, "Corporate Social Responsibility is the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large."

According to European Commission CSR as "the responsibility of enterprises for their impacts on society". To completely meet their social responsibility, enterprises "should have in place a process to integrate social, environmental, ethical human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders" This definition asserts the need to assimilate the investor fears into the business operations and the core policy of the business.

### **CSR practices of SBI towards customers:**

SBI has committed to improve community wellbeing through various CSR activities primarily in healthcare and education. Bank has contributed towards environment protection, sports, rural development and disaster relief. The focus of the CSR activities is to help underprivileged section of people to meet their basic requirements and spreading to them opportunities to fulfil their desires for better life.

The Bank has implemented highly robust grievance redressal system and instrument to enable its customers to voice their concerns and response. Bank has launched web-based complaint Management System (CMS) designed to serve as a Single point online grievances housing and restoring system for its customers. While the Bank attempts to achieve the highest standard in customer service, it has also put in place a Board sanctioned compensation Policy to compensate the customer financially in the unlikely event of any slippage in services extended. The Bank ensures that the aggrieved customer is compensated without having to ask for it. State Bank of India intensely believes that a satisfied customer is the most powerful factor for the prosperity of its business. The Bank was the first in India to introduce a code of Fair Banking Practices called "Towards Excellence". The code imitated the commitment of the Bank to provide Banking services of a high order to individual banking customers. The Bank had adopted code of Fair lending practices and it is providing banking services in a professional way, no discrimination among the customers on the basis of caste, religion, sex etc. Bank is fair and honest in advertising and marketing the loan products and timely revelation of terms, costs, rights and liabilities as regards loan transaction. Bank is scattering general awareness about possible risks in contracting loans and encourages customers to take independent financial advice and not act only on representations from banks.

### **REVIEW OF LITERATURE:**

(Irshad & Rahim, n.d.) Conducted a sample survey from government sector employees, private sector employees and university students, to examine the influence of CSR factors on Customers Satisfaction and Loyalty in the presence of corporate Image as a moderator in economy of Pakistan. There is positive effect of Corporate Social Responsibility on the Customers



Satisfaction and Loyalty and moderating effect of corporate high image results more strong relationship between CSR and Customer Satisfaction and Customer Loyalty.

**(Lei Wang and Heikki Juslin 2011)** The authors determined the effects of personal values on individual perceptions of CSR issues. The authors investigated 980 Chinese young people, finding that: Chinese youth displayed a mixed value structure of traditional and emerging western values, stronger self-transcendent values than self enhancement values, and stronger openness values than conservation values. Personal values have a significant effect on perception of Chinese youth of CSR. The practical ethical contribution of this research suggested that value cultivation is a good way to develop ethical behavior and responsibility, which in turn affect the development of CSR in china.

**(Perrini et al., 2010; Lee et al, 2012)** CSR has found to have a positive effect on consumer loyalty which refers to the repeated purchase/use of a product or service over a period of time. Since enhancing consumer loyalty is of crucial importance for companies because of its direct link with financial performance, companies can leverage the effect of CSR in order to survive and prosper.

**(Pérez & Del Bosque, 2015)** This study result supports that CSR perceptions influence customer affection and behavior. The results of this paper contribute to a better understanding of how CSR perceptions can positively impact customer recommendation and repurchase behaviour, especially through the triggering of customer satisfaction. CSR initiatives seem to be reporting better results for savings banks because of their long CSR tradition. However, some interesting effects of CSR perceptions on customer emotions are also observed in the commercial banks subsector.

**(Osakwe & Yusuf, 2020)** Conducted a survey for selected customers of bank in Nigeria. The study has contributed towards influence of CSR beliefs on customer loyalty by considering the factors like brand trust and bank reputation. CSR beliefs foster brand trust and brand trust in turn fosters bank loyalty. The study revealed that brand trust is the more powerful mediator and it will foster bank loyalty.

### **Statement of the problem:**

Regardless of the scope of business, customer loyalty is considered as lifeblood of a business. An entity can create a loyal customer by serving in the society ethically and by satisfying its customers continuously. It is less expensive to maintain an existing consumer portfolio than to create a new one with the acquisition of new consumers. Loyalty is consumers' positive attitude which in turn increases an organisation's financial performance. By being socially responsible how a company can create a loyal customer is a topic for discussion.

### **Objectives of the study:**

To study the perception of customers towards CSR practices with reference to SBI and its impact on creating loyal customers.

### **Scope of the study:**

The population for the study are customers of the SBI in Mangaluru city, Karnataka. The variables in the study are customer loyalty (dependent), Impacting factors of CSR that is

customer satisfaction and ethics (independent variable). Data on these variables were collected through the administration of questionnaire (likert scale).

### Methodology:

Gathering information in this study is based on five point likert scale questionnaire. Information is gathered from selected 34 customer of SBI in Mangaluru city. Constructed hypothesis is tested by using simple linear regression model in SPSS (20).

### Research Hypothesis:

H1: Customer satisfaction has positive relation with customer loyalty

H2: Ethics has a positive effect on customer loyalty.

### Data Analysis:

Out of 34 respondents, 48 percent were female and remaining 52 percent were male.

**Figure 1: Descriptive statistics of customer perception towards CSR**

	N	Mean	Std. Deviation	Std. Error Mean
I think bank is socially responsible one	34	3.74	.751	.129
I believe that bank carries out a lot of socially responsible activities for customers and society	34	3.65	.849	.146
I feel that bank follows good moral principles	34	3.62	.817	.140
I believe that bank has the ability to deliver what it promises.	34	3.50	1.052	.180
I have a more positive perception towards SBI's CSR practices	34	3.53	1.051	.180

To identify customer perception towards CSR practices, descriptive statistics were considered. Table 1 shows in detail the results of the descriptive analysis of each variable of customer perception. Highest mean score is represented in item 1, where the customer think bank is socially responsible one, with a mean score of 3.74 and lowest mean score is represented in item 4, where customer believe that SBI has ability to deliver what it promises, with a mean score of 3.50. The overall mean score of 3.608 indicate that the respondents have moderately positive perception towards the CSR activities of SBI.

### Hypothesis Test:

#### Linear regression analysis

Simple linear regression is used to examine the relationship between dependent and independent variable. Model fits the hypothesis and it is accepted. The figure 2 shows the result of simple linear regression of Hypothesis 1: customer satisfaction variable of CSR has positive relation on customer loyalty.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.870	.757	.750	.699

#### ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	48.822	1	48.822	99.834	.000 <sup>b</sup>
Residual	15.649	32	.489		
Total	64.471	33			

a. Dependent Variable: customer loyalty

b. Predictors: (Constant), customer satisfaction

#### Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.604	1.393		1.151	.258
customer satisfaction	.813	.081	.870	9.992	.000

a. Dependent Variable: customer loyalty

Figure 2: simple linear regression analysis

Data in the above figure shows that, the dependent variable is Customer loyalty and the independent variable is customer satisfaction. From the table we can observe that Beta is .813, and t value is 9.992  $F(1,32)=99.834$  and the p-value  $0.000<.005$ . R square value is 0.757, which means that this model explains 75.7% of the variance. This implies that independent variable significantly influencing on the dependent variable. Therefore, customer satisfaction is positively and significantly related to Customer loyalty, and Hypothesis 1 is supported.

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
	.856 <sup>a</sup>	.733	.725	.734

**The figure 3** shows the result of simple linear regression of Hypothesis 2: Ethical variable of CSR has positive effect on customer loyalty.

### ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	47.251	1	47.251	87.810	.000 <sup>b</sup>
Residual	17.219	32	.538		
Total	64.471	33			

a. Dependent Variable: customer loyalty

b. Predictors: (Constant), Ethics

### Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.348	1.512		.891	.379
Ethics	.818	.087	.856	9.371	.000

a. Dependent Variable: customer loyalty

Figure 3: Simple linear regression analysis

From the above figure it is understood that all the variables of ethics are significantly influencing customer loyalty. From the table we can observe that Beta is .818, and t value is 9.371,  $F(1,32)=87.810$  and the p-value  $0.000<.005$ . R square value is 0.733, which means that this model

explains 73.3% of the variance and fits. Therefore, ethics is positively and significantly related to Customer loyalty, and Hypothesis 2 is supported.

**Figure 4: Correlations table**

Variables	Customer loyalty	Customer Sa.	Ethics
Customer loyalty	1		
Customer satisfaction	0.870**	1	
Ethics	0.856**	0.796**	1

\*\*correlation is significant at the 0.01 level (2-tailed)

Figure 4 shows the correlation among all the variables are significant. In this study correlation between all the factors are significant with correlation coefficient range from 0.796 to 0.870.

## CONCLUSION AND RECOMMENDATIONS

The study reveals that customers of the bank are having positive perception towards the CSR practices. The result obtained from this research has proved that there is relationship between customer satisfaction practices and ethical practices and customer loyalty. If bank in following ethics in all its activities and satisfying its customers, then it can create loyal customers. Creating loyal customer will help the bank to gain competitive advantage in the market.

In this globalised economy to sustain the market an organization need to focus more on CSR practices. Improved CSR practices will improve the image of the bank and bank need to give more promotion about its CSR activities.

### Limitations of the study:

The major limitation of the study is data was collected from the customers of SBI in Mangaluru city. The study result may change if the study is conducted in different place with different impact factors. And convenient sampling is used.

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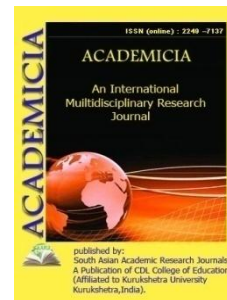
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## RIDDLE AS A MEANS OF SPEECH DEVELOPMENT IN PRESCHOOL CHILDREN

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### ABSTRACT

*The article emphasizes the relevance of speech development in preschool children, the importance of the formation of such speech qualities as accuracy and expressiveness. The author proves that a folk riddle will be an effective means of developing the speech of a preschooler. An innovative pedagogical technology for the development of speech of older preschoolers in the process of familiarization with various types of riddles is presented.*

**KEYWORDS:** *Pedagogical Technology, Speech Development, Speech Accuracy, Speech Expressiveness, Preschool Child, Folk Riddle, Communication, Preschool Educational Institution.*

### INTRODUCTION

Fiction and folklore are important means of forming a child's personality and developing speech, a means of aesthetic and moral education of children.

A preschool educational institution is the first and most responsible link in the general system of public education. Mastering the native language is one of the most important acquisitions of a child in preschool childhood.

The problem of the development of speech of preschool children by means of small forms of oral folk art is of particular importance today.

One of the small forms of oral folk art, in which the most vivid, characteristic signs of objects or phenomena are given in an extremely concise, figurative form, is a riddle.

Solving riddles develops the ability to analyze, generalize, forms the ability to independently draw conclusions, inferences, the ability to clearly highlight the most characteristic, expressive

signs of an object or phenomenon, the ability to brightly and concisely convey images of objects, develops a "poetic view of reality" in children.

Riddles are varied both in topic and content. They reflect human life, flora and fauna, objects of labor and everyday life. There can be several riddles about one and the same object, phenomenon, animal, each of which characterizes it from its side. The main feature of the riddle is that it is a verbal-logical task. To guess a riddle means to answer a question, i.e. perform a complex logical operation.

When working with preschool children, riddles can be used in the classroom, in work and play, in everyday life. They encourage the child to observe, reflect, and learn. Solving riddles requires active work of thought, search. The entertaining form of the riddle makes learning interesting and exciting, makes it easy and effortless to train the child in the use of lexical and grammatical language means. There are several types of riddles:

- riddles - comparisons where the enigmatic object is compared with another object, or a phenomenon that it looks like, or is somehow different;
- riddles - descriptions where an object or phenomenon is described; combined riddles are a combination of riddles - descriptions with riddles - comparisons;
- plot riddles are riddles composed by children using a logical sequential plot.

When working with riddles - comparisons, it is necessary to teach children to consciously highlight and memorize various signs of what was hidden. To achieve this goal, children in their environment find similar objects according to one common feature, and then compare and generalize them.

For example: The owner knows, he walks with him. (Dog.) Barks, bites, does not let him into the house. (Dog.) The preschooler names the guessed animal, proves the answer, says whether it is domestic or wild. The topic of riddles can be about domestic and wild animals, about clothes, about products, about natural phenomena, about transport, etc. These kinds of riddles are offered to children of younger and middle preschool age.

In working with children of older preschool age, more complex types of logical problems are proposed: comparison, exclusion, comparison. This happens especially when solving and explaining those riddles, the content of which can be interpreted in different ways, for example: I only hold on while walking, and if I get up, I will fall. (A bike). On the road, legs go and two wheels run. (A bike). In such cases, it is recommended not to seek traditional answers from children, but, seeing the correct course of their reasoning, emphasize the possibility of different answers and encourage them.

The use of riddles in working with children contributes to the development of their speech-proof and speech-description. The riddle becomes not just entertainment, but an exercise in reasoning and proving, i.e. an important means of teaching children to speak coherently.

Proof speech requires special, different from the description and narration of speech turns. The point of creating reasoning is the ability to pick up arguments. Children should be interested in the process of proof, in reasoning, in the selection of facts and arguments. When guessing a riddle, set a specific goal for the children: not just guess the riddle, but be sure to prove that the guess is correct.

Examples of such riddles can be: The master of the forest Wakes up in the spring, And in the winter, under a blizzard howl, Sleeps in a snow hut. (Bear) Motley fidget, Long-tailed bird. Talkative bird, The most talkative. (Forty.) Children, relying on figurative comparisons, explain their guess, first putting forward their proof, and only then the answer.

At the senior preschool age, children show a great sensitivity to the semantic shades of the word, they begin to understand the meaning of figurative expressions in literary works.

The characteristics of objects and phenomena in riddles can be brief: only one or two signs are named, according to which it is necessary to restore the whole and draw a conclusion based on reasoning. This form of riddle includes a riddle-description. It contains many opportunities for enriching the children's vocabulary with new words, phrases, figurative expressions.

It helps children develop their ability to understand and create descriptive speech. Examples of such riddles are the following: A white tablecloth covered the entire field. (Snow) Tall, thin, spotted. (Giraffe) Green, not grass, round, not the moon, with a tail, not a mouse. (Watermelon.) Mastering the skills of descriptive speech is carried out in the process of everyday life, as well as in special correctional classes.

Their goal is the formation of skills to own speech-description.

An important role in this is played by the questions of an adult, helping children to compose their riddle. The content of the questions influences the choice of speech means, its composition, artistic features. If in the riddle a description of the appearance of an object or animal was given, then when examining it, one should pay attention to its shape, size, color, as well as to those speech means by which these signs are usually expressed. If we want children to name the movements, actions of the object, then when examining the picture, one should pay attention to these signs.

After a careful acquaintance with the subject, children of older preschool age move on to independently compiling riddles according to the proposed plan, and in the future to inventing riddles about it. Classes on teaching children to invent riddles are closely related to classes on describing objects. The child is asked to describe the object without naming it, the rest of them recognize this object by the description.

The most successful forms of such activities are games, for example, in the form of the game "Wonderful bag". The teacher motivates the children by showing a wonderful bag of toys, offers to guess what is inside. The teacher complements the children's answers: "You can also make a riddle about what is in the bag, that is, ask about something, tell what object it is, but not name it." In the Toy Shop game, the child buyer must describe the toy in detail using a sample or plan, and the seller must guess which toy it is and sell it. A condition for receiving a toy, in addition to a description, may be the requirement to name the department, the shelf on which it stands. If the description of the toy does not meet the requirements, the seller-educator suggests thinking about how to make the story more complete and interesting. The ability to identify and name the various actions of an object is a prerequisite for creating riddle stories.

Solving riddles can also be used in theatrical activities (games - dramatization, concerts, holidays), where the ability to tell is consolidated in children, vocabulary is activated, expressiveness and clarity of speech are developed.

A systematic appeal to the riddle brings the child closer to understanding folk and literary speech, provides a faster mental, speech and artistic development of the child. The structure of the riddle requires specific linguistic means, so you should pay attention to the construction of the riddle: "With what words does the riddle begin? How does it end? What does it ask about?" Such questions develop children's sensitivity to language, help to notice expressive means in riddles, and develop the child's speech.

It is important that children not only memorize the figurative expressions of the riddle, but also create a verbal image of objects themselves, that is, they try to find their own versions of descriptions.

Riddles can be used not only at the beginning and during the activity, but also at its end. For example, examining objects, comparing and contrasting them, finding similarities and differences between them, children come to conclusions and express them in words. At the same time, the riddle can serve as a kind of completion and generalization of the process of activity, helping to consolidate the signs of the object in the minds of children. This technique helps to concretize children's ideas about the characteristic properties of an object or phenomenon.

Thus, riddles help children understand how succinctly and colorfully, using language means in different ways, one can say the same thing. The development of coherent speech in the classroom using riddles should take one of the central places. Vivid images are emotionally perceived by children, awaken their imagination, imagination, develop observation and interest in everything around them, are an inexhaustible source of the development of children's speech.

It is advisable to make riddles for children in the appropriate situation. The riddle can be used for a walk, in games, in everyday life, at work. It makes the child think, develops observation, the desire for reflection and knowledge of the surrounding reality. The very form, riddles, attracts the attention of children and makes the teaching interesting, unobtrusive.

Riddle: - this is not only a game, but also an exercise in reasoning, in the ability to prove. But in terms of content and structure, the riddles are such that they allow them to develop the logical thinking of children, to form their skills of perception and use of speech-proof, speech-description.

Thus, a riddle is not only a game, but also a means of educating, teaching, developing children, an exercise in reasoning and the ability to prove. Correctional and developmental possibilities of the puzzle are diverse. The most important of them are:

- Education of resourcefulness, ingenuity, speed of reaction; - stimulation of mental activity;
- Development of thinking, speech, memory, attention, imagination; - expanding the stock of knowledge and ideas about the world around;
- Development of the sensory sphere.

Types of riddles with examples

1. Direct riddles, in which a hidden object or phenomenon is described with the help of allegories, direct and indirect features. They can be both colloquial and poetic. Conversational form: What is it: does not bark, does not bite, but does not let it into the house? Answer: the castle. Poetic form: Gray neck, Yellow sock, Floats in the river Like a float. Answer: duck.

2. Rhyming riddles. Guessing them is incomparably easier because the right word just asks for the tongue. But the benefits of such word games are enormous. They contribute to the development of the baby's intellect, wake up fantasy and imagination, but, most importantly, help to get the first ideas about rhyme. The smallest "guessing" - simpler riddles. They love oranges and bananas very much ... (monkeys) I lost a sock, took it away ... (puppy) There is a big fight in the river: two quarreled ... (cancer) There are a lot of windows in it. We live in it. This is ... (house) I'm not afraid of the word "scatter" - I'm a forest cat ... (lynx)

3. Trompe l'oeil riddles also rhyme, but that's the whole trick. The answer must be chosen not in rhyme, but in meaning. If you say the last word in rhyme, you get ridiculous nonsense. Such riddles teach children to think and be attentive, not to succumb to deception. They also develop a sense of humor. An example of a children's trompe l'oeil puzzle: Who gnaws a cone on a branch? Well, of course, this is ... (bear, squirrel) From the palm tree down to the palm tree again Deftly jumps ... (cow, monkey) Whinnying in the field in the morning Long-Mane ... (kangaroo, horse) I even heard a foreigner - Everyone in the forest more cunning ... (hare, fox)

4. Riddles on imaginative thinking are usually solved if the question is considered not literally, but figuratively or broadly. Include in the decision plane the factors that may be implied due to the ambiguous interpretation of the question or the words that are used in it. Thirty-two warriors have one commander. (Teeth and tongue) Twelve brothers roam one after another, do not bypass each other. (Months) He wanders importantly in the meadow, Out of the water comes out dry, Wears red shoes, Gives soft feather beds. (Goose) I have a hedgehog in my room for a year. If the floor is waxed, He will rub it to a shine. (Polter) They knock, knock - they don't tell you to get bored. They walk, they walk, and everything is right there. (Clock)

4. Mathematical riddles are solved by counting, but often involve the use of both figurative and logical thinking. And sometimes, it is pure mathematics, but framed in figurative folk speech.

For example: Soon 10 years of Alisher - Amin is not yet six. Amina still cannot grow up to Alisher. And how many years younger Amin Boy is than Alisher? (for 4 years) Near the forest, at the edge of the forest, three of them live in a hut. There are three chairs and three mugs, three beds, three pillows. Guess without a clue who the heroes of this tale are? (Mashenka and three bears). The five brothers are inseparable, they are never bored together. They work with a pen, a saw, a spoon, an ax (fingers). Black, but not a crow. Horned, but not a bull. Six legs without hooves. Flies buzzes, falls - digs the earth (beetle). Principles for selecting riddles for older preschool children When selecting riddles for working with older preschool children, it is necessary to take into account sufficient life experience, developed observation, the ability to reason, it is necessary to offer the child riddles that require a deep thought process and the application of their knowledge reflect the content of the program of cognitive and speech development ... Riddles about natural phenomena, about extraordinary properties that we do not notice in everyday life, but for children this is a whole discovery. Winter glass flowed in the spring. Answer: ice. Fluffy carpet Not with fabrics, Not sewn with silks. In the sun, in the month, it shines with Silver. Answer: snow. Grow green. Fall turn yellow. Lie. Black. Answer: (leaves) For older preschoolers, riddles with possible several correct answers are especially good, where evidence-based speech can develop in the discussion. Brother and brother sit next to each other all their lives, see the white light, but each other is not. Answer: eyes There is a bath in the belly, a sieve in the nose, a navel on the head, a hand on the back. Answer: kettle. The puzzle for older



children can be used both as part of the lesson and as a whole lesson. For example, riddles that give an idea of the ambiguous meaning of a word carry so much information that playing it out will take the whole lesson. Guess what word every tailor has? Instead of a fur coat, a hedgehog wears this word on his back. This word, along with the tree in the New Year will come to me. Answer: a needle Such riddles will certainly find their continuation in the visual activity of children. In working with riddles, it is not so important how quickly her children guess, the main thing is to interest the children, involve them in the process of comparison, comparison, discussion and search for answers. Questions, disputes, assumptions - this is the development of speech, creative imagination, figurative thinking.

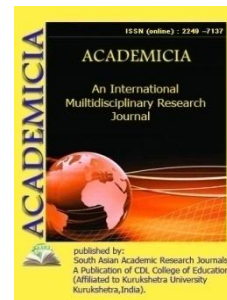
Learning to guess riddles begins not with guessing them, but with the education of the ability to observe life, perceive objects and phenomena from different sides, see the world in various connections and dependencies, in colors, sounds of movement and change.

The development of all mental processes of the preschooler is the basis for guessing the riddle, and the preliminary acquaintance of children with the objects and phenomena that will be discussed is the main condition for understanding and correctly guessing the riddle. The teacher also needs to know the main mistakes of children when guessing riddles. Children are in a hurry to answer, do not listen to the end, do not remember all the details. In younger preschoolers, attention is often drawn to some bright object, already well known and the thread of attention is torn. Children single out several minor objects at once, but they miss the main feature. Children deliberately skip one of the signs named in the riddle, replacing it with their own, as it seems to them, correct and, as it were, adjust to the answer, distorting it.

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## UZBEK FOLK TRADITIONS AND CUSTOMS AS A MEANS OF FORMING THE SPIRITUAL AND MORAL QUALITIES OF CHILDREN IN PRESCHOOL EDUCATE

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### ABSTRACT

*This article reveals the content of educational programs for preschool education of the Republic of Uzbekistan, based on the system of basic national values and contributing to the spiritual and moral development of the child's personality. The article analyzes the problems, explains the possibilities of their successful solution precisely in preschool childhood; the tasks, principles, content, forms and methods of developing interaction between adults and children, aimed at the spiritual and moral development of preschoolers, and the possible positive results of this activity are revealed.*

**KEYWORDS:** *Way Of Life, Personality, Spiritual And Moral Development, Education*

### INTRODUCTION

Childhood is a wonderful and fragile world. In this most important period of a person's life, the foundations of his physical and mental health are laid, creative abilities develop and, most importantly, the basic spiritual and moral qualities of a person are formed. Thanks to this, the ability to distinguish between "good" and "evil", moral standards is formed, the spiritual culture of one's people is comprehended. Therefore, it is so important to exclude distortions in the spiritual and moral development of the individual during preschool childhood. And for this, a systemic spiritual and moral education of the child is necessary, because, finding itself without proper upbringing, bearing the traditions of the domestic cultural environment, the child's soul is filled with a surrogate content of the external and virtual world, terrible images and ideas, and sometimes overt occultism.

The spiritual and moral component in the structure of the main educational program of a preschool educational institution determines the content and organization of the educational

process for preschool children and is aimed at the spiritual, moral, social and personal development of children, contributes to solving the problems of education and upbringing based on the values of folk culture.

Currently, there is a need for a comprehensive and deep study of the influence of folk traditions and customs on the educational process in various social institutions: family, preschool institutions, general education schools, as well as in higher educational institutions.

Interpretation of traditions and customs as social norms and rules of behavior is found in ethnology, culturology, philosophical, sociological, demographic and a number of other branches of scientific research. In these studies, the concepts of "tradition", "custom" are defined taking into account the tasks of each branch of social sciences. This is due to the fact that in the scientific literature there is no single, generally accepted definition. We have the right to note that many researchers approach the solution of the issue from different positions, primarily from the point of view of the problems of interest to them. Traditions cannot be only norms and principles of social relations, methods of social activity, heritage of the past or norms of people's behavior. They consolidate the results of both past and modern social practice. They express the nature of social relations inherent in the community of people - nations, ethnic and social groups, collectives, etc.

Traditions are social and cultural heritage that is passed down from generation to generation and reproduced in certain societies and social groups for a long time. In our opinion, the upbringing and educational function of traditions is the main way of inheriting the social accumulated experience of mankind in the field of upbringing and personality formation in different periods of an individual's life. Customs - a rule of social behavior, reproduced in a particular society or social group, rooted in the habit, life and consciousness of their members. The custom plays an important role in upbringing, contributing to the introduction of the child to spiritual culture, forms an inherited stereotyped way of behavior, acquaints with patterns of behavior (this should be done or this should not be done).

The term "tradition", "custom" is often identified with the term "rite", "ritual", "ceremony". The ceremony, being a traditional symbolic action, accompanies important moments in the life and work of an individual, a group of society, and requires a certain type of behavior. It has emotional and psychological effects.

An important social function of the rite, which includes a ritual, ceremony in its structure, is the formation of the moral qualities of a person. The rite can act as a norm of behavior, implements the norms of law, forms stereotyped behavior, habits, which, in turn, have regulatory influences on people's lives.

Practice shows that for centuries, traditions and customs have been and remain one of the effective means of introducing new generations to the life of society, the formation of a certain type of personality. The peculiarity of their educational impact lies in the fact that they are not limited to any one age period of a person's life. Each person, living in a society, is always in the sphere of action of its customs and traditions. Fulfillment of their requirements and prescriptions has a significant and constant impact on the formation of the world perception, culture of feelings and behavior of the individual, on her relationship to the world around her.

Traditions and customs as pedagogical creativity of the people represent various forms and methods of pedagogical influence on the feelings, will, consciousness and behavior of children. As a public phenomenon, traditions also act in the form of principles, norms and rules governing the relationship of people in society and personal life, they are approved and supported by public opinion.

A comprehensive study and public assessment of the common foundations of the national traditions and customs of the Uzbek people, like other peoples of the world, is the most important task of modern pedagogical science. It should be noted that many of her questions, which have not received important coverage in the historical and pedagogical science, are in dire need of in-depth, all-round creative development, especially the issues of moral, labor and artistic and aesthetic education of children in a preschool institution.

The problem of preschool education of children in accordance with generally accepted spiritual values is of particular importance in the period of changes in social structures and socio-economic relations. It should be noted that the events of recent years and changes in society are hard for the adult generation. This also affects the younger generation. Children strive for self-affirmation and individuality. It is folk traditions and customs that play the role of regulating the behavior and activities of adults and children in society, form the foundations of moral qualities, contribute to the revival of new spiritual values, and enrich the cultural heritage of the people.

Preschool education as a stable social community is an important factor in the formation of personality. It was and remains the most important educational institution, a source of transfer of social experience from generation to generation. Especially in preschool age, it plays an important role in the socialization of a child. The foundation of personality is laid precisely in the family. The first ideas, concepts, skills, attitudes towards people, moral norms of behavior, feelings are formed in the family.

It should be noted that for a certain time the problem of folk pedagogy was ignored, many traditions and customs were considered in the historical aspect, and not as educational values.

It is necessary to search for pedagogical technologies that will ensure the child's acceptance of the meaning of the transmitted values, concepts, norms that will be reflected in his behavior. One of the significant conditions in our work is the creation and implementation of a structural and functional model of spiritual and moral education in a preschool institution, focused on acquaintance with the works of art of national cultures of different peoples.

The means of spiritual and moral education are literary texts (fairy tales, proverbs, parables, fiction), fine arts, musical works, architecture.

Methods and forms of educational activities with children: conversation, reading and discussion of literary texts and parables, viewing works of art, listening to musical works, watching films, making cartoons, games with rules, cultural practices, thematic exhibitions, acquaintance with the traditions of spiritual holidays, theatrical performances, handicrafts, creative artistic activities, charity events.

In organizing work on spiritual and moral education during the experiment, we used active forms of activity: organization of joint living of events by adults and children; classes using active teaching methods; games (role-playing, directing, theatrical, didactic); thematic conversations on

a dialogue basis; watching slide films, videos and using other technical teaching aids; family holidays, leisure.

A full-fledged national upbringing and education of a child is a daily work to educate children in love for the motherland, folk traditions, etc.

In the formation of a child's personality, great importance was attached to play as an effective means of spiritual and moral development of preschool children in a preschool educational institution. In organizing play activities, we focused on traditional folk games, original author's didactic games. For the successful organization of this process, it is also important to recreate the children's play tradition and the development of modern methods that contribute to the creation of a spiritualized children's play space.

Play is the basis for the normal development of children. L.S. Vygotsky argued that when children are busy playing, they are at a level close to their optimal level of development. Joint activity is a condition for the emergence and manifestation of one of the most important abilities of a child - his kind, humane attitude towards his peer as towards himself. And on the nature of the interaction and communication between children, the individual style of relations with people that will manifest itself in adulthood largely depends.

On the contrary, the weakening of the game forms of joint activity transforms the children's community into a "community of underplayed", for whom in the future adult life family relations will lose their full value, the boundaries of good and evil will lose clarity and certainty. The loss of inner harmony of a child in today's world of individualists, cynics and cruel people will lead to a morally crippled and empty world of an adult. The spiritual and moral upbringing of a child is the upbringing of his relationship with the objective world and the surrounding nature, with other people - adults and peers, with himself as a subject.

The main means of ensuring a full-fledged spiritual and moral education is the creation of a spiritually renewing and personality-forming educational environment, in which an adequate hierarchy of goals and values of a person's life and the necessary components of his full-fledged life are laid. The attitude towards others, including peers, is manifested by preschool children in joint activities. Their interaction in games also determines the tone of future relationships. In order to harmonize the children's picture of the world, it is necessary to create a play space within which the child will gain the skill of good relationships and protection from the negative influence of the external environment. Individual moral experience of communication arises primarily in play.

Thus, in determining the level of moral education of preschool children, it is advisable to use various methods, including taking into account information received from children, from their parents and teachers.

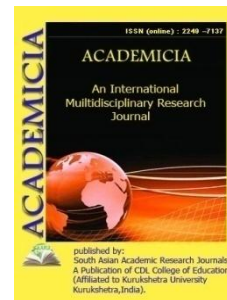
Middle, senior and preparatory preschool ages are characterized by the needs:

- In communication with relatives and peers;
- In self-service, in mastering play, visual and work activities;
- in the knowledge of the world and the principles of world perception;
- in moral guidelines in relations with people and the world.



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## INNOVATIVE MECHANISMS FOR THE FORMATION OF A PERSON'S WORLDVIEW IN FAMILY RELATIONS

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### ABSTRACT

*The article poses the problem of determining the worldview feelings of a person, as one of the stable mental structures of a person along with attitudes, value orientations, established relationships, beliefs. As the main factor in the formation of worldview feelings, it is proposed to consider a person's experiences throughout his life path. The article highlights the issues of improving the pedagogical mechanisms of the family and educational institutions in the development of the spiritual culture of the younger generation of social and legal risks. And also on the basis of the author's approach, the main directions, principles, innovative methods, the pedagogical mechanisms of the development of the spiritual culture of youth were studied, conclusions and recommendations were developed.*

**KEYWORDS:** *Experience, Worldview Feelings, Worldview Experiences, Family. Methodology, Innovative Methods, Educational Tools, Pedagogical Diagnostics, Pedagogical Requirements, Pedagogical Mechanism.*

### INTRODUCTION

The family is a historically specific system of relationships between spouses, parents and children, as a small group linked by marriage or kinship.

Parents, family, and childhood have a huge impact on human development. In the family, the first years of a person's life usually pass, which are decisive for the formation, development and formation. Jan Amos Kamensky reasoned: "If parents teach their children to eat, drink, walk, talk, adorn themselves with clothes, then all the more they should take care of imparting wisdom to children." And in "wisdom" the most important is, firstly, the knowledge of the real world, and secondly, "the ability to carefully and reasonably manage oneself." The family largely determines the range of his interests and needs, views and value orientations. Moral and social

qualities are laid in the family. The future of the child depends on the educational influence of the family, on what qualities will be developed and formed.

American sociologist M. Elmer noted that "the family is a social institution that provides a mechanism through which social inheritance works. The family as a social institution is built and modified by folk customs and morals. " According to the American researcher of the family R. Linton, the family "will exist in any form as long as people exist." Le Play believes that in order to understand society it is necessary to understand the family. According to Le Play, it is in the family that all the features of society, the seeds of its stability or instability are laid.

The importance of the family is recognized at the state level, and sociological research in the field of family relations serves as a solid basis for the development of state social policy.

Every person, regardless of age, needs a strong, reliable family. The socializing function of the family is decisive in the development of the human personality. A child is born with a predisposition to sociality and during his life becomes an active member of society. It is known that the process of the formation of the civic identity of the younger generation includes a set of social roles and norms of behavior. At the same time, the absence of a stable worldview, a clear image of the state model in the minds of young people leads to the conflict in their social behavior.

A worldview is a special system of ideas, knowledge about a person and the world, outlook on life, with the help of which a person determines his actions. Its components include knowledge, emotions, norms, assessments, values, etc. A worldview helps a person to organize knowledge about the world around him and determine acceptable ways to achieve goals.

It is especially important to study it due to the fact that the worldview has a social and practical orientation, affects the behavior of the individual, his choice. The behavior of individual individuals, the peculiarities of their worldview, affect the changes taking place in society.

The worldview is formed as a result of knowledge of the surrounding world. It is the outlook of a growing child that is formed in the family. Various factors have an impact on its formation. This is the cultural environment, media, fashion, education, family, etc. At the same time, it is important to note that such social institutions as family and education play an ever smaller role in the formation of the world outlook of young people in the modern world. But an increasing place in this process is taken by the media, the Internet and fashion. This process carries with it a certain danger, since certain components of the worldview are imposed on young people, bringing negative consequences for their carriers in the future.

Values are one of the most important components of a worldview. We consider "value" as a relation to an object, phenomenon or process, which expresses its significance for the subject. By a value system, we mean a certain set (or hierarchy) of human values.

The value system of modern society is formed through institutional influences and the latest, not yet sufficiently studied, influences (the Internet, social networks, etc.) and represents a certain hierarchy. Moreover, the hierarchy of values is based on the idea that the order of values depends on the influence under the influence of which a person is able to refuse them. The stronger it is, the higher the order of value. In the process of life, most values change their position in the value system many times, but the higher the order of values, the less their ability to change it.

The importance of the value system lies in the fact that it is the basis of culture. It also, in many respects, determines the features of the functioning of social institutions and systems. It should be noted that in society one can distinguish value systems of individual social strata, communities, groups, classes and generations. This phenomenon must be taken into account, since it carries a certain danger. There is the potential for conflicts to arise between groups with differing value systems within society. One of the types of such conflicts is the so-called “fathers and children” conflict.

Three generations actively interact in society: “children”, “fathers” and “grandfathers”. The harmony of interactions between them largely depends on how compatible their value systems are. To achieve compatibility, the values that make up the system must be consistent, but with the constant increase in the number of differences in value systems, this is almost impossible.

Differences in value systems are exacerbated by the break in the continuity of generations in the family. Values are not passed on from generation to generation, they are “depreciated”. This happens for several reasons. One of the main problems is that modern society is changing rapidly, its dynamics outstripping the process of generational succession. The number of interactions between representatives of different generations in the family is reduced, their content is changing. Representatives of the generation of “fathers” do not always strive to pass on their values to children, and the interactions of representatives of the generation of “children” with the generation of “grandfathers” are often minimized. Because of this, many values lose their original meaning or completely disappear from the value system of young people, complicating interactions with older generations to the point of misunderstanding and conflicts.

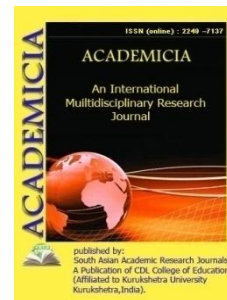
Particularly interesting is the relationship between representatives of the generation of “grandfathers” who received social experience in Soviet times and the younger generation. The difficulty lies in the fact that values are not only not passed on from the generation of “grandfathers” of young people. These two generations are poorly informed about each other's values and attitudes, which often complicates communication between them. Representatives of the younger generation consider many of the values of the elders as outdated and unviable.

But it is not only the values of representatives of different generations that differ. As noted above, the value structure of Russian society is not homogeneous. Today, not only scientists, but also politicians are beginning to realize this, making certain attempts to recreate a single system of values. But to create it, you need to take into account several important features.

We can conclude that an integral system of values is only being formed in modern Russian society. Multidirectional tendencies prevail, which sometimes leads to negative results. In order to reduce the risk of conflicts due to differences in value systems, relationships in society should be regulated using basic values shared by all members of society. Targeted institutional impact is needed. Family, government, education must communicate important values together. Scattered measures do not bring tangible results.

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## THE USE OF NATIONAL TRADITIONS IN THE LABOR EDUCATION OF PUPILS

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### ABSTRACT

*The article deals with the issues of upbringing a student, the formation of his personality, instilling in the representatives of the young generation of love for work. The techniques and methods of the main directions of the national education system, tradition are highlighted. Described are Uzbek traditions, each of which plays a great educational role.*

**KEYWORDS:** Education, Student, Formation, Tradition, Labor, Hard Work.

### INTRODUCTION

Folk traditions are a historically formed set of educational and social experience, norms of behavior, social traditions, passed down from generation to generation. Labor traditions of spiritual education accustomed children to systematic work, passing on all the skills, knowledge and skills known in the peasant world, contributed to the formation of the habit of working, hard work, reverence and respect for work, responsibility for the assigned work. Life experience is acquired throughout the history of the existence of the people, and is reflected in folk traditions. The rich arsenal of folk traditions, which was formed from the specific historical conditions of the development of the people, should be widely used. The cultural heritage of the people contains pedagogically valuable ideas and proven experience of upbringing for centuries, which, while developing, enrich the world pedagogical thought.

The role of folk traditions in the upbringing of the younger generation is great. The most significant period in the moral formation of an individual is school age. This over out is characterized by increased susceptibility to external influences, belief in the upbringing of everything that is taught, what they say, in the unconditionality and necessity of moral norms, uncompromising in moral requirements for others, immediacy in behavior. This is the key to the learning and education of younger students.



The upbringing of schoolchildren on the traditions of folk pedagogy contributes to the recognition and strengthening of national identity, which is so important for the preservation of the identity of society, the preservation of history and determines the future of our people.

Folk pedagogy is an integral and integral part of the general spiritual culture of the people. The great Russian teacher KD Ushinsky said that "upbringing has existed in the people for as many centuries as the people themselves have existed." And it also suggests that folk pedagogy arose in ancient times, that it historically preceded scientific pedagogy and influenced its early forms. Researchers of folk pedagogy Ushinsky KD, Makarenko A.S., Sukhomlinsky V.A., have shown the mutual influence and interdependence of official and folk pedagogy that enrich and complement us.

An analysis of the sources shows that education in particular closely resonates with the ideas and thoughts expressed in the monuments of folk pedagogy: in sayings, proverbs, fairy tales, legends. Moreover, the people directly associate some legends with actions, life and activities.

Traditions (from Lat. Traditio - transmission) - elements of social or cultural heritage, passed down from generation to generation and preserved in social groups for a long time. As a tradition, certain social institutions, norms and rules of behavior, attitudes towards specific moral and ethical values, customs, rituals act.

Custom is traditionally established rules of social behavior.

Today they say that without solving the most important task of educating the younger generation on national traditions, imbued with a highly moral national ideal, there can be no full-fledged, comprehensive education. Labor education is the central problem of folk pedagogy. The development of morality and mind, physical and aesthetic improvement of the personality occurs mainly in work. The ability to work, create valuable and beautiful things with your own hands is the leading criterion for assessing a person, the basis of popular opinion about a person. Considering the traditions and customs of folk pedagogy in conjunction with modern specialized education, we would like to pay special attention to labor training in folk pedagogy and the embodiment of its ideas in the conditions of modern specialized education.

It is difficult to overestimate the importance of labor education in the general system of folk pedagogy, it really is its core. Since ancient times, the labor education of children and youth has been the most important responsibility of parents, and then of educational institutions and other public institutions.

Labor for many peoples was primarily associated with animal husbandry, gardening, silkworm breeding, and folk crafts. Everyday culture, the spiritual makeup of the people are generated by millennia of agricultural civilization. All moral canons, moral ideas, even the artistic tastes of entire eras are conditioned by the relationship of man to his mother - damp earth. The hard work of the farmer and the breeder, the attitude to bread as a sacred thing, cotton, all this brought up in children a feeling of love for work and people of labor.

The people not only glorify labor as an invaluable gift of nature to man, but to some extent idealize his inspired character: "Labor is the father of everything." The people have always made sure that the younger generation mastered a number of professions, each becoming a "jack of all trades". All peoples have a common opinion: "Superfluous skill does not turn one's head", "Seventy crafts are not enough for a young man." History has preserved for us invaluable



experience in arming the young generation with a variety of labor skills and abilities. The people clearly understood that mastering labor skills takes time and effort, since "there are things that you cannot do until you learn, but there are also things that need to be done to learn." The people make fun of the man who is looking for an easy job. The proverb says: "On a rainy day, there are many who want to water chickens." Especially negative attitude is caused by people with "white hands" who love other people's work. The people ridicule a person who does not think about the results of his work or is engaged in unreasonable, useless work.

In such cases, they say: "Having chopped down the roots of a tree with an ax, he waters the top with water." If we formulate the attitude of the people to labor education in modern terms, then we can say that they stood for universal labor education, for conscientious, systematic and reasonable socially useful labor.

Honest and conscientious work is celebrated in fairy tales; in them, with undisguised irony and sarcasm, lazy people, idlers, idlers are ridiculed. Fairy tales, as you know, idealize the strength and capabilities of heroes, but they are based on popular belief in a person, in his mind, a willingness to overcome any difficulties to achieve an intended goal, not only and somewhat for the needs of the family itself, but, above all, for work in a social collective.

Secondly, to make every effort to ensure that the child's labor is not forced, i.e. was creative, worked with interest, love, without fear of "labor sweat".

Based on the traditions of folk pedagogy, considering the family to be the cell of a new society, where the primary laying and formation of feelings, thoughts, character and consciousness of the child takes place, the teacher claims that correct upbringing cannot be presented as unworked upbringing. Explaining the meaning and significance of labor education, he advises parents to keep in mind a number of circumstances.

First, take into account that the family must prepare the child for work.

Secondly, in the process of labor, it is necessary to educate in a child certain moral qualities: love and respect for a working person, intolerance to manifestations of parasitism, laziness, attempts to evade labor.

Thirdly, labor education should become a means not only of "physical development in labor", but also of the psychological and spiritual development of a person.

Fourthly, it is necessary to take into account that work training in the family is of great importance in a person's personal life, in determining his future profession and qualifications.

An analysis of the works of the largest teachers who devoted their research to the problems of labor education shows that they undoubtedly relied on the knowledge of folk pedagogy, treated with deep understanding of folk traditions, the experience of the people in educating the young generation in the spirit of love and respect for various work activities. person.

In modern conditions, when the labor training of students is a factor in their development and at the same time meeting the needs of the national economy, special attention is paid to this important pedagogical problem.

Labor education also plays a significant role in the all-round development of the individual. For the implementation of the goals of developing labor education, its variability, electiveness, shift

types of labor activity are necessary, which will allow to include in its framework the sphere of social assistance, nature protection and cultural monuments, etc. Not only teachers, but also parents should be prepared for this.

The ongoing restructuring of the content of education is aimed at creating conditions for a person to achieve a high intellectual, moral, aesthetic and physical level.

This is what can increase the intellectual potential of the state, enhance the influence of humanistic ideas and the prestige of the state, and spiritual values.

It is important to reflect the traditions and socio-cultural values of the people in the content of education. And as this, according to the concept of modernization of education for the period up to 2010, at the senior level of the general education school, specialized training is envisaged, the task is to create a “system of specialized training (profile education) in the senior grades of the general education school, focused on the individualization of education and socialization of students, in including taking into account the real needs of the labor market.

The transition to specialized training has the following main goals:

- To provide in-depth study of individual subjects of the program of complete general education;
- To create conditions for a significant differentiation of the content of education for high school students with wide and flexible possibilities for building individual educational programs by students;
- To promote the establishment of equal access to comprehensive education for different categories of students in accordance with their abilities, individual inclinations and needs;
- to expand the possibilities of socialization of students, to ensure continuity between general and vocational education, to more effectively prepare school graduates for the development of higher vocational education programs.

In these conditions, it is important to combine folk wisdom, centuries-old working traditions of the family with the achievements of modern pedagogical science. At the same time, labor education must meet at least the following pedagogical requirements: the systematic and collective nature of labor, the presence of feasible and constant labor duties for each child, taking into account the age.

At an early age, work should be combined with elements of the game, and in the senior grades, gradually move from simple forms of labor to more complex ones. It is important to teach children to perform work duties that are necessary, but no less for them, not to punish children with labor, to systematically take into account and evaluate the quality of work, to stimulate work with praise and personal example to show a conscious and disciplined attitude to work.

Thus, answering the above question, we cannot give a concrete answer: is it the continuation of specialized education of the traditions of folk labor education or only the embodiment of ideas in the system of the new Russian educational standard.

Time does not stand still, and the goals and objectives of education are changing taking into account the modern requirements of the state. But we must never forget about those principles, the ideas of labor education that originated in a distant time with its popular belief in a person, in

his mind, readiness to overcome any difficulties to achieve the intended goal, not only and somewhat for the needs of the family itself, but above all, for work in a social team.

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## METHODS FOR IMPROVING THE SYSTEM OF ASSESSING PUPILS' KNOWLEDGE BASED ON THE QUALITOLOGICAL APPROACH

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### ABSTRACT

*The article is devoted to the problem of qualitological education of the future teacher. It shows the special importance of this type of vocational education in the modern sociocultural situation. The structure and content of the teacher's qualitological competence are considered, a strategy for its formation in the conditions of qualitological education is proposed. The effectiveness of the implementation of the program is ensured by the use of competence-oriented technologies, such as: case technology, dialogue technologies, portfolio technology, rating technology and others.*

**KEYWORDS:** *Qualitology Of Education, Qualitological Education, Qualitological Competence*

### INTRODUCTION

The modern sociocultural situation has sharply set before education new tasks related to the formation of a person of a new cultural type. This is a person who understands and accepts the new values of life, independently, freely and responsibly solves various problems, has analytical, design and predictive intelligence, knows information and communication technologies, is capable of education throughout life.

The formation of a "cultured person" of the XXI century dictates the need to modernize higher professional education in the direction of improving its quality.

The main result of quality education in higher education is the training of a professionally competent specialist. A large number of factors affect the quality of education.

This is the quality of educational programs, and the level of implemented pedagogical technologies, and the quality of material and technical, regulatory, methodological, informational support of the educational process, and of course, the qualifications of teachers. Moreover, it is the teacher as the bearer of sociocultural experience that is the guarantor of quality education.

In other words, the teacher is one of the main factors influencing the quality of education. In this regard, it becomes obvious that in modern socio-cultural realities a teacher has a new function of professional activity - quality management of the educational process. That is why today there is a need for qualitological training of a teacher, which will allow him to effectively solve the issues of forming the quality of the educational process.

A modern leader and teacher needs a qualitological education, which makes it possible to develop a new paradigm of their professionalism.

The scientific content of this education is the qualitology of education (from the Latin *qualitologica* - the science of quality).

Qualitological education of a teacher involves the formation of his knowledge of the problems of theory and practice of quality management of the educational process.

It is essential to note that effective management of the quality of the educational process presupposes that the teacher has not isolated, but systemic ideas, knowledge and skills that integrally reflect the object of management, the environment of its formation and development; sociocultural, theoretical, methodological and technological foundations of the teacher's activity in the implementation of such management requirements for his professional competence. In this regard, it seems appropriate to us to introduce the didactic unit "Quality management of the educational process" into the course "Theoretical pedagogy", the development of which by students will change the value-target orientation of their future professional activities towards the formation of the quality of education, form systemic knowledge and skills in this area. The system-forming category of a teacher's qualitological education is qualitological competence.

The methodological basis for the development of the scientific content of qualitological competence is the qualitology of education, as a scientific complex, including the quality of the functioning and development of educational systems, the educational process, professional training of the teaching staff, aimed at ensuring an effective system for managing the quality of education.

The structure of education qualitology, which includes the following components: theory of quality, which studies laws, patterns, principles of formation of the quality of education; the theory of quality management, which studies the laws, principles, mechanisms, methodology of quality management in education; qualimetry, which studies laws, principles and methodology for assessing (measuring) the quality of education.

The "imposition" of the component composition of the qualitology of education on the specifics of the teacher's professional activity allows to develop the structure and content of his qualitological competence.

Qualitological competence of a teacher is an integral structure consisting of four interrelated components:

- Motivational and value;

- Cognitive; - technological;

- Professional and personal.

Let us give a meaningful description of these structural components.

The motivational-value component of the teacher's qualitological competence presupposes the presence of motivational-value orientations towards the management of the quality of education and the awareness of the fact that competence in this area is a professionally significant quality. This component manifests itself in the following aspects:

- Attitude to the quality of the educational process and its management as a professionally necessary and socially significant value;

- The desire to actively participate in mastering the theory and technology of quality management of the educational process;

- Awareness of tasks, ways, means and ways of organizing quality management of the educational process;

- focus on self-education in the use of effective tools for managing the quality of education.

The cognitive component includes a system of scientific, professionally important knowledge and ideas about the essence of the quality of the educational process and its management, which provide an opportunity for the teacher to perform these professional functions. The named component contains four types of knowledge that make up the structure of the teacher's qualitological competence:

Regulatory, philosophical and methodological, psychological, pedagogical and managerial. Regulatory knowledge includes:

- Knowledge of the foundations of the state policy of the Republic in the field of education;

- Knowledge of the state standard of general secondary education;

- Knowledge of regulatory documents that determine the requirements of the state and society to the quality of the educational process in educational institutions.

The philosophical and methodological knowledge includes:

- Knowledge and understanding of the social essence of the quality of education;

- An idea of the structure of the quality of education as a unity of the procedural and effective components;

- Knowledge of the conceptual and categorical space of the quality of education: properties, system, factors, dynamism, axiology, certainty, border, quantity, efficiency and other concepts

Psychological and pedagogical knowledge includes:

- Knowledge of the psychological characteristics of the pupils;

- Knowledge about the basic principles and laws of the organization of the educational process, focused on achieving the quality of education;



- Knowledge of the requirements for the design of the content of the educational process, ensuring the development of key competencies of schoolchildren;
- knowledge of modern educational, health-saving technologies focused on the development of independence, activity, creativity of schoolchildren; principles of their selection and use;
- Knowledge of the principles and features of designing a developing educational environment;
- Knowledge of the quality criteria of the educational process and its results;
- Knowledge of the conditions for ensuring high-quality school education: psychological, organizational and pedagogical, medical and health-improving and others;
- Knowledge of the features of the organization of productive interaction of the subjects of the educational process. Managerial knowledge involves:
- Knowledge of the essence of quality management of the educational process, its structure and content;
- An understanding of the main approaches and principles of quality management of the educational process;
- Knowledge of the functional composition of the management process: design, provision, measurement and quality assessment;
- An idea of effective design tools for the quality of the educational process;
- Knowledge of the criteria, methods and procedures for assessing the quality of the educational process.

The technological component is a set of qualitological skills that act as a specific form of the functioning of theoretical knowledge.

In the structure of the teacher's qualitological competence, the following types of skills can be distinguished:

Design and technological, organizational, communication and qualimetric.

Design and technological skills include:

- The ability to analyze the state and results of the educational process, to highlight the factors that affect them;
- the ability to set goals, select the content of the educational material and technologies adequate to it, initiating the independence and creativity of the student, activating cooperation in collective work, ensuring the student's motivation in educational activities;
- The ability to create various educational environments (information, communication, etc.), to saturate the spatial-subject components of the environment with the symbols of the academic subject;
- The ability to construct pedagogical problems of the open (choosing one of the many feasible solutions) and closed (choosing one correct solution) type.

Organizational and communication skills include:

- The ability to organize the activities of students to work with information (find information in various sources, comment on it, draw conclusions, use it to solve practical problems);
- The ability to use new information technologies to organize the independent activity of schoolchildren;
- The ability to select objects of the environment and use them to solve specific pedagogical problems;
- The ability to organize educational, creative and other types of activities, taking into account the individual characteristics of students;
- the ability to use technologies focused on a multi-level composition of students; - the ability to select and use methods aimed at developing students' reflective skills and the development of self-esteem;
- The ability to carry out reflex analysis of the lesson;
- The ability to build a communicative situation taking into account the characteristics of its subjects;
- The ability to build interaction with other subjects of the educational process;

Qualitric skills include:

- The ability to determine the goals of measuring and assessing the quality of the educational process;
- the ability to build a criterion base for measurement, determine estimated indicators, select qualimetric methods, develop a procedure for evaluating activities;
- The ability to develop test items for written assessment and computer testing of the general educational level of training of students;
- The ability to form a bank of assessment materials; - the ability to make organizational and pedagogical decisions based on the results of qualimetry.

The professionally significant qualities of a teacher's personality, which determine the success of his activities in managing the quality of the educational process, include:

- Analytical and predictive thinking;
- Innovation;
- the ability for intellectual and professional-personal reflection, allowing to comprehend their actions and decisions.

The analysis of the structure and content of the teacher's qualitological competence allows us to give its detailed definition.

The qualitological competence of a teacher is a holistic personal education, including a motivational and value attitude to managing the quality of the educational process, a system of knowledge (regulatory, philosophical and methodological, psychological, pedagogical and managerial), a set of qualitological skills (design and technological, organizational, communication and qualimetric) , professionally significant personality traits (analytical and

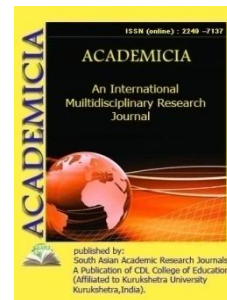
predictive thinking, innovation, personal and managerial reflection), ensuring the success of his activities in managing the quality of the educational process.

Qualitological education of a teacher is a pedagogical system that includes a set of interrelated components: target, content, organizational and communicative, evaluative and effective.

The designated structure of the content, based on the relationship of social and professional managerial and pedagogical aspects of the qualitativization of the management of the educational process of a general educational institution, contributes to the disclosure of its essence, students' awareness of its place and role in the process of innovative development of modern society, as well as their mastery of a set of qualitological knowledge and skills that provide their willingness to manage the quality of the educational process. The effectiveness of the implementation of the program is ensured by the use of competence-oriented technologies, such as: case technology, dialogue technologies, portfolio technology, rating technology and others.

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## WASTE MINIMIZATION IN PAINT MANUFACTURING UNITS: ENVIRONMENTAL PROTECTION AND COST SAVING

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### ABSTRACT

*Paint manufacturing wastes are mostly hazardous and toxic. The cost of proper treatment and safe disposal of these wastes is high. Implementing waste minimization management system reduces both waste generation and resource consumption. Furthermore it can result in environmental preservation and operational cost saving. The purpose of this study was evaluation of the effectiveness of waste minimization performance in the paint formulating industries. So we determined the amount of waste generation, raw materials usage, water and energy consumption in a paint manufacturing plant called "Rang Afarin" in Tehran, Iran. There were three major sources of waste in this factory: solid wastes, wastewater, and air pollutants. We focused on wastewater because according to our researches we found that the main waste in this plant is wastewater and we can reduce about 20% of generated wastewater at the plant. Also, results showed that by implementing waste reduction program, the amount of raw materials, energy, and water usage can reduce respectively down to 0.114%, 22%, 9.8%. The whole of these waste reduction equal to 87288\$ saving in production costs annually. Waste minimization plays key role to achievement sustainable development and economic profits in industries.*

**KEYWORDS:** *Paint Industry; Energy And Water Consumption; Raw Materials Saving; Waste Minimization*

## INTRODUCTION

Waste minimization is an aspect of pollution prevention. It includes source reduction and recycling (California department of toxic substances control, 1992). Waste prevention is a business strategy from which any company can benefit. In addition to cost savings, it can also help you improve worker safety, reduce liability, and enhance your image in the community (USEPA, 2001). In today's competitive business environment, saving energy, reducing waste and improving productivity are more than just buzz words; they are vital for a business to be successful (EPA, 2002). The major driver for waste reduction is cost (Jewell et al., 2004). If a firm wishes to minimize its total cost, it is obvious that both disposal costs and waste amounts are a good place to start cutting costs (Higgins, 1989). Waste encompasses wastage of energy or water in producing or using a product (Bishop, 2000).

The amount of wastes disposed of by paint manufacturers is high and reducing waste is a high priority for them (USEPA, 1990). Paint formulators generate a variety of hazardous wastes in their operation. Tank cleaning is the principal source of waste generation (California department of health services, 1989). The majority of conventional paints contain organic solvents. These chemicals are classified as hazardous due to toxicity, ignitability or both (WMRC reports, 1992). Waste sources of the plant are classified into three main categories: wastewater, solid waste, and air pollutants. Significant attention is given to wastewater since laboratory results indicate that wastewater contains significant quantity of solvents (Dursun, & Sengul, 2006). Waste generation reduction leads to saving in raw material, energy, and water as well as less waste disposal. This means cost saving in production process and environment protection. It is true that pollution prevention is prefer to pollution treatment.

This study examines quantitative results of waste minimization Implementation in paint formulating industries. Our selected plant for researching is located in Tehran, Iran ( see Fig. 1). This plant produces 30 kton/year of products such as industrial paints, marin paints, thinner.



Fig. 1. Location of the plant

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## MATERIALS AND METHODS

Our research was done at some steps. First we estimated the quantity of wasted raw materials, energy waste, water waste as well as the amount of wastewater generated in the factory. Then it was determined that what percentages of all aforementioned items could be stored by implementing waste minimization management system in the plant. Finally, the sum of production cost saving was calculated through the price of purchasing raw materials and energy as well as annual production capacity of the plant.

### Raw materials

We selected seven different batches in seven days randomly to estimate raw materials wasting. For each batch, the type and quantity of raw materials recorded from weighing and mixing stage to the end of production process. Paint is composed of pigment, solvent, resin and additive but the most wastage in raw materials is related to pigments and solvents. we measured total weight of used raw materials and total weight of produced paint. Differences between these two amounts indicated raw materials wasted. By the percentage of pigments and solvents in each batch the waste of pigments and solvents determined.

### Energy

For measuring the quantity of energy consumption, first we listed all of the electrical equipments and facilities in the plant. At three periods of time we recorded the hours of energy consumption for all of electrical devices. According to the registered used power (total watt) on the devices by the manufacturers, the quantity of energy consumption were calculated. Compare between calculated amount and electricity bills which sent periodically by the power organization showed the waste of energy in the factory.

### Water and wastewater

Total water consumption except for drinking water was supplied by a well at the plant. The volume of water which pumped daily into water reservoir was measured. Then we specified all of the water consumers in the plant. At the production area we determined the amount of water applied for cooling process equipments, washing the floor of production area. At the domestic area we estimated the volume of water used to daily shower for people who worked at production area (because of the contact with pigments and powder raw materials) and water consumption for sanitary and kitchen purposes of all domestic and industrial workers as well as water use for irrigation of plants and lawn of the plant.

Whit due attention to waste minimization approaches at water consumption segment in the plant, it was estimated that how much water could be reserved.

There were three major sources of waste in the factory: solid wastes, wastewater, and air pollutants. We focused on wastewater because according to our researches we found that the main waste in this plant was wastewater. So we examined wastewater of the plant at two portions. Cleaning solvents used for removing paint from process equipments accounted for the most volume of the hazardous waste stream. The used solvents were collected into barrels and sent for off-site management. The other waste stream we focused on was composed of paint spills mixed with solvent residue plus floor washing waters which contained low concentration of pigments.



The quantity of both waste streams were measured in our research. The amount of used solvents and wastewater could be recycled and reused were also estimated.

## RESULTS

The results of measuring the quantity of raw materials usage, product produced, and raw materials waste in seven different batches in seven days have been shown at table 1.

Table 2 shows the list of electrical devices in the plant and their electric power. The estimated amount of energy consumption, the true amount of energy consumption according to electricity bills, and the quantity of energy waste are shown at table 3.

The water reservoir was pumped  $50\text{m}^3$  of well water in the factory every day. Daily usage of water by water consumers in the plant and reservable amount of water are given at table 4.

It was also estimated that  $2.5\text{m}^3/\text{d}$  of used cleaning solvents were collected into barrels. Collected used solvent are sent to off-site recovery and then is recycled in process. The other wastewater composed of floor washing and inadvertently paint spills with cleaning solvents which generated at the production area was determined  $6.5\text{m}^3/\text{d}$ .

**TABLE 1 THE AMOUNT OF USED RAW MATERIALS, PRODUCED PAINT, AND RAW MATERIALS WASTES**

Batch No.	Used raw materials (Kg)	Pigments content (%)	Solvents content (%)	Produced paint (Kg)	Raw materials waste (Kg)	Waste pigments (Kg)	Waste solvents (Kg)
1	1064.965	28.3	23.47	1061.165	3.8	1.075	0.892
2	1069.965	28.16	20.09	1066.265	3.7	1.042	0.743
3	894.7	26.89	42.36	891.4	3.3	0.887	1.398
4	1267.6	22.92	11.44	1263.4	4.2	0.963	0.48
5	850.452	25.91	12.93	847.252	3.2	0.829	0.414
6	1214.4	21.28	12.35	1210.3	4.1	0.872	0.506
7	969.575	28.09	8.25	966.075	3.5	0.983	0.289
Average	1047.379	25.94	18.7	1043.69	3.69	0.95	0.674

**TABLE 2 LIST OF ENERGY CONSUMPTION SOURCES IN THE PLANT AND THEIR POWER**

Electric device	Number	Power (Kwatt)
Mixer	1	40
Mixer	6	3.5
Mixer	2	15.2
Mixer	3	6.6
Purl mill	5	30

Purl mill	4	24
Filter	3	0.37
Feeding and discharging electro pump	1	4
Feeding and discharging electro pump	1	2.5
Dissolver	4	30
Dissolver	1	11
Sand mill	4	24
Sand mill	1	30
Ventilator	20	0.8
Fluorescent lamp	25	0.06
Lift track	3	60
Laboratoar mill	3	3
Laboratoar centrifuge	1	2.5
Refrigerator	5	0.3

**TABLE 3 THE ESTIMATED AMOUNT OF ENERGY USAGE, THE ELECTRICITY BILL VALUE AND THE ENERGY WASTE VALUE**

Course No.	Length of time (day)	Electricity value (Kwh)	bill Estimated value (Kwh)	Energy waste (%)
1	29	24827	18620	25
2	31	30967	22451	27.5
3	41	36585	25975	29
Average		915	664	27.2

**TABLE 4 DAILY WATER USAGE IN THE PLANT AND RESERVABLE AMOUNT**

Consumption source	Consumption rate (m <sup>3</sup> /day)	Saveable amount (%)
Cooling water	32	2.5
Washing water for production area floor	6	50
Plants and lawn irrigation	1	50
Kitchen and sanitary uses	3	10
Shower	3	10

## DISCUSSION AND CONCLUSION

There is average 3.69kg (0.35%) waste of raw materials in each batch during production process. One portion of these wastes is related to solvents evaporation and other portion is due to pigments waste. According to table 1, nearly 0.064% of total wasted raw materials in one batch,

results from solvents waste. Changing the technology in the plant is one way to minimize the quantity of waste (Dursun, & Sengul, 2006). Since most process equipments are open design, some of used solvents vaporize in the form of volatile organic compound (VOC). We can save approximately 50% of solvents wasting. The production capacity is 3Kton /Year and 9686.784 Kg of solvents can be stored per year which equals to 24217\$ cost saving. This goal can be achieved in this plant through designing close system for production process. This system can be performed by:

1. Putting cover over the mixing tanks and other open processing equipments.
2. Pouring small plastic balls over containers.

By the table 1, 0.091% of pigments waste in each batch. The most important reasons for pigment wastes in the plant are as follows:

1. Waste of pigments when loading in bags and unloading in mixing tanks manually.
2. Suction through ventilators in loading and unloading areas.

We can automate loading and unloading pigments by using facilities such as vacuum and hopper system and save nearly over 90% of pigments wastage. By the production capacity, 3Kton /Year, we are be able to save annually 24576.26 Kg of pigments and 61441\$ in operational costs. Improved quality control during manufacturing process with employee training can be significant factors in reducing wastes particularly the reduction of material losses through spills. Thus by performing waste minimization program in the factory 0.114% of total raw materials will stored each year which equal to 85658\$ cost saving in operational costs of the plant. It must be mentioned that there is about 50Kg leftover paint in mills in every batch. If the next batch is same colour with previous, it will be discharged as production. Otherwise, it must be cleaned and removed as waste. In this research we didn't consider this kind of raw materials wasting.

Table 3 shows that there is about 27.2% energy waste in the plant. It was found that the most share of energy consumption belongs to mills, ventilators, dissolvers, and mixers respectively. For production of one ton paint, mills work approximately 18 hours.

The main causes of this wasting can be:

1. Low efficiency of the process equipments resulting from oldness and fatigue of devices
2. Inappropriate program for maintenance and repair of electrical devices.

Process equipments in this plant have been instaled since 35 years ago. So they probably work with around 50% efficiency or less. For instance, in order to supply 30kw power, a mill with 80% efficiency consumes 37.5kw energy while a mill with 50% efficiency uses nearly 60kw energy. Differences between these two number is equal to 22.5kw (75%)energy waste. Therefor, if we replace electrical equipments at production process with newer ones, the energy consumption will approximately decrease as much as 22% . If plant works 300 days per year, then 1630\$ will nearly saved yearly. Unfortunately because of low price of energy in our country , there is no incentive to save it . In fact, regulatory approvals and really price of energy are good instruments to natural resources conservation.

With due attention to this point that  $50 \text{ m}^3$  of water is pumped to reservoir every day, as well as by findings at table 4, it is found that there is  $5 \text{ m}^3/\text{day}$  (10%) waste of water in the factory. Most of this wasting results from lack of pay attention to resource conservation and incorrect consumption pattern, because the water is free in this factory. In this research we noticed that through accomplishment of some easy option, we can save about  $4.9 \text{ m}^3/\text{day}$  (9.8%).

By closing floor drains and discouraging employees from routinely (i.e. needlessly) washing down areas, some facilities have been able to achieve a large decrease in wastewater volume (USEPA, 1979). Other effective ways to reduce water use include employing volume-limiting hose nozzles, using recycled water for cleanups, and actively involved supervision (USEPA, 1990).

Moreover aforementioned options, we recommend other waste minimization options as follows:

- 1- Employee training to correct consumption and environmentally sound thought.
- 2- Control and check the leakages and defaults especially water pumping system providing cooling water.
- 3- Use of shower and valves equipped to electronic eyes.
- 4- The wastewater results from washing floors has low contamination, so by slight treatment to reduction COD, it can be reused for irrigation of the plants and lawn and floor cleanup purposes. This waste stream plus spills cleaning residue generate as much as  $6.5 \text{ m}^3/\text{day}$  and we can reduce it down to  $3 \text{ m}^3/\text{day}$

Spent cleaning solvent is a hazardous waste commonly generated by the paint manufacturing industry. Spent solvent should always be kept separated from other wastes, so that it can be reused. Spent cleaning solvent can often be reused as a process ingredient in batches of compatible formulation (Department of toxic substances control, 1997). Over 1/2 of the paint manufacturing hazardous waste contained solvents (USEPA, 1992). Installation of a distillation unit can provide at least 70% solvent recovery from wastewater (Dursun, & Sengul, 2006). In 1985 a survey showed that over 82% of the respondents recycled all of their solvent waste either on-site or off-site (USEPA, 1990). Waste minimization options for decreasing solvent waste are: Scheduling batch production runs from light to dark colors, use high pressure wash systems, reuse equipment cleaning wastes, clean equipment immediately, use alternative cleaning agents, use mechanical wipers on mix tanks, use countercurrent rins methods. By performing mentioned options the solvent waste generation in the plant decreased to  $2 \text{ m}^3/\text{day}$  and 20% of solvent waste stream generated in the plant will reduce.

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## LITERARY CONCEPTION AND AESTHETIC INTERPRETATION IN ORIENTAL EPIC FOLK TALES

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### ABSTRACT

*Studying spiritual and mental essence of ancient spiritual and cultural heritage, realizing socio-genetic factors thoroughly, feeling them in heart, its ideological and literary features, special features of its genres, historical roots and foundation of faith, poetic structure give us opportunity to create similar features of our historical heritage with world poetic understanding. Especially, researching from the point of view of Uzbek and Indian epics in archaic plot transformations of motifs in historical-genetic, historical-comparative, psychological and social methods is currently an actual problem of modern literature and folklore studies. There was researched parallels in epics in the method of plot motifs: childlessness, the birth of the main hero and challenges and protective characters, description of faith in poetic understanding, semantic chains concerning helpful spirit, individuality of symbolical or complete artistic conception and mythopoeic interpretation in this article.*

**KEYWORDS:** *Aesthetic Interpretation, Motives Of Supernatural Birth, Motives Of Trial, Motives Of Trip, Cosmogonic Views, Epic Transformations.*

### INTRODUCTION

Research has revealed that almost all genres of folklore contain protective forces. In oriental folk literature, the main character overcomes difficulties and reaches perfection with the help of such forces. Though there are certain differences on cosmogonic views of Indian and Uzbek nations, there are certain similarities as well in the perception of the universe as a triad, reached the beloved one in Heaven, attitude towards water, earth, air and fire as sacred matters, regarding just and kindness as noble features of a human being.



Similarities can also be traces in conflicts between heavenly powers and help to the main characters by protective forces in overcoming difficulties and problems. These features constitute common literary conception of oriental epic folklore and serve as continuing motives. Family and social traditions create certain motives as the result of epic transformations. Uzbek and Indian people bear share some common history and have similar traditions, which are reflected in their traditions and poetic mind. Literary traditions also allowed both nations to enrich each other.

**Main part:** The ancient scriptures of “Avesto” serve as a proof of the fact that our ancestors created a highly developed civilization. The underlying principle of this scripture is the battle between good and evil forces and hymn to kindness of human nature. It is interesting to note that this battle begins in Heaven, among gods and continues among nature and human beings. In the scripture, the evil force Anhra Manu (Ahriman) tries to harm the good force Ahura-Mazda. The former is helped by giants in these attempts. Therefore, the supreme god of good forces, the creator of life and light Ahura Mazda and the evil force Anhra Manu, the representation of an evil mind ApaMand, the destroyer giant, the enemy of beauty and kindness Ayshma, the giants of death and fade Tuarvi and Zariklar are constantly at war with each other. Ahura-Mazda protects humankind and the whole nature as well as the riches of the underground from evil forces. In this endeavor, he is helped by such heavenly forces as Mitra, Anaxita, Sienta, Xarvalat, Amereatt and Xshatra. In “*Avesto*” it is stated Ahura Mazda has created the whole universe and sixteen countries. The purpose of creating the universe is humankind. It is stated when apocalypse comes, a person named Saoshyant appears who will save humankind from evil forces. This person will clear the Earth with “molded iron. Those who were on the side of evil forces will be put to destruction. It can be concluded that the problem of the influence of natural and heavenly forces on the fate of humankind and universe plays an important role in almost all genres of folk epic tales. In oriental folk epic tales, the main character overcomes all the difficulties and reaches perfection with the help of heavenly forces. Despite the differences, there are many similarities in the beliefs of Uzbek and Indian people. These similarities can be seen in the conflicts between heavenly forces. We assume that these similarities call for special research. Myths are results of attempting to perceive the genesis of human-nature-society-universe. People have always been incline to tie the reasons of events with external forces. Supernatural forces also allow creating this conflict between good and evil. This also increases the ideological and literary reliability of the poems and serve to create the polarity between good and evil, approving good and rejecting evil. Such humanistic pathos improves the readability and aesthetic value of the poems. For this reason, different examples of ancient epic tales like “*Gilgamish*” of Sumer, Homer’s *Iliad*” and “*Odyssey*”, “*Mahabharata*”, “*Ramayana*”, “*Pacha-tantra*” (“*Kalila and Dimna*”) of India, “*Geser*” of the peoples of Tibet and Mongolia, “*Jangar*” of the Kalmyk people, “*Edda*” of Ancient Iceland, “*Amiraniani*” of Georgia, “*Gurughli*”, “*Alpomish*”, “*Manas*”, “*Qirqqiz*” of Central Asian peoples as well as folk epic tales Gershasp, Elibek, Kayumars, Jamshid, Erxubbi, To‘maris, SHiroq, Siyovush, Rustam and others are still widely read. So, we can see that the comparative analysis of Indian and Uzbek folk literature opens new horizons for researchers. After Uzbekistan became independent, it has become possible to research ancient manuscripts that contain all the wisdom, philosophical, literary, religious, ethical and aesthetic beliefs of our ancestors.

The problem of being childless is addressed in many folk tales and epic narrations of Uzbek people through motives of the supernatural birth of the main character. V.Ya.Propp, S.Kaskabasov, B.Sarimsoqov, K.Imomov, G'.Jalolov, J.Yusupovlar and other researchers of folk literature study the genesis of tales and epic poems of nations in relation to their beliefs and traditions.<sup>6</sup>

They believe that the motive of being childless serves as a main element of composition of many tales. Before telling the history of the supernatural birth of the main character, narration starts with describing the state of childless parents.

The child is born after they beg to supernatural forces. In bearing the child, the spirit of ancestors or eating such things as fish or fruit presented by supernatural forces plays a certain role, which add to supernatural character of the motives of birth. For instance, in the Khorezm version of *"Olmos botir"* fairy tale, a fifty-year old woman married to a sixty-year old man unexpectedly becomes pregnant and bears a healthy, strong child.

In *"Go'ro'g'li"* epic series, the main character is born by dead mother in a grave, as his mother BibiHilol dies when his child-to-be-born reaches six months. It is interesting to note that Gurughli himself also faces the problem of being childless and adopts Avaxon from Xunxor and Hasanxon from Vayangandan.

Similar motives can be traced in *"Alpomish"*, where the sons of AlpinbiyBoyburi and Boysarini pray for a child during forty days in the mausoleum of Shohimardon. Their prayers are accepted by God and Boysari's wife bears a daughter, while Boyburi's wife bears a son.

In *"Orzigul"* epic tale, the king Qoraxon is also childless and wants to have a son. However, his wife bears a daughter.

In *"Ramayana"*, Indian epic narration, the main characters are born in supernatural ways. In particular, the descendants of Dasharatha are considered the descendants of Sun, while Sita is found in the dew. Some of the main characters suffer from being childless, and bear a child after long prayers and sufferings as a heavenly gift. For instance, the childless king of MithilaJonak wants to build a temple and starts ploughing the ground. At this point, a beautiful lady appears from under the plough and the king adopts her. She is called *"Sita"*, which means *"plough"*. The old king of KushalagDasharatha is also childless. His prayers are accepted and his wives, after eating heavenly gifts provided by the god Vishnu, bear children.

In the masterpiece of classical Uzbek literature *"Farhod and Shirin"*, an epic poem by Navoi, we can also observe such an extraordinary birth. The poem starts with the description that the powerful emperor of China suffers from being childless. His only desire is to have a son. His good deeds and charity are not in vain.

Deeds such as battle with the enemy, overcoming different disasters show that the motif of trip was applied and followed. These instances are very close to Farkhod's adventures, who is a hero of Navoi's poem. The ways of passing through the stages of perfection are reflected poetically in the book, and as Farkhod fights with a dragon, a dreadful demon Akhraman, a lion and an iron warrior – robot, he also fights with his lust, and gets rid of the feelings such as the passion for power and wealth, anger and hypocrisy. The hero learns from the great scholars such as Sukhaylo and Socrates the secrets of opening the magic of the mirror, the secrets of love and purification.

As Navoiy writes about the features of the trip, he notes that:

*“A traveler can have many difficulties, but also he can achieve his aim. Though his body suffers from the difficulties of travel, his soul and spirit has a rest. and you can ask about the countries and places from the traveler.”).*

It can be observed in a series of “Alpomish” and “Gurughli” poems, which reflect the high ideals of our people. For example, Khakimbek sets out to rescue his beloved. Saying goodbye to his relatives, leaving his country, travelling across ninety mountains, he reaches the country of the kalmyks ruled by Toychikhon. He fights against the enemy to fulfill Barchin’s terms.

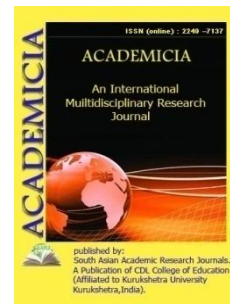
He wins all parts of the competition, including racing, pulling the arrow, hitting the coin from a thousand steps, and wrestling and shows that he is a real strongman. Despite the dodges of the Surkhail’s sons, he overcomes all difficulties. At the end of the poem, he returns his country after a seven-year captivity, and applies justice.

**CONCLUSION:** Such motives exist in the folklore of all oriental nations, and they have been playing an important role in forming the universal features such as good, kindness, objectivity and honesty throughout the centuries.

Furthermore, studying from each other in nations, acquiring living traditions and develop enrich both literatures and influence considerably to educate ethnic groups.

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## THE CONCEPT OF "BALAGAT" AND THE "BALAGAT" OF THE SENTENCE

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### ABSTRACT

*Although "the science of balagat" has a history of almost a thousand years, it is one of the least studied sciences. The word "maturity", which in the dictionary means "maturity", "perfection", as a science, is based on the complete delivery to the reader of all the layers of meaning intended by the author in the text. In this case, the full observance of the rules of linguistics, the delivery of the meaning and purpose of the author in full accordance with the situation of the reader ("muqtazoi hol") and the concise expression of the conflicting interests of the two parties is important. Similarly, having the ability and skill to compose a text indicates the maturity of the author. Scholars have identified the highest and lowest levels of this subject of science and acknowledged that there are several other ranks among them. It is emphasized that every author must constantly strive to bring his work to the highest level that humanity can achieve. Systematic study of "the science of balagat" makes it easier to understand the meaning of texts that are more difficult to understand - divine books, classics and other similar texts.*

**KEYWORDS:** "Balagat" (Maturity, Perfection), The "Balagat" Of The Sentence (Perfection Of Speech), Fasohat (Writing Without Mistakes), Mutobiq (Combination Of Contradictions), "Muqtazoi Hal" (The State Of The Listener And The Need Of The Speaker To Speak Accordingly), Mutakallim (Speaker, Author), "Muxotob" (Listener, Reader).

### INTRODUCTION

The word "balagat" literally means الوصول والانتهاى "to reach" and "to finish." It expresses the quality of speech and mutakallim. In this case, the purpose of "intiho" is for the words to reach the heart of the "muxotob" (reader, listener) in the most acceptable form.

Scholars have given different definitions of "balagat" and the "balagat" of the sentence. In particular, it is necessary to "convey the great meaning in sahih (clear) and fasih (unambiguous) terms", "Let it be explained in a few words without interfering with the completion of its meaning in the heart, and do not go beyond the limits of necessity when the need arises", "the word being eloquent(fasih) and corresponding to space and time(muqtazoi hol)", "the eloquence of the eloquent word to the required situation". Some researchers have suggested that two aspects need to be considered when studying puberty. One studied the science known as éloquence in a foreign language, and the other as a skill known as rhétorique. The "balagat" we are studying is included in the first round as a skill. In our opinion, it is correct to rely on the scientific view of scientists in the form of "balagat" is a science that encompasses the rules of science, methods and factors".

The definition of balagat, which most scholars agree with and which embodies the essence of this science, is as follows: "balagat is the conformity of the eloquent (fasih) sentence to the essential." This was seen as the "the balagat of the sentence." There are three points to note here:

Fasih (writing without mistakes) sentence. "Muktazai hal" (the state of the listener and the need of the speaker to speak accordingly). Compatibility (combination of contradictions).

In order to get to know with the definition of "balagat" as a scientific term and its essence, it is necessary to be aware of the concept of "éloquence". One of the three phenomena that form the basis of "balagat" is directly related to the rules of "éloquence" observed in words, sentence and "mutakallim".

The eloquent (fasih)sentence is composed of eloquent words. The word eloquent, on the other hand, is a word that is free from literal defects, fully complies with the rules of language in its construction and use, and can express its meaning clearly. An eloquent **speech** is one in which the words that follow are not difficult to pronounce, do not follow the rules of the language, and do not form a long chain that suffers from the combination of compounds without spiritual and verbal defects and excessive repetition. It would not be appropriate to argue about his maturity unless he is a prostitute. A sentence that contains the necessary rules of "éloquence" (fasih) provides the basis for "balagat". The lack of eloquence makes it impossible to find "balagat" in it. But this does not mean that every eloquent speech can be a fish.

In order for the eloquent speech to be a fish, it is also necessary to conform to it again.

At this point, it is necessary to get acquainted with the basic concepts of "balagat" with the terms "mutakallim" and "mukhotob". Although "mutakallim" means "speaker" in the dictionary, the term "balagat" is a term that encompasses all concepts such as speaker, writer, author, narrator ... and refers to "speaker". It does not matter whether the speech is oral or written. "Mukhotob" means "speech-oriented person" (people), which includes the meanings of listener, reader, reader, interlocutor. Also, "mukhotob" is not limited to the expression of a person (people). In its place, it is used in reference to "any being to which speech is directed." For example, a rock, a flower, a wind, an animal, etc. can come in the form of a "contact".

The second concept in the definition of "balagat" is the basic term and the basic concept of "muqtazoi hol". "Muktaza" is derived from the word اقتضاء, which means "demand", "necessity", "need".



"Hol" indicates status, situation, condition, etc. Researchers who have studied the situation as a whole have described it as the situation of the parties at the time of the speech. In our opinion, it is appropriate to study the "muqtazoi hol" as two phenomena.

"Mutakallim" (author) determines the need to express the purpose of the "Mukhatob" based on the situation. The basis of Mutakallim's speech is the state of "mukhatob". In this case, the level of knowledge, intelligence, awareness and perception of the "addressee", his attitude to the message is important. It is necessary to take into account space-time, situation and other conditions in the expression of the purpose, to adapt it to the mind of the addressee in conveying the idea, to point to several meanings at once, to express a single goal by pointing to several meanings. "Mutakallim" adapts the expression he wants to convey to the above cases of "mukhatob". From this point of view, the "case" is the status, and the "obligation" is the "worthy attention" from which the "mutakallim" must adapt his speech to this state.

It is the duty of the "mutakallim" to find the most necessary sentence that is "appropriate" to his situation and to convey it in an eloquent manner, while the "hal" indicates all aspects of the "mukhatob." Determining the necessity of the state of the mukhatob is at the heart of the mutakallim's speech.

The following example will help you understand these theoretical rules:

Alisher Navoi, describing the event of Miraj in the epic Hayratul Abror, writes:

“One night in the dark, the universe,

The sun hid like the eye of life”

It is known that the ascension is the ascension of our Prophet Muhammad to heaven. This historic event took place at night - in the dark. At night, the Earth or some other planet may be dark. But it is unimaginable that the whole universe - the galaxy - is dark at the same time. Astronomical and physical facts deny that there is complete darkness in the universe as long as the Sun exists. The sun definitely illuminates a part of the universe. Alisher Navoi does not deny this idea. It can be said that Mutakallim's high knowledge and poetic skill, his masterful use of the rules of "balogat" could easily bring into the mind of the "mukhatob" an event that does not fit into the human imagination, which seems to contradict the truth.

Navoi likens the Sun to the eye of life. It is well known that life means all beings. When you close your eyes, it is as if nothing has happened. And in the blink of an eye, it happens in a very short time, and sometimes it goes unnoticed. What Navoi is referring to, in our opinion, is that the Sun, which is the eye of life, closed and opened its eyes in such a short time that no one in the whole universe noticed it closed and opened. The miracle happened at a time when such a moment was less than a billionth of a minute. He is well aware that any "mukhatob" does not feel dark when he closes his eyes. Alisher Navoi skillfully used this well-known situation in the "mukhatob" to fully achieve his goal.

Based on the "mukhatob" case, the correct and error-free construction of the sentence in accordance with its case is carried out on the basis of the "meaningful" rules. One of the main sections of the "science of balogat" is the "message" in the "meaning" - "essay", "musnad" - "musnadun ilayh", "enlightenment" - "nakra", "presentation" - "tahir", "zikr" - Rules such as "hazf", "vasl" - "fasl", "iyjaz" - "itnob" - "musavat" are necessary factors for this state of



"mukhatob". The main object of "meaningful knowledge" ("maoniy") is that the "mutakallim" conveys its purpose to the "mukhatob" in full compliance with the formal (formal, structural) rules of the text.

Also, the rules of the "statement" (bayon) section, such as "tashbeh", "istiora", "kinoya", "majoz" in the debate between "truth and metaphor" are aimed at serving the same purpose of "mutakallim". In a text that is fully based on the rules of "fasohat" and follows all the rules of language in the construction of words, sentences and phrases, the meaning and purpose of "mutakallim" is conveyed to the "mukhatob" through the rules of "narrative science" (bayon ilmi).

Eloquent (fasohat) speech is a means of expressing the purpose of the "mutakallim" and thus corresponds to the state of "mukhatob." The purpose of "mutakallim" and the state of "mukhatob" are two completely different phenomena that are different from each other. It is natural that the goals of the opposing parties, who want to annex, convey their purpose to the other party, and the desire to obtain the information necessary for their situation, are often different from each other. The "mukhatob" and his condition, as well as the "mutakallim" and the need arising from the "mukhatob" in the expression of the purpose, are directly proportional to each other. Consistency is the basis for creating a new phenomenon by combining the same negative and positive events into one point. In the "fish talk" (balig'gap) he creates a combination of non-interests that serve the separate independent purposes of "mutakallim" and "mukhotob". This "union of opposites" ensures that the "eloquent speech" is a complete "fish."

The absence of these "contradictions" in the speech or the fact that it does not take the form of an "alliance" (ittifoq) that serves the common good of "mutakallim" and "mukhotob", hinders "balagat". It is for this reason that scientists have said that any fish will be eloquent, but not every eloquent speech will be eloquent. "Fasohat" is a peculiar and primitive form of "balagat". The lack of "balagat" in it means that it is free from the "union of opposites" that arises between the above "mukhotob" and the "mutakallim" "muktaza" and turns non-interests into the common good.

The "union of contradictions" inherent in any creature in existence, as in all other phenomena, is the basic expression in the "science of balagat", the basic concept, the main factor that constitutes the essence of this science. Conflict and alliance serve as the driving force for the systematic evolution of things.

Scientists have identified its highest and lowest points in determining the subject of "science of balagat". The highest point ("excellent") is, according to the union of all scholars, the "status of permission." "I'joz" (إعجاز) is the root cause of the "science of balagat". Although "I'joz" is defined in the dictionary as "something beyond human power," it is in fact "something that makes humanity incapable of creating an image like it". The science of puberty examines the extent to which a sentence is appropriate to a particular situation. At the same time, it is a characteristic of humanity to be inconsistent with the totality of all the "mukhotob". It is beyond the power of humanity to create a eloquent speech (or text) that is equally relevant to all times and all spaces and to each of the ever-changing states of all the "mukhotob" in them. With this in mind, scholars have stated that the status of "I'jaz" is not included in the subject of "science of balagat".

According to Jalaliddin Qazvini, the level of "excellent" includes "status of i'jaz" and "below it". This is the highest status that humanity is capable of. It is necessary for every "mutakallim" to strive as much as possible to bring his speech (text, work) to this status.

The lowest level of "balagat" is "adno" (or "asphal"), which is higher than the sound level of animals. If immorality is found in it (if it serves a certain purpose), then it is the subject of "balagat". But the sound of animals is not part of the "science of balagat",

The levels that make up the subject of "science of balagat" can be expressed as follows:

TABLE 1

•		1.	Status of "i'jaz"	tanzil
BALAGAT	excellent	2.	The status below the "i'joz"	the creation of mankind
	the lowest	1.	higher status than animal sounds	
•		2.	animal sounds	physical sounds

It is acknowledged that there are a number of other levels below the "i'jaz" and above the animal voice.

The "balagat of the mutakallim" is the ability and ability to express eloquent words in the form of "muktaza" ("fish").

From the "science of balagat", " is meant to be free from any flaws in the expression of the goal in eloquent words in accordance with the state of "mukhatob". In this case, the semantic-structural rules, such as the sentence structure of the "defect", the expression of the parts of speech, the location, the use of words, are in the "science of meaning"(maoniy ilmi); the avoidance of spiritual errors and omissions in speech and the expression of meaning in other parallel ways are studied through the rules of "narrative science(bayon ilmi)." In addition to the rules of "meaning" (maoniy)and "statement"(bayon), the aesthetic and emotional impact on the meaning and word - the attraction - is studied through the "science of art."

The basis for the study of "balagat" is almost all the sciences currently studied in the field of philology. However, these disciplines may not be sufficient in the study of textual maturity.

The origin and development of "science of balagat" is based primarily on the Islamic sciences, and this process continues to this day. Most of the scholars and researchers who have studied the "science of balagat" have studied this science mainly as an Islamic science that helps to understand the meanings of the Qur'an and the hadith. Those who have studied it from the point of view of philology, on the other hand, have observed that this science is often viewed only in terms of the poetic arts. This view may cover a certain part of the sciences of 'badi' and 'bayan', but in this case the 'science of meaning', which is fundamental in understanding the essence of the "science of balagat", is ignored. Without the rules of "science of meaning", it will be impossible to have a complete picture of this science.

Another group of scholars who have studied this science in terms of philological sciences argue that "balagat" is largely consistent with the linguistic sciences. They try to justify this idea on the basis of the rules of "eloquence" and "science of meaning". A number of linguistic disciplines, such as phonetics-phonology, lexicology, grammar, syntax, morphology, emphasize the formation of formal-structural aspects of "balagat". There is no denying that these disciplines are included in the structure of "balagat". At the same time, it is also true that these sciences cannot study the maturity of the text on its own.

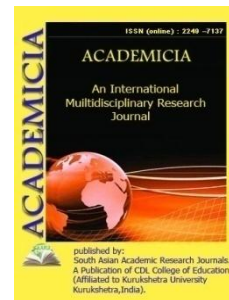
In our opinion, the complex study of the rules of "balagat" and its application to the poetic text is a phenomenon that occurs in the generalization of several disciplines. Dozens of rules and laws, which are sometimes studied in a number of disciplines, are relied upon in order to make a sentence perfect in terms of "eloquence" and to express the purpose in the most extreme way. The neglect of any of these aspects, as Mutakallim implies, is a serious obstacle to understanding the maturity of the text.

In short, "balagat" consists of a set of rules that formally and spiritually cover the text, the words, phrases and combinations in it.

In expressing its purpose, Mutakallim first of all pays attention to the full observance of the rules of language in the external structure of the text. This issue is mainly based on the rules of "eloquence". Expressing the eloquent sentence in accordance with the state of the "addressee" is the basis of the "science of balagat." This scientific approach makes it possible to cover all meanings of the text.

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## IMPROVING MELIORATIVE CONDITION OF SALTED LANDS ON THE BASIS OF USING LOCAL MINERAL AGRO ORES

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### ABSTRACT

*Field experiment was carried out in order to improve salty lands of the Republic of Karakalpakstan. The aims of the experiment are improving meliorative condition of soil, increasing its productivity, defining influence of organic fertilizers and local agro ores. As a result of investigations it was obvious that when mineral fertilizers were fully used, the amount of chlorine and other salts increased, soil productivity decreased at the end of vegetation. When the amount of mineral fertilizers was shortened to 25% and additionally 10, 20 t/ha organic fertilizers and 1,5-2,0 t/ha celadon green from local agro ores were used, increasing the amount of chlorine and other salts slows down, the amount of nutritious elements in the structure of soil also balances. It was defined that for improving salty lands it is effective using N180P130K90 kg/ha mineral fertilizers, 20 t/ha organic fertilizer, 1,5-2,0 t/ha celadon green in improving soil and increasing cotton productivity.*

**KEYWORDS:** *Saltiness, Productivity, Improving, Mineral, Organic Fertilizers, Local Mineral Agro Ore, Celadon Green, Again Salty, Underground Water, Cotton, Harvest.*

## INTRODUCTION

The main task of agriculture is to increase agricultural production constantly, improve their quality, preservation and processing.

The intensification of agricultural production, as cotton growing, requires increasing productivity based on the effective use of mineral fertilizers. Generally known importance of mineral fertilizers in improving the condition of the soil, and in increasing its fertility and productivity of agricultural crops, is to follow to the optimal norms in applying them to the soil. In addition to the well-known nitrogen, phosphorus and potassium fertilizers, the use of trace elements containing (Fe, Cu, Mn, Mo, B, Zn, Co) fertilizers is of great importance, which enhance plant growth, increase the efficiency of enzymes that contribute to the intensity of photosynthesis, and therefore increase yield, stability of plants to drought, cold and some diseases.

In this, much attention is paid to the problem of developing and using non-traditional fertilizers obtained on the basis of local natural raw materials, which include celadon green, containing up to 15 different trace elements.

## Objects and Methods of Research

The object of research is local mineral agro-ore (celadon green), organic fertilizer, the central soil-climatic zone and cotton. The soils of the experimental plot are medium loamy, the level of groundwater occurrence is 1.5-2.0 m, saline.

The following variants were studied experimentally: variant 1, normal cotton cultivation rates N250, P175, K125 kg / ha, variants 2, 3 and 4 application of celadon green with a rate of 1.0, 1.5 and 2.0 t / ha without mineral fertilizers, variants 5, 6 and 7, norms N185 P130 K90 kg / ha, celadon green 1.0, 1.5 and 2.0 t / ha and organic fertilizers 10 t / ha, variants 8, 9 and 10, norms N185 P130 K90 kg / ha, celadon green 1.0, 1.5 and 2.0 t / ha and organic fertilizer 20 t / ha.

## Results of Research

For the normal growth and development of cotton, the joint application of mineral (reduced rates by 25%), organic fertilizers of 20 t / ha and celadon green at the rate of 1.5-2.0 t / ha is necessary. Cotton yield is the final result of applied agricultural technologies. If cotton is adequately provided with life factors, then indicators of growth, development and productivity will be high. The average cotton yield for 2 years was 16.5-28.5 c / ha. When using mineral fertilizers with the norm N250 P175 K125 kg / ha (option 1), the yield was 24.6 c / ha. The introduction of celadon green in its pure form without organic fertilizers is 16.35-17.5 kg / ha. This is because in the composition of celadon green there are not enough macronutrients necessary for plants, and micronutrients in sufficient quantities.

When celadon green was used without organic fertilizers with a norm of 1.0, 1.5 and 2.0 t / ha, there are not significant differences between the options. With the combined use of celadon green with mineral fertilizers, the annual NPK rate was reduced by 25% i.e. N185 P130 K90 kg / ha and in addition to them organic fertilizer. Cotton productivity in these variants (var. 5-10) was 22.4-28.1 c / ha. When applying organic fertilizers with a norm of 10 t / ha (var. 5, 6, 7), the yield was 22.4-24.7 kg / ha, and with a norm of 20 t / ha (var. 8, 9, 10) - 25, 3-28.1 c / ha, or an additional yield of 2.9-3.8 c / ha. In an average of two years, the harvest of raw cotton in var. 1, where the full norm of mineral fertilizers was applied (N250 P175 K125 kg / ha) was 24.6 c / ha,

and using only celadon green with a norm of 1.0; 1.5 and 2.0 t / ha (var. 2-4) - 16.5-17.5 kg / ha., the decrease in yield compared to option 1 was 7.1-7.8 kg / ha. With the combined use of organic, mineral fertilizers and celadon green, there is an increase in cotton productivity, i.e. on average, they amounted to 22.7-28.5 c / ha.

The content, change and accumulation of the dense residue from spring to autumn are the same as for chlorine ion.

The increase in chlorine ion and dense residue at the end of the vegetation is explained by the fact that the level of groundwater in the territory of irrigated lands is from 1.5 to 2.0 m. Groundwater is the source of salinization of the soil. Therefore, despite annual leaching, secondary salinization of the soil occurs. Due to the annual washing of saline lands, nutrients are simultaneously washed into the deeper layers of the soil.

With an increase in the rate of organic fertilizers to 20 t / ha, and the norms are the same as in variants 5, 6 and 7, the yield was 26.3-28.5 c / ha, i.e. increase in yield compared to variants 5, 6 and 7 - 3.4-3.7 kg / ha, and compared to variant 1, where the full rate of mineral fertilizers was applied (N250 P175 K125 kg / ha) - 1.7- 3.9 kg / ha.

**TABLE 1 THE INFLUENCE OF THE NUTRITIONAL REGIME ON COTTON PRODUCTIVITY, C/HA**

№ var.	2017	2018	Average	Variation, ±		
				From variant 1	From variants 2, 3 and 4	From variants 5, 6 and 7
1	24,1	25,2	24,6	00		
2	17,2	16,5	16,8	-7,8	00	
3	17,0	16,0	16,5	-8,1	00	
4	18,0	17,1	17,5	-7,1	00	
5	22,4	23,1	22,7	-1,9	5,9	00
6	22,9	24,2	23,5	-1,1	7,0	00
7	24,7	25,5	25,1	+0,5	7,6	00
8	25,3	27,3	26,3	1,7	9,5	3,6
9	26,7	27,7	27,2	2,6	10,7	3,7
10	28,1	28,9	28,5	3,9	11,0	3,4

In 2017. md=0,61 c / ha; p=2,26%

In 2018. md=0,57 c / ha; p=2,71%

The combined use of organic fertilizers and local agro-ore significantly improves the reclamation state, agrochemical, agrophysical properties and soil fertility, which improves the nutritional regime of the soil. In these variants, compared with variant 1, where only mineral fertilizer was introduced, the additional yield was 1.7-3.9 c / ha. This is confirmed by the fact that the combined use of mineral, organic (20 t / ha) and local mineral agro-ore is quite acceptable for additional fertilizing cotton. At the same time, organic fertilizers and celadon green have a beneficial effect to improve the reclamation state and soil fertility.

To determine the effect of the applied mineral and organic fertilizers, celadon green on the change in the salt content before the start of the experiment, at the beginning, middle, and at the end of the vegetation, chlorine and a dense residue were determined in the arable horizon.



From the data of table 2 it can be seen that prior to laying the experiment, the content of chlorine ion varied within 0.032-0.039%, this is acceptable for obtaining full-fledged seedlings of cotton. The content of chlorine ion increases by the end of the vegetation. The accumulation of chlorine ion from spring to autumn amounted to 0.005-0.019%. The greatest accumulation of chlorine ion during the growing season is observed in variants 1 and 3 (0.019-0.011). In other variants, where mineral and organic fertilizers used together with celadon green, the accumulation of chlorine ion at the end of the vegetation was less compared to variants 1 and 3, and amounted to 0.005-0.008%.

**TABLE -2 CHANGE IN THE CONTENT OF WATER-SOLUBLE SALTS, % IN THE LAYER 0-30 CM**

Variants	Prior to laying the experiment		At the beginning of the vegetation		In the middle of the vegetation		At the end of the vegetation		Accumulation from spring to autumn	
	Cl	Dry residue	Cl	Dry residue	Cl		Cl	Dry residue	Cl	Dry residue
1	0,036	0,640	0,039	0,700	0,046	0,730	0,058	0,760	+0,019	+0,120
2	0,038	0,640	0,040	0,700	0,40	0,720	0,046	0,740	+0,006	+0,100
3	0,038	0,660	0,039	0,680	0,040	0,710	0,050	0,740	+0,011	+0,080
4	0,039	0,640	0,040	0,660	0,042	0,690	0,046	0,720	+0,006	+0,080
5	0,036	0,630	0,039	0,640	0,042	0,680	0,046	0,690	+0,007	+0,060
6	0,037	0,680	0,040	0,700	0,043	0,720	0,045	0,720	+0,005	+0,040
7	0,036	0,690	0,040	0,720	0,043	0,740	0,046	0,740	+0,006	+0,050
8	0,036	0,660	0,039	0,680	0,042	0,700	0,046	0,710	+0,007	+0,050
9	0,038	0,680	0,039	0,700	0,040	0,720	0,046	0,710	+0,007	+0,030
10	0,037	0,660	0,038	0,700	0,040	0,710	0,046	0,720	+0,008	+0,060

With the combined use of organic, mineral fertilizers and celadon green, it improves the nutritional regime of the soil, celadon green and organic fertilizer improves water-physical and agrochemical properties, and increases soil fertility. In addition, they prevent negative influence of harmful salts on plants.

The use of celadon green together with mineral fertilizers to some extent prevents the accumulation of water-soluble salts in the soil.

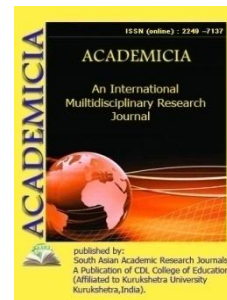
## CONCLUSIONS

Due to the close occurrence of groundwater, the irrigated lands of Karakalpakstan annually undergo secondary salinization. Annual reclamation measures are required. The research results proved that with the combined use of mineral, organic fertilizers and local mineral agro-ore, it is possible to improve the reclamation state of irrigated lands, increase soil fertility and cotton productivity.

For the additional fertilizing of cotton, the combined use of mineral (N180 P130 K90 kg / ha), organic (20 / ha) fertilizers and glauconite (1.5-2.0 t / ha) is recommended.

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## ACHIEVEMENTS OF UZBEKISTAN IN THE FIGHT AGAINST THE CORONAVIRUS PANDEMY, PROBLEMS AND SOLUTIONS

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### ABSTRACT

*In this article, the regulatory documents adopted by the government to prevent the spread of the Covid-19 pandemic in the Republic of Uzbekistan, the ongoing reforms are described in detail. At the same time, the practical measures taken to combat the disease during the Covid-19 pandemic in the country, the achievements, the existing problems in the field, the role of the media in overcoming them are described.*

**KEYWORDS:** Globalization, Covid-19, Pandemic, Prevention, Anti-Crisis Fund, Sanitary-Epidemiological Service Media, Social Networks.

### INTRODUCTION

In the context of globalization, the spread of Covid-19 infection, its prevention and control is considered to be one of the main challenges facing the world. The Covid-19 infection, first reported in China in December 2019, quickly spread to large areas and endangered the lives of millions of people. March 11 was declared a pandemic by the World Health Organization. Because of this pandemic, the number of people infected with the virus is growing rapidly in many countries around the world, which is a serious concern for all humankind [1]. The spread of the Covid-19 pandemic has created economic and social problems in all countries of the world, and their solution remains relevant.

Today, all countries of the world, including international and regional organizations, are taking practical measures to combat the Covid-19 pandemic in the framework of international cooperation. The spread of Covid-19 infection has not bypassed the Republic of Uzbekistan. In the prevention of Covid-19 infection, which has not yet reached the level of a pandemic, our government has raised the level of prevention, control and implementation of preventive

measures to the level of state policy. A number of regulations have been adopted to combat the pandemic. In particular, the Decree of the President of the Republic of Uzbekistan dated January 29, 2020 F-5537 "On the establishment of the Republican Special Commission to prepare a program of measures to prevent the entry and spread of a new type of coronavirus in the Republic of Uzbekistan" and Decree PF-5969 "On priority measures to mitigate the negative impact of the coronavirus pandemic and the global crisis on sectors of the economy" are signed. In addition, Medical and Sanitary-Epidemiological Service of the President of the Republic of Uzbekistan dated March 26, 2020 No. PP-4649 "On additional measures to prevent the spread of coronavirus infection in the Republic of Uzbekistan", March 26, 2020 "On additional measures to prevent the spread of coronavirus infection in the Republic of Uzbekistan" Resolution PQ-4652 "On additional measures to support employees", also Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated March 23, 2020 No 176 "On additional measures against the spread of coronavirus infection" [2] were signed. On the basis of these regulations, the prevention of economic crises in the country, state support of economically disadvantaged entities, continuous analysis and monitoring of the epidemiological situation in the country, disease prevention, diagnostics, antiviral drugs and personal protection of health facilities and the population. Effective measures for timely diagnosis and comprehensive prevention of Covid-19 disease in the country have been organized on the basis of the study of advanced foreign experience, providing the necessary amount of equipment in a timely manner.

Fighting the Crisis under the Ministry of Finance of the Republic of Uzbekistan in order to combat pandemics and other global threats in order to ensure macroeconomic stability, uninterrupted operation of industries and sectors of the economy, stimulate foreign economic activity, effective social support, prevent sharp declines in incomes fund was established. The fund will support businesses, manufacturing enterprises, banks and other entities in the country, provide medical and other institutions with the necessary drugs and medical supplies, protective equipment and test systems to combat the spread of Covid-19 infection, financial incentives for health workers involved in the fight against the spread of coronavirus infection, additional funding for the implementation of protective measures by the Republican Sanitary and Epidemiological Service, reimbursement of costs associated with quarantine of persons at risk or in contact with infected people, detection of infectious diseases. A total of 6.5 trillion soums have been allocated from the Fund for Prevention and Treatment to address the above mentioned problems caused by the pandemic. In particular, 1 trillion soums were spent on measures to combat Covid-19. These were spent directly on the care of quarantined citizens and patients treated in hospitals, as well as on the costs associated with the purchase of medical equipment. 2.5 trillion UZS spent on construction and reconstruction will help stabilize the economy by stimulating demand in the country. In addition, a total of 640 billion soums will be allocated for social protection measures were spent. These funds were used to provide financial assistance to those in need of social protection, as well as to subsidize part of the cost of planting crops on their lands, to help unemployed people earn money by involving them in temporary public works, to support low-income women. These costs will help provide financial support to the population during a pandemic. These costs will help to provide financial support to the population during a pandemic. At the same time, 2.3 trillion soums were allocated to support sectors of the economy, which were used to cover the basic salaries of employees of large industrial and service enterprises during the pandemic [3].

By the beginning of August 2020, the number of coronavirus treatment beds had increased 3.5-fold in the last 20 days to nearly 65,000. In addition, about 800 ambulances were delivered. An additional 4,000 respirators (OSVs, portable ventilators, oxygen concentrators) were delivered, bringing the total to 6,500[4].

In the context of the pandemic in our country, the government is actively pursuing an active policy to protect the health of the population and their economic and social support, the establishment of an effective system to combat the pandemic is widely covered through the media and social networks. In particular, shows, broadcasts and video materials related to pandemic control problems and their solutions are distributed by local state authorities and responsible organizations through local media and social networks. Nowadays, when we observe the activities of the media in Uzbekistan, during the pandemic period, there is a growing trend in the activities of Uzbek journalism in terms of transparency, disclosure of existing problems, their analysis and solution. A clear example of this is the words of President Sh. Mirziyoyev: "Our work to liberalize all spheres of life, to establish the principles of freedom of speech and press, openness and transparency, to establish effective public control over the activities of public authorities has become irreversible. I want to emphasize once again" [5].

In the past, one of the most "painful" problems in our society, such as corruption and the irresponsibility of officials, was rarely covered and addressed in the media. For example, at the 6th plenary session of the Senate of the OliyMajlis of the Republic of Uzbekistan in August 2020, the Chairman of the Senate T.Norbaeva reported corruption cases related to the funds allocated for the fight against coronavirus, in particular, in Andijan, Bukhara, Kashkadarya, Navoi and Namangan regions. In total, more than 1 billion 750 million soums of the fund were looted and it is necessary to pay serious attention to this issue [6].

The population is dissatisfied with the work of medical staff in the pandemic, and there are reports through foreign media and social networks. In particular, the staff of the medical institution in Termez district of Surkhandarya region said, "We, the doctors and nurses, feel sorry for ourselves!" In a video message titled, "Termez district medical institution is in a difficult situation and the hygiene products distributed to medical staff are of poor quality and insufficient. This information was discussed on Facebook by 450 citizens, who noted the urgency of the problems in the medical system and the lack of attention paid by the Ministry of Health and local authorities to the shortcomings in solving problems [7]. On August 18, 2020, a video message was posted on social media demanding the resignation of the Minister of Health, GulnoraAkbarova, a doctor who had been working as an infectious disease specialist at the Yangiyul Infectious Diseases Hospital for 33 years. According to the report, on August 19, 2020, Deputy Minister of Health UlugbekSobirov visited Yangiyul to get acquainted with the situation and said: "The hospital depicted in the video is in a really bad condition. The reason is that it was built in 1972 and has not been repaired for a long time. Because a new hospital with all conditions has been built in Yangiyul. For various reasons, doctors did not start their work at the new hospital, and patients were not relocated there. We went to the place and carried out explanatory work, re-introduced the new hospital to the chief doctor and the head of the department, showed the possibilities. It can be said that the staff of the new infectious diseases hospital, which created the necessary conditions, was pleased. The relocation process has begun. Shortcomings in the supply of medicines were also investigated and the necessary medicines were delivered, "He said in an interview with Kun.uz[8]. In the pages in social networks of

Radio “Liberty”, people has strongly criticized the irresponsibility of health care leaders. On August 30, 2020, J. Mustafiev reported to Radio “Liberty” that his father had been hospitalized with pneumonia but had been left untreated by doctors [8]. As a result of discussions on the appeal on Facebook, it was stated that there are problems in the medical system in Uzbekistan, but there are honest and effective employees in the system [10].

We have touched upon the events taking place in our society during the current pandemic, some of the existing problems. Such negative cases occur in almost all regions of the country. For solving the problems that face to the one of the main areas which is the healthcare system of our society, first of all, it is necessary to radically improve the material conditions of employees working in the health care system (currently being reformed by President Sh. Mirziyoyev), to increase the number of young staff and provide them with social support, to restrict the professional activities of corrupt managers and employees, and establish public control over the funds allocated to the system. It will serve to prevent the above-mentioned negative developments while ensuring accountability to public organizations through the media.

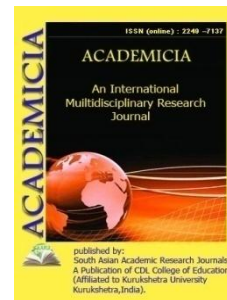
In conclusion, the problems caused by the irresponsibility of some medical leaders at a time when the media representing different interests and views in the world today are effectively working in the fight against the Covid-19 pandemic in our country, some "impartial and fair" foreign media. There are also cases of attempts by the media to disseminate messages aimed at preventing the country's ongoing reforms in the field. This could negatively affect Uzbekistan's growing positive image in the international community. Therefore, the leaders of the health care system should objectively study the problems on the ground, solve them in a timely manner, organize quality preventive measures, and the ongoing medical activities in the media, in particular, the information services of the Ministry of Health and its regional departments analyze various appeals and speeches, resolve them legally, and provide a full legal response to these appeals. Only then will citizens have confidence in the protection of their rights and freedoms by government agencies and officials. The role of the media as a mirror of society is invaluable. Because the media is an institution that reveals, analyzes, solves problems, and reflects public opinion in society.

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## DEVELOPMENT OF PHYSICAL QUALITIES IN VOLLEYBALL PLAYERS ON THE BASIS OF DIFFERENTIAL METHODS

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### ABSTRACT

*The article describes the development of physical qualities in volleyball players on the basis of differential methods, the effective use of such qualities in the training plan as speed, agility, strength, agility, flexibility. During training, athletes are required to have maximum speed, agility, alertness, quick thinking, quick understanding of the situation on the field and the ability to respond "useful" in tight conditions. The article is intended for coaches and practitioners of volleyball.*

**KEYWORDS:** *Differential Methods, Static Exercises, Physical Qualities, Training, Physical Training, Special Training, Volleyball.*

### INTRODUCTION

Modern volleyball, with its essence, content and technical-tactical combinations, which are performed at an extremely high speed, require great physical ability and functional training. Physical and functional training, in turn, are of fundamental importance for the effective formation of sports skills.

It is known that volleyball is one of the most popular sports in our country. At the same time, the problem of training competitive volleyball players in accordance with international standards in all sports schools is still a problem.

For many years, the local community has been indifferent to the issues of children's sports, including the role of volleyball, the development of talented young volleyball players, the creation of all-round conditions for them, training of coaches and training of young professionals.

1st President of the Republic of Uzbekistan I. A. Karimov's Decree of October 24, 2002 "On the Establishment of the Fund for the Development of Children's Sports in Uzbekistan" and the Government Resolution on its implementation defined the "today" and "tomorrow" prospects of this issue and laid a fundamental foundation for legal and material support.

Indeed, in recent years, the country has made great strides in the development of children's sports, the preparation of young talented sports reserves, a lot of creative work, regular sports and all the conditions for local and national competitions in accordance with official rules.

The next issue is to implement the final goals set by the requirements of this Decree and Resolution, both now and in the near future. It is known that the main strategic problem in this area is to create a scientific and methodological basis for the training of young, competitive athletes. However, this process is one of the most complex, comprehensive and multifaceted problems in terms of its organizational and technological aspects, and requires the organization of the principles of step-by-step and coherence.

Some differential physical methods, which are directly related to the formation of sports skills at the initial stage of training young volleyball players, are aimed at studying the effectiveness of non-standard game exercises in developing qualities (speed, agility, strength, agility, jumping). Of course, a lot of scientific-theoretical considerations and information on pedagogical research in this area have been published in many scientific literatures (L.V. Byleeva, I.M. Korotkov 1982; I.M. Korotkov 1971, 1979, 1991; A.I. , Lisitsina, TS Usmonkhjaev, 1989; M.N. Zhukov 2002; M.A. Kurbanova 2003 The methodology of development of physical qualities, which is the basis of sportsmanship in sports practice, including in the initial stage of training of athletes, often prefers the use of general or special exercises It is obvious that. However, forcing such exercises can lead to certain negative consequences.

Physical training is a type of training aimed at developing the body of a volleyball player, improving his physical qualities and abilities, as well as creating a solid foundation for the effective implementation of the game.

### **Steps of development of physical attitudes in volleyball players on the basis of differential methodologies**

Modern volleyball is a type of sport that requires a great deal of strength, speed, agility, endurance and flexibility from the participants. It takes a great deal of physical strength, agility, endurance, and mental harmony for a volleyball player to perform many obstacles, kicks, and jumps, falls, runs, stops, turns, bends, and other movements at high speeds during each game.

Today's volleyball player should be 185-195 cm tall, mobile, fast, jumping, smart, intelligent, quick-thinking, sharp-witted, able to quickly understand the situation on the field and give a "useful" answer. Therefore, the content, scope and intensity of physical training varies depending on the age, training, qualifications of athletes, as well as the period and tasks of sports training.

The tasks of physical training are:

1. Health promotion.
2. Life - improving the necessary movement skills (walking, running, jumping).

3. Development of movement qualities.
4. Increase the range of movement skills and expand the scope of their implementation.
5. Formation of the functions of the organs, divisions and muscle groups of the body involved in the game.
6. Development of special qualities that ensure the effective acquisition of game skills.

Physical training is divided into two types: general and special physical training.

**General physical training** One of the important tasks of sports training is to ensure the full physical development and comprehensive physical training of trainees. UJT is a process aimed at improving vital motor skills and developing basic physical qualities. The goal is to create a database of NGOs, which is the basis of NGOs.

Its tasks are to develop basic physical qualities, increase the functional capacity of the body, expand the scope and performance limits of motor skills, strengthen health, increase the body's resistance to external and internal negative influences.

Common physical qualities include strength, speed, agility, endurance, and flexibility.

UJT is a specific exercise that develops physical qualities individually or together.

In the process of UJT, it is advisable to use a variety of sports equipment, simulators and natural factors.

At some stages and periods of sports training, UJT exercises and trainings differ in size, intensity, direction and structure.

Special physical training is a process aimed at developing the physical qualities that are fundamental and crucial in this sport in order to achieve high results in the chosen sport.

Functions:

- Development of special movement qualities and abilities (speed, strength, agility, special endurance, etc.) in volleyball.
- Development of skills required for mastering game techniques.
- Development of skills needed to master the tactics of the game.

At all stages and periods of MJT sports training, volume and intensity are used in a reasonable manner (L.R. Hayrapetyants, 2006).

The state educational standards for physical education for general secondary education define the requirements for the quality, education and content of the educational process: the necessary adequate level of training of students, activities in educational institutions and procedures and mechanisms for assessing the quality of physical education and training.

In the context of the Law on Education and the National Training Program, each educational institution is obliged to develop the physical capacity of students to maintain and strengthen their health, to form the basis of physical culture, and even to create conditions that guarantee it.

The course "Physical Education and Training" in general secondary education consists of:

1. Physical education classes.

2. Extracurricular forms of movement activities: pre-class gymnastics, physical minutes, dynamic pauses during extended breaks, games.

3. Extracurricular forms of physical training: sports sections, electives, sports competitions, etc.

The physical education curriculum includes sports materials (volleyball, basketball, handball and individual football).

The exercises, technical and tactical methods required to teach volleyball program materials, as well as the theoretical and practical rules of the game are included. Therefore, it is advisable to organize volleyball clubs in secondary schools.

Training of young athletes is a complex multi-stage pedagogical process that requires the organization of training on a scientific basis.

It is important that the volume and intensity of physical and technical-tactical exercises used in the lessons are planned and applied in accordance with the age, physical and functional capabilities of the children involved. The volume, intensity, return, and duration of this exercise should be based on biological laws. If the exercise load is too high for the child, such a load can have a negative effect on the child's body. Conversely, if the load is less than the capacity, the formation process will inevitably slow down.

Some coaches use special and specialized exercises in order to accelerate the development of physical qualities in a short period of time, to train more qualified athletes. In sports practice, there are cases when regular exercise, similar to each other, extinguishes the interest of a child who has just started to play sports, in which he loses his devotion to sports, and eventually he stops playing sports.

Therefore, in the training of young athletes, especially in the early stages of training, the use of movement games is very useful and important for the development of physical qualities, the formation of technical and tactical skills.

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## LAND MAPPING AND ITS CHANGE DETECTION ANALYSIS IN CHITRADURGA TALUK OF KARNATAKA STATE, INDIA USING GEOSPATIAL TECHNOLOGY

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### ABSTRACT

*Land is one of the non-renewable resources and mapping of Land Use/ Land Cover (LU/LC) is essential for planning and development of land, water resources of a region with suitable technology. There is a significant change in LC/LU across the globe due to the climatic changes, rapid increase in population and over demand of the growing economic resources. The present aim is to detect the changes in LU/LC patterns and its aerial extent due to different socio-economic factors in the study area. Efforts have been made to evaluate the LU/LC patterns using SoI topomap (1:50,000) with limited field visits; geo-coded FCC of IRS-1D, PAN+LISS-III multispectral, multi-temporal satellite images. Spatial, spectral and temporal analysis type of approach has greater importance in mapping of specific LU/LC patterns and its change detection over time and coverage areas calculated using ArcGIS v10. Supervised classification using Maximum Likelihood Classifier (MLC) is applied to prepare LULC maps using NRSC guidelines (1995) through GIS software's. Different classes of vegetation activities affect the surface flow of run-off water leading to maximize infiltration. The final results highlight the capability of geospatial techniques to bring out the real changes observed in LU/LC patterns and provide meaningful information in proper planning and developmental strategies for land sustainability.*



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**KEYWORDS:** *Land Use/Land Cover; Change Detection: Chitradurga; Geospatial Technology.*

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## I. INTRODUCTION

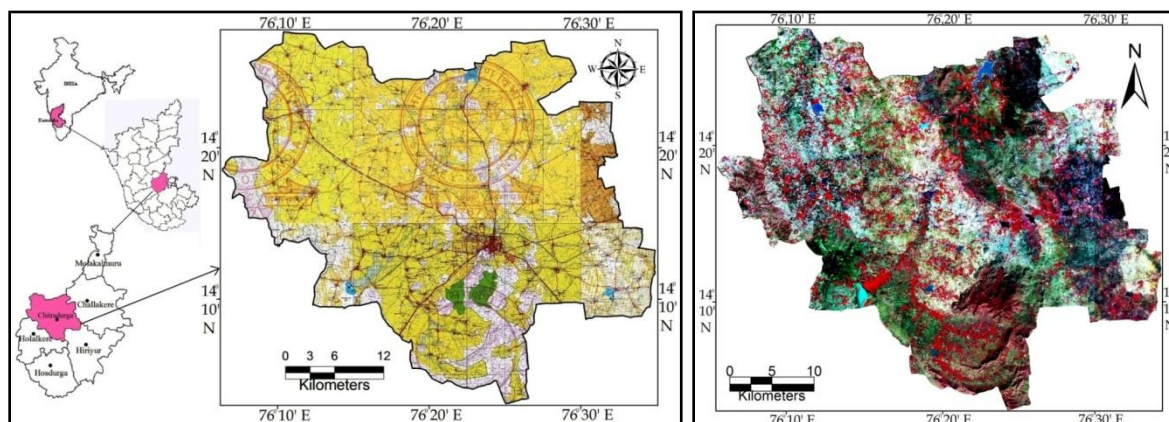
LU/LC changes on the surface of the earth are generally divided into land use and land cover which are two concepts (Barnsley et al., 2001) and are often used interchangeably (Dimiyati et al., 1996). Over the last few decades various techniques of LU/LC mapping and change detection have been developed and applied all over the globe (Zhang et al., 2014). Land becoming a scarce resource due to immense agricultural and demographic pressure; but at current strategies, the natural resources can be managed and monitored for environmental changes (Pushpavathi., 2009) to initiate & increase the land productivity, restoration of soil degradation, reclamation of wastelands, increases in environmental qualities and to meet the needs of rapidly growing population of the country (Basavarajappa and Dinakar., 2005; Manjunatha et al., 2015a). In view of pressure exerted by increasing population, need for mitigating increasing demands of land resources, appropriate scientific land use planning and land management strategies could provide the alternative for sustainable development including forest cover (Sexena et al., 1993). Improper management of LU/LC may affect immensely on geo-environmental and natural ecosystems such as biodiversity, water resources and radiation budget (Yang et al., 2017). Information on change in resources, classes, area covered and patterns of land use/land cover are essential for future planning (Palaniyandi et al., 1997). The importance of investigating LULC and their impacts as a baseline requirement for food security, land sustainability, biodiversity and socio-economic vulnerability of people & ecosystems and management of natural resources (Basavarajappa et al, 2014b; Lambin et al., 2000). The potential of satellite based data as a basis for generating valuable information for LU/LC is by now widely recognized (Lambin et al., 2003; Yuan et al., 2005), although initial efforts was made since mid seventies for application of different interpretation techniques in LU/LC mapping (Anderson, 1976; Colwell, 1983). Geospatial technology and its applications provide better results on land resource management, monitoring, mapping and change detection at varying spatial ranges (Singh et al., 2010) in monitoring of ecosystems, biodiversity, water, predictive land use implementation strategies and climate change variability. In present era, satellite based Remote Sensing (RS) technology revealing its immense value in preparation of LU/LC maps through synoptic view and monitoring at regular periodic intervals of time (Kumar et al., 2004; NWDB., 1987) for proper utilization of land for agriculture, forestry, pasture, urban-industrial, environmental studies, economic production etc. This needs land use inventory surveys periodically, to make available the information on the type, spatial distribution, location, aerial extent, rate and pattern of change of each category of LU/LC patterns.

## II. MATERIALS AND METHODS

### *i. Study Area*

It lies in between 14°03'7" to 14°27'10" N latitude and 76°06'22" to 76°34'53" E longitude with an aerial extent of 1383 km<sup>2</sup> (Fig.1). Physiographically, it is a dry and thirsty land with broken hills ranges and huge undulating plains with general elevation of 732 m (Ibrahim-bathis and Ahmed, 2014). The study area experiences a hot, seasonally dry, tropical savannah climate which receives low to moderate rainfall. The quality of vegetation is poor because of poor rains. However, small grooves of the trees are to be seen in rural villages. The average annual rainfall in the district is 574 mm (1980-2010) recorded from last three decades. The average annual

rainfall is 355.6 mm (2011). The maximum temperature recorded is  $37^{\circ}\text{C}$ , while minimum is  $15^{\circ}\text{C}$ ; may falls up to  $12^{\circ}\text{C}$  during winter season (Nov-Jan). SW monsoon (June-Sep) contributes major portion of rainfall about 194.56 mm (CGWB, 2013).



**Fig.1. (a) Topomaps Location and (b) LISS-III Satellite Image of Chitradurga taluk**

## II. METHODOLOGY

Topomaps of 1:50,000 scale from Survey of India (SoI, Bengaluru) (Fig.1) have been acquired as a base map, geo-rectified and digitized each individual LU/LC themes as layers such as agricultural land, built-up land, forest cover, wastelands, water bodies, others using ArcGIS v10 software. Indian Remote Sensing (IRS)-1C/1D, PAN+LISS-III imageries of 2001 & 2005 was acquired (NRSC, Hyderabad) and Supervised Classification analyses have been carried out to extract desired meaningful information to observe recent changes occurred in the study area. Survey of India (SoI) topomaps of 1:50,000 scale are utilized for registration of satellite data, selection of Ground Control Points (GCP) and locating training sets on the satellite image. LU/LC maps are prepared using satellite image in conjunction with collateral data like SoI topomaps on 1:50,000 scale by considering permanent features such as temples, major roads (NH/SH), drainages, power-lines, railways, settlements, co-ordinates, forests and village boundaries (Manjunatha et al, 2015a). A field survey was conducted for ground verification of doubtful areas with the help of GPS and local guides in different parts of remote villages and hilly terrains covering all the LULC classes. Due to mountainous topography, rough terrain and steep slopes, few areas were not accessible.

## III. MATERIALS:

**a. Topomaps:** 57B/3, 4, 7, 8, 11, 12 of updated edition of the year 2009/10 (SoI), (Fig.1).

*Source:* Survey of India (SoI) of 1:50,000 scale, Bengaluru.

**b. IRS Satellite Data:** IRS-1D/P6, PAN+LISS-III of 5.8m Resolution (D43K03; 04; 07; 08; 11; 12) [Year of Pass: 2000-01 & 2005-06] (Fig.2).

*Source:* Bhuvan-portal, ISRO-NRSA, Hyderabad.

**c. Software's:** Erdas Imagine v2013 and Arc GIS v10.

**d. GPS:** Garmin eTrex-10 of 3m error handheld GPS is used to check the conditions of land use/land cover patterns during limited field survey.

**v. Supervised classification**

Supervised classification analyses are carried out on multispectral, multi-temporal IRS-1D, PAN+LISS-III FCC [Year of Pass: 2000-01 (Feb) & 2005-06 (Nov)] with medium scale through ArcGIS v10 (Fig.9; 10; 11). The LU/LC patterns are digitized based on the standard schemes developed by National Remote Sensing Agency (NRSA, 1995; 2007). Maximum Likelihood Classification (MLC) scheme is one of the most widely used image classification technique adopted on LISS-III images for mapping all the land use/cover classes. Before the selection of training samples, empirical analysis of satellite imagery and specific features on the toposheets are investigated carefully. For most of the classes, a minimum number of training samples were 100. Selecting training samples for water was tough because of the dense canopy of forests along with the river channel and lack of water in the river channels since the acquisition date of imagery was in mid-November and at that time most of the rivers in the mountains carry less water as compared to the monsoon season. Different LU/LC patterns are delineated based on the key elements of image characteristics like tone, texture, shape, shadow, pattern, association, background etc. Changes in land surface conditions can affect the volume, timings and quality of run-off water.

**TABLE.1: DESCRIPTION OF DIFFERENT LULC CATEGORIES**

Sl. No	LULC category	Classes included-general description
1.	Agricultural land	Agricultural plantations, crop lands, Vine on trellis, Palms, palmyra, conifer & bamboo plantation, Wooded/ cultivated areas, surveyed trees
2.	Built-up land	Towns, villages, buildings, huts, temples, church, Mosque, Idgah, Tomb, graves, Post-office, Power lines, metalled & unmetalled roads, bridges
3.	Forest land	Reserved & protected forest, scrub forest, deciduous forest
4.	Water bodies	Streams, canal, tidal river, swamp, springs, tanks, perennial dry
5.	Waste/ vacant lands	Barren rocky, land with/ without scrub, Mining/ industrial wastelands, Salt affected area
6.	Others	Shifting cultivation, Sand deposits

**III. RESULTS AND ANALYSIS****i. Land study**

Land use is influenced by economic, cultural, political, historical and land-tenure factors at multiple scales. Land use referred to as man's activities and the various uses which are carried on Land. Land cover, on the other hand are the biophysical attributes of the land that affect how ecosystem functions (Turner et al., 1995). Land cover is referred to natural vegetation, water bodies, rock/soil, wastelands, sand/ snow cover results due to land transformation and both LU/LC are closely related & interchangeable (Manjunatha et al., 2015a). In the past few decades there is change in land use due to illegal mining activities, immense agricultural practices, encroachment of forest cover, construction of mega & mini check-dams, industrialization, urbanization, biogeophysical characteristics which need mapping to avoid deforestation and

biodiversity loss (Basavarajappa and Manjunatha., 2015). Viewing the Earth from space is now crucial to understand the influence of man's activities on his natural resources over time due to mining, industrialization and urbanization. Geospatial technique is one of the advent high-tech tools in analyzing the causes, rates, magnitude, patterns, trends in landscape changes at local scales. These inputs forms the primary basis for studies on regional climatic variations, accounting changes in deforestation/ degradation, forest encroachment, evapo-transpiration and regional ecosystem mapping and monitoring.

**i.a. Agricultural land:** These are primarily used as farming & production of commercial and horticultural crops. It consists of cropland, plantations, fallow land, current shifting cultivation, irrigated & un-irrigated land and plantations (Basavarajappa et al., 2014b) (Fig.4). The prevailing cropping patterns reflect physiography, climate and resources availability. Pixel reflection varies from light red to bright red and green in color. Area under this category follows regular shape with scattered to continuous pattern.

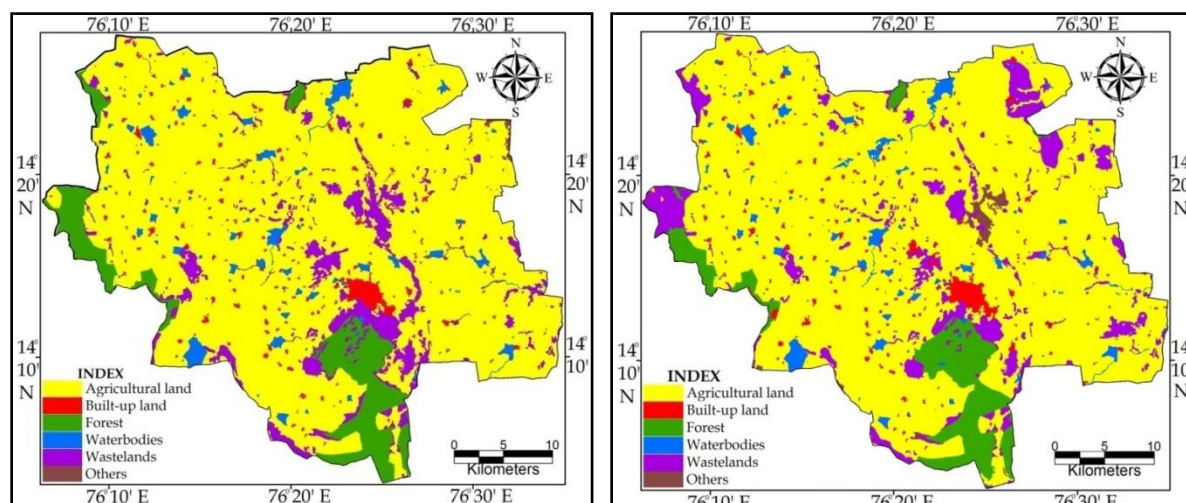
**i.b. Built-up land:** These are the human habitation areas developed due to non-agricultural use including buildings, major towns, villages, transportation networks, communication & recreational utilities in association with water, vegetation, open and underground mining lands (Pandian et al, 2014) (Fig.5). These can be easily identified on FCC image by its bluish to bluish green tone, definite shape, size and texture. The road network is distinguished by their characteristic linear features (Basavarajappa and Dinakar, 2005) having regular pattern and appears in cyan color.

**i.c. Forest:** Forest covers are (within the notified State forest boundary) the lands with tree canopy cover of more than 10 percent and area of more than 0.5 ha (FSI, 2017). It consists of evergreen/semi-evergreen, deciduous, forest plantation, scrub forests, grass/grazing land and other vegetation types capable of producing timber and other forest products (Basavarajappa and Dinakar., 2005) (Fig.6). Satellite data has become useful tool in mapping the different forest types and density classes with reliable accuracy through visual as well as digital techniques (Madhavanunni, 1992; Roy et al., 1990; Sudhakar et al., 1992). Forests exert influence on climate, water regime and provide shelter for wildlife and livestock (FAO, 1963).

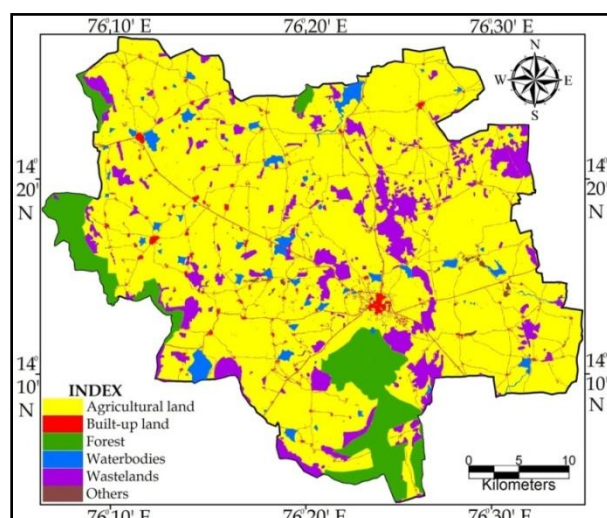
**i.d. Wastelands:** Wastelands are the degraded land/ bare exposed land devoid of vegetation which can be brought under vegetative cover with reasonable efforts (Pandian et al, 2014) (Fig.7). Wastelands can result from inherent/imposed constraints such as by location, environment, chemical and physical properties of the soil/ financial/ management constraints and are currently not productive due to various problems such as soil erosion, salinity, water logging etc (Basavarajappa et al., 2014a). Barren rocky appears in greenish blue and brown in color with varying size and irregular to discontinuous shape.

**i.e. Water bodies:** The water bodies include both impounded as well as the regular flowing water, streams and tanks. It includes manmade ponds/ reservoirs/ lakes/ tanks/ canals, besides natural lakes, rivers/ streams and creeks (Pandian et al., 2014) (Fig.8). It is represented by light blue very dark blue tone depending upon the depth, volume and turbidity of the water bodies (Manjunatha and Basavarajappa., 2015b). Water bodies include those pixels reflecting dark blue to light blue and cyan color in standard FCC.





**Fig.2.** Land Use/Land Cover map of Chitradurga taluk in 2000-01(a) and 2005-06 (b)



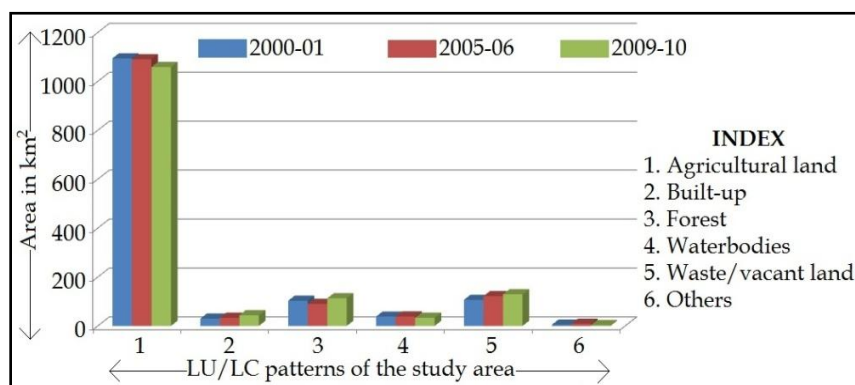
**Fig.3.** LU/LC map of Chitradurga taluk in 2009-10

*i.f. Others:* These are treated as miscellaneous due to their nature of occurrence, physical appearance and other characteristics in the integrated thematic layer such as snow/ glacier cover, sand dunes etc (Basavarajappa and Dinakar., 2005).

**TABLE.2. LU/LC CATEGORIES OF CHITRADURGA TALUK FROM 2000 TO 2010**

Sl No	LU/LC Categories	2000-01 (PAN + LISS-III)	2005-06 (PAN + LISS-III)	2009-2010 (SoI Toposheet)
		Area in km <sup>2</sup>	Area in km <sup>2</sup>	Area in km <sup>2</sup>
1.	Agricultural land	1094.07	1090.61	1058.57
2.	Built-up land	29.66	33.11	43.84
3.	Forest cover	102.98	89.84	112.96
4.	Water bodies	38.08	38.15	33.31

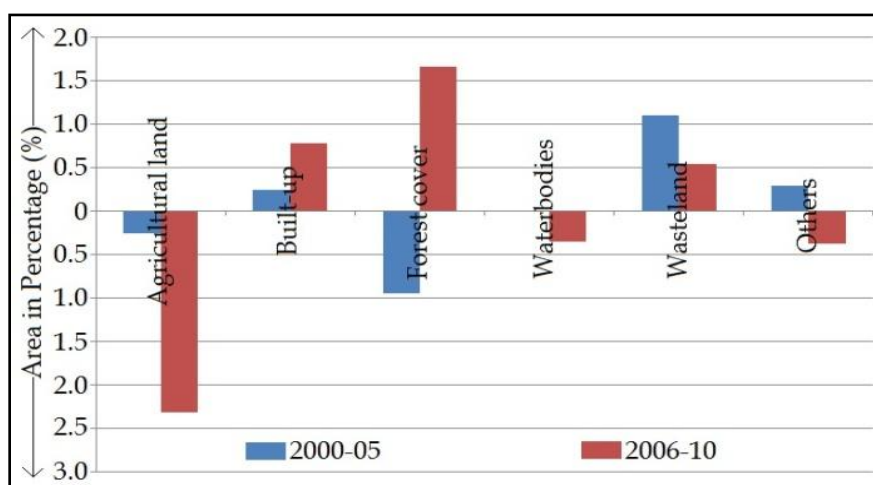
5.	Waste/ vacant lands	106.67	121.90	129.40
6.	Others	4.86	8.92	3.62
	<b>Total</b>	<b>1376.32</b>	<b>1382.53</b>	<b>1381.7</b>
<b>Total Geographic Area</b>		<b>1383.04</b>	<b>1383.04</b>	<b>1383.04</b>



**Fig.4.** Column graph depicting the temporal change analysis in LU/LC patterns

**TABLE.3. CHANGE DETECTION ANALYSIS (CDA) OF LU/LC IN CHITRADURGA TALUK**

Sl. No	LU/LC Categories	Change Detection analysis			
		2000-01 to 2005-06		2005-06 to 2009-2010	
		Area in km <sup>2</sup>	%	Area in km <sup>2</sup>	%
1.	Agricultural land	-3.46	-0.25	-32.04	-2.32
2.	Built-up land	+3.45	+0.25	+10.73	+0.78
3.	Forest cover	-13.14	-0.95	+23.12	+1.67
4.	Water bodies	+0.07	0	-4.84	-0.35
5.	Wastelands	+15.23	+1.1	+7.50	+0.54
6.	Others	+4.06	+0.29	-5.3	-0.38



**Fig.5.** Column graph depicting the Percentage-wise variation in LU/LC patterns



## VI. CHANGE DETECTION ANALYSIS

### *i. LULC patterns over the period of 2000–2005*

Built up and wastelands show increasing trend during this time period in contrast to decrease rate of other land use classes. Built-up land covers an area of 29.66 km<sup>2</sup> in 2000-01; later shows increase in its area due to gradual increase in population and this also impacted on agricultural and forest encroachment. Forest covers an area of 102.98 km<sup>2</sup> in 2000-01 has been degraded to 89.84 km<sup>2</sup> (2005-06) due to human intrusions at each forest boundaries by installation of wind turbines and illegal mining activities (Fig.5 & 6). Forest degradation was also recorded by the intensity of over-grazing and other anthropogenic factors due to economic demand (Manjunatha and Basavarajappa, 2017). Illicit cutting of trees were commonly observed by the vicinity of village peoples to fulfill their needs of fuel, small timbers for huts & houses and agricultural implementations (CFD, 2012). Over-grazing was observed by the large population of cattle, goat & sheep in the forest premises which affecting the natural regeneration status causing deterioration of wild life habitat (CFD, 2012). Major proportions of iron, manganese and limestone deposits were being mined rapidly and mine waste dump were noticed (Basavarajappa and Manjunatha, 2015; NRSA, 2007). Storage of mine waste materials, sliding of the dump outside the leased area, encroachment of forest area for dumping, mining pits, trenches, routes for wind turbine installation and other activities were gradually increasing the deforestation. Approximately 12 km<sup>2</sup> of the forest cover has been degraded/ converted to wastelands during 2000 to 2005 observed through Change Detection Analysis (CDA) in western and north-western parts of the study area.

### *ii. LULC patterns over the period of 2005-2010*

Major decrease in agricultural lands had been observed due to low rainfall intensity and global warming (?). Chitradurga taluk is highly dependent on rainfall and climatic conditions due to which the severe drought has been experienced during 2002-06 (CGWB, 2013) resulted in the failure of agriculture land. Due to the scarcity of abundant surface water, farmers have to turn groundwater resources for irrigation. Groundwater contributes to more than 70% for irrigation. Rapid loss of agricultural lands is noticed in the study area due to gradual increase in population, unplanned urbanization, industrialization, soil degradation, soil erosion, pollution, depletion of groundwater levels, and illegal mining activities for economic deposits. The aerial extent of these major changes over time has been recorded and change analysis has been shown in column graph (Table.2; Fig.13) and also percentage-wise variation is shown using column graph (Table.3; Fig.13).

Karnataka Forest Department Authority came up with many regeneration programs along with local village peoples to retain the forest resources during 2006-10 (Manjunatha and Basavarajappa, 2017). In freshly leased forest and illegal mining lands were demarcated and maintained to enlarge the forest covers in the study area. Regeneration has been assisted through artificial mode by sowing of seeds of sandal in bushes and also by areal sowing (CFD, 2012). Large areal extent of encroachments of illegal mining lands has been evicted and plantations have been raised. Rotational grazing, controlling fire hazards combined with rigid protection avoiding soil erosion and enriching moisture regime were practiced periodically by the Forest Department Authorities (CFD, 2012). More than 22 km<sup>2</sup> area of forest cover has been restored and reclaimed through periodic implementation programs by Forest Authorities (2009-10). It is

necessary to take up periodic re-surveys and demarcations in order to protect the forest ecosystems to prevent further encroachments in other similar forest land.

## V. DISCUSSION

Multi-temporal mapping of LU/LC categories cover six major classes such as agricultural land, built-up land, forest cover, waste/ vacant land, water bodies and others of 2000, 2005 and 2010. The spatial distribution pattern of LU/LC obtained from supervised classification is registered in Table 3. The significant changes in the land use/land cover during the study period between the years 2000 to 2010 recorded some interesting observations. The study revealed that the major changes occurred in agricultural land, built-up land, forest cover and wastelands. The features namely agricultural land, water bodies are indicated a decreasing trend where as built-up land, forest and wastelands are indicated an increasing trend. It is suggested that the industrialization and urbanization should be restricted to wasteland or unproductive lands. Results from classified maps indicated the area coverage of each category during 2000 such as; agricultural land of 1094.07 km<sup>2</sup>, built-up of 29.66 km<sup>2</sup>, forest of 102.98 km<sup>2</sup>, water-bodies of 38.8 km<sup>2</sup>, wastelands of 106.67 km<sup>2</sup> and others cover 4.86 km<sup>2</sup> respectively.

The performance of *agriculture* by *crop* categories also clearly indicates the slowing down process of *agriculture* in India. During the decade (2000-10), the area occupied by agricultural area shows gradual decrease in cultivated land due to change in climatic conditions and various anthropogenic activities. Agricultural land covers 1094.07 km<sup>2</sup> during 2000; was gradual decreased to 1058.57 km<sup>2</sup> at the end of the decade. The built up area has increased from 29.66 km<sup>2</sup> to 43.84 km<sup>2</sup> during the decade. Forest cover shows major loss in the study area by 13 km<sup>2</sup> from 2000 to 2005; while by the efforts of Karnataka Forest Department Authority 23 km<sup>2</sup> freshly leased and illegal mining areas were demarcated and reclaimed during 2010. Mapping of water bodies was difficult in 5.8 m spatial resolution due to the shallow water and dense canopy along the rivers and tanks. Areas covered by water body decreases in 2010 due to low intensity in rainfall conditions, rise in temperature and over withdrawal of groundwater. Agricultural lands are being converted into wastelands due to soil erosion, soil degradation, and construction of highways, housing, industries, check dams & factories. Wastelands show rapid increasing in its area from 106.67 km<sup>2</sup> to 129.4 km<sup>2</sup> during the decade of 2000-10.

It is necessary to closely monitor the land use/land cover changes for maintaining a sustainable environment for a proper development. LU/LC exposes considerable influence on the various hydrological aspects such as catchment area, interception, infiltration, evaporation and surface flow which implies remarkably impact on agricultural practices (Sreenivasalu and Vijay Kumar., 2000; Kumar et al., 1999) and better understanding on the cropping pattern and spatial distribution of fallow lands, forests, wastelands and surface water bodies; which is vital for developmental planning (Philip and Gupta, 1990).

## VI. CONCLUSION

The study clearly established that the satellite remote sensing coupled with GIS can be a powerful tool for mapping and evaluation of land use/land cover changes for its sustainability. A precise land use and land cover map is critically necessary for growing demands of natural resources and its utilization. LU/LC change detection analysis revealed major decrease in agricultural land; encroachment of forest land by human forces; major increase in wasteland categories and fluctuation in water bodies due to difference in seasonal variation. There is a

gradual increase in built-up land due to increase in population, mining activities and its transportation network which can negatively impacts on biodiversity & also disturbs natural land cover, increase in soil erosion into streams and lakes. Increase in wastelands shows negative impact especially on agricultural point of view. Geo-spatial application provides wide range of digital databank information in a synoptic, spatial and temporal manner for mapping & monitoring of LU/LC in most time and cost effective manner as such in the study area. This helps to record the land consumption rate and the possible changes that may occur in future, so that the planners can have a basic tool for planning. Ultimately it can contribute to the establishment of data and information products, services, models and tools for multiple users such as., scientists, resource managers and policy makers to establish an appropriate scenario in human health issues, global warming (?), ecosystem impacts and future sustainability. Land use systems need thorough systematic monitoring and management in maintaining food security, minimizing the deforestation, conservation of biological diversity and protection of natural resources.

### **Conflict of Interest**

There is no conflict of interest between authors.

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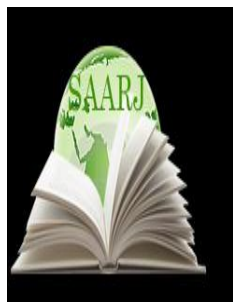
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## FORMATION AND STAGES OF DEVELOPMENT OF THE ACT OR IN THE UZBEK THEATER

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### ABSTRACT

*This article analyzes the role of acting in Uzbek theater arts. The question of creating an image was raised. This article is about the appearance and formation of the theater of one actor in Uzbekistan. The article describes the formation of theatrical art in Uzbekistan, genres and styles in traditional Uzbek theater. In addition, the article tells about Uzbek actors and actresses of the "theater of one actor" of the past and present. The article provides some recommendations for young actors involved in the creation of this genre.*

**KEYWORDS:** Culture, Art, Theater, Performance, Actor, Director, One-Actor Theater, Stage, Genre, Stage Ethics

### INTRODUCTION

Art is beauty, art is education, art is education. The actor is the educator. When we say educator, we mean an intelligent teacher, a teacher, a pedagogue, who first of all holds a pen in his hand and teaches us to read and write. If an actor is an educator, what do we need to do to be worthy of it? The acting profession requires reading a lot of books because of its closeness to literature and music. To create an image, we must read a dramatic work in order to perform a monologue and sing an aria (monologue of musical drama) from a work. The essence of the work, the consistent dynamics, the course of events, the spirit of the period are reflected in the poem. The character, the inner world, the sphere of thinking, the feeling of pain, the imaginary dreams of the heroes are revealed. One of the brightest representatives of the Uzbek national literature, the People's Writer of Uzbekistan TogayMurod, said: "I had only one goal: to read world literature until the age of thirty-five. Just read and practice the little stories so you don't get stuck. I did not build a building, I did not buy a car, I did not have a career, I did not aspire to fame. I didn't fight



the world! I just searched, I just read. ” [1] Uzbek theatrical art is directly related to the development of Uzbek literature.

About the writer Said Ahmad, the Hero of Uzbekistan Said Ahmad: "Uncle Murad was as straightforward as his works, very rude at first glance, but in fact he was a very gentle, sincere and kind person. Uncle Murad was not interested in literature, he was on fire. The people depicted in his stories are Uzbek even if you wear different national costumes. Their behavior is not the same as everyone else's." A person should have a sense of creativity, the activities and emotions of the person who chooses the path of art will touch the heart. The Uzbek national theatrical art has developed with the work of professionals with professional skills. Theatrical repertoire is full of unique and bright performances, including the diversity of genres, the breadth of stage opportunities, acting skills, plasticity, puppetry, improvisation and other important features. "Ayajonlarim", "Andishalikelinchak", "Temirkhotin", "Chimildiq", "Arolmomo", "Birkadamyol" this list will continue. The prosperity of the industry depends on the activities of dedicated, dedicated individuals. HuseyinBoydemir, a professor at Ataturk University in Turkey, said: "The secret to being a real writer is to work, research, read and write day and night. Uncle Murad had such a principle." [2]

If we take a look at Uncle Murad's work, one of his most important works is the story "Stars burn forever", in which the courage and honor evoke wonderful feelings in the human heart. The events in the play take place in the Surkhandarya region, and the person who reads this work can clearly observe the people of Surkhandarya, their customs, rituals, and the field of struggle. The wolf wrestler is a wrestler who has not touched the ground during his lifetime, and when he reaches middle age, the wolf wrestler is defeated by a young, strong wrestler Ismail. Now the wolf will run away when he sees the wrestler. But at one point, Ismail the wrestler is caught. The wolf wrestler fights for the ori, and Ismail makes the wrestler a star. After that, the Wolf wrestler is an invincible wrestler! Ohunboboev does not shrug his shoulders at all the raises, Akhunboboev does not bless all the chairmen. The wolf's honesty, truthfulness, his superiority over his honor, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty, his honesty. In short, I think it showed what a real Uzbek couple would look like! This image depicts the complex character of the character. Everyone builds their own lives. Whatever he succeeds, he achieves, and whatever mistake he makes, he is the cause. True art is universal and requires great effort and courage. If we look at the past a little bit, we knew, we admired, folk artists, darga artists worked tirelessly on their skills. They worked hard for art, studied day and night, searched, worked on their skills. People's Artist of Uzbekistan ShukurBurhon is a great Uzbek theater based on the famous writer OlmasUmarbekov's film "Doomsday and Debt". and is considered a film actor. While ShukurBurhanov is known among his colleagues for his sincerity and humility, his professionalism, character-building style and brilliant plasticity are admirable.

Each position of the actor is not only a lesson for today's youth, but also a guide for future generations. The role of drama in the development of acting skills in the Uzbek national theater is also important. Our national repertoire includes such national performances as "Padarkush", "The Unhappy Groom", "Doomsday Debt", "The First Day of Autumn", "One Step Road", "Dayless Nights", "Last Days", "Chimildiq", "Soul" unique performances of acting performances can be seen. Being able to apply the art of improvisation in a timely manner, sound intonations, plasticity and other elements come to life on stage. At the Uzbek National Academic Drama

Theater, the play "Chimildiq" based on the play by playwright ErkinKhushvaqtoev has a national interpretation and is imbued with folk traditions. In doing so, the actors embody a comic character, the essence of which changes throughout the plot. If the idea of the work is to understand the sanctity of the chimpanzee, to inculcate in the minds and upbringing of young people the centuries-old Uzbek values, to feel the sanctity of marriage, every actor will move towards this idea. Most importantly, the theme is fully revealed through bright performances, unique characters. A unique school of acting has been formed in the Uzbek theatrical art. The complex performances of such well-known theatrical masters as AbbosBakirov, ShukurBurhanov, OlimKhodjaev, ZikirMuhammadjanov, LutfikhanimSarimsakova, SoraEshonturaeva remained on the stage. The lively vibe of the performances shakes hearts, caters to catharsis. An important element of the art of tea is also the catharsis of the human psyche, i.e. purification. The brilliance of his acting skills, based on professional experience, seals the unforgettable work in the pages of history. The character's sorrows, joys and sorrows permeate the psyche of the actor. That's when an artistic whole is formed. The goal is to play each role from the heart. At the same time, the demands, opportunities and prospects of the director increase the longevity of the play.

Let's get acquainted with the history of the development of theater art in the republic. From time immemorial, namely from the primitive system, the land and climate of Uzbekistan were comfortable for the life of people. Ancient finds found on the territory of the republic: vessels, rock paintings, samples of dishes and utensils, stone weapons, human burials, indicate that ancient tribes lived here several hundred thousand years ago. Various ceremonies and rituals of primitive people, inherent only to them, are displayed in a kind of primitive art. In view of this, it is confidently asserted that the spectacular art of Uzbekistan has a history of several hundred thousand years. Theatrical art makes an invaluable contribution to the development of social and social life of people. It is especially worth emphasizing the contribution of the figures of this art, who convey to the people the traditions and aspirations of actors and theater. The literary scholar NM Mallaev said the following about this kind of art: "The art of the artistic word appeared much earlier, in the form of oral creativity, in addition, it was the basis for the emergence of written literature. It is passed from mouth to mouth, from generation to generation, from era to era" [2, p. 44]. Uzbek traditional theater is closely associated with such theatrical performers as the actor - comedian, clowns (maskharaboz), narrators of sacred stories, epics, puppeteer actors (qirchokboz). Such a theater existed in our area several centuries ago. This idea can be traced in many historical sources and is emphasized by art researchers in their works. In traditional theaters, mainly epics, parables, fairy tales, fables, sacred stories, adventures were performed, which were transmitted orally. In the repertoire of this theater there were many works of oral folk art, which were modified, reduced or lost in subsequent historical collisions. "Studying the history of the theater of our region, I was firmly convinced that the theater of one actor existed from the day when the folk storyteller (bakhshi), with a dombra in his hand, glorified folk heroes." A folk storyteller in a dombra in his hand performed his legends about a great people and heroes himself, and this suggests that the "theater of one actor" originates from folk storytellers [3, p. 315]. Of no less importance is the fact that the storytellers (bakhshi) performed the legends for 6-10 hours. Not to bore the viewer and singing in different voices of heroes for several hours is not an easy work of folk storytellers. One can even safely say that this is true art. Actors of traditional theater, such as rope walkers (darboz), performed their numbers both on the rope and on the stage. Clowns (maskharaboz) and comedians (kizikchi) amused the audience,

showing heroes, animals, birds. In the process of studying the history of traditional theater, we consider it reasonable that the theater of one actor was formed and existed in the origins of the birth of the national traditional theater. Studying the history of national traditions, one cannot but take into account the merits of our great ancestors, who laid the foundation for the birth of the art of the theater of one actor. They were virtuoso musicians, storytellers of folk epics, poets-improvisers, skillful orators (kissakhonlik), who performed at literary and poetry evenings dedicated to such poets as Bedil, Navoi, Fusuliy, Mashrab, which was also one of the sources of the birth of theater art. The study of the history of traditional theater, works of oral folk art began in the 20th century. In the distant past, the traditional Uzbek theater was led by experienced actors, clowns, maskharabozes, sometimes singers and musicians. Experienced actors and singers who distinguished themselves in the theater were called "korfharmon" (that is, experienced in the profession, senior, ordering). The emergence of "korfarmons" is considered an important stage in the formation of the theater of one actor. Able, gifted actors, "korfarmons", served exemplarily in several types of traditional theater. The most famous among them were Muhammadsolikh and Bidiyorshum from Kokand, ZakirEshan and his disciple Yusufzhan-kizik from the Fergana Valley, BoboerDiyorov from Bukhara. By this time, two genres dominated in the traditional theater: the first, "tankid" - criticism (a genre that touches on and depicts problems of a social and domestic nature), the second - "mukallid" - a parody. In the genre "mukallid" human vices were depicted and ridiculed, copied movements of humans, birds, animals, children were shown. The performers of this genre had their own special make-up and costume. For example, clowns and comedians dressed in peculiar bright costumes and bright make-up. They always wore a characteristic cap on their heads, by which one could recognize a cheerful maskharaboz. Heralds began spectacular performances, who with loud exclamations gathered the people to the square.

In the 21st century, a whole galaxy of actors (maskharaboz, orators, kizikchi) was formed, who had their own creative style. They were: Yusufzhon-kizikShakarzhonov, Okhunzhon-kizikKhuzurzhonov, Tesha-kizikKomilov. In the second half of the 20th century, a talented master of words, an actor-satirist who won great popular love, MukhiddinDarveshev, appeared. He skillfully performed the satirical stories of AnvarMukimov. Darveshev created the genre of "monologue", which did not exist in the theater before him. Satirical stories, such as: "The hairdresser", "Airplane", "The consequences of drunkenness" Darveshev performed vital, witty, adding to them from himself anecdotes, funny stories, he could instantly transform into a hero. The actor's speech was clear, pronouncing every word. The peculiar movement of eyes and eyebrows, hands helped to embody various forms, images, characters of people. Darveshev skillfully used plastic techniques, creating amazing "performances-stories" of the theater of one actor. In 1991, during the performances, when the scenery was changing, the theater needed readers who would entertain the audience with poems and stories. The actors MukhsinKhamidov and NabiRakhimov, who were famous and worked in the genre of artistic reading, coped with this task perfectly well. The creative tandem of two talented actors gave a powerful impetus to the formation and development of the theater of one actor. The poems of MukhsinKhamidov, who read them masterfully, were very relevant to our time, expressed the aspirations and desires of a person, the dreams of the people. The poems of ShokirSulaiman, Hamid Alimzhan, GafurGulyam were read for the most part. Among them, the patriotic poem "Sparks of Hope" was a great success. In the mid-eighties of the last century, KhazhibayTadzhibaev was very popular. He went down in the history of theater as a virtuoso comedian and professional actor.

He performed in the genre of satire, humor, had his own unique style, each of his concert numbers was at the highest level of professional acting. Tadjibaev masterfully showed female and male characters. A variety of characters, sparkling humor and professionalism are characteristic features of the work of KhazhibaiTadjibayev, who during his lifetime won the stage master national love and fame. In recent years, he has been fruitfully working on the stage of the national theater. People's Artist of Uzbekistan Malika Ibragimova. For many years the actress has been working in the one-actor theater genre. Her solo performances are widely known to the viewer. Creativity Malika Ibragimova is unique and deeply individual. The heroines of Malika Ibragimova make the viewer empathize and think, her work focuses on the role of a woman in society, family, raising children and love.

In the end, I would like to emphasize that young actors should closely study and be equal to the work of actors of the past, try to find their own creative niche on the stage, creating new images.

In short, it is difficult to imagine the development of theatrical art without the formation and development of acting skills. Skill, on the other hand, is sharpened in experimental fields. The teacher-student tradition should also be established on a large scale.

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## METHOD OF IDENTICAL TRANSFORMATIONS IN PROBLEM SOLVING

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### ABSTRACT

*This article discusses the application of problem solving to the method of identical transformation. To solve problems, compose new problems. Different formulas are used, sometimes such formulas are identities. The article shows examples of how to apply identities in problem solving.*

**KEYWORDS:** *Identity, Method, Transformation, Educational, Developing, Rationality*

### INTRODUCTION

Method-a lot of ways to its use. In addition to select the method there and selection of ways to its use. In science often determines the fate study. Method is in unbreakable unity with the theory; any system objective of knowledge can become a method. Inseparable contact method and the theory of finds its expression in the methodological the role of scientific laws.

The method by itself does not completely predetermine success in the study of reality: not only a good method is important, but also the skill of its application. Each method makes it possible to

cognize only some separate aspects of the object. Hence, the need arises for the mutual complementarity of individual methods, which is also due to the fact that each method has certain limits of its cognitive capabilities.

Thus, in the theory of scientific knowledge of the method is treated as a system of successive action that lead to achieve the result of the corresponding the intended purpose. This sequence of actions can be aimed at both theoretical results and practical implementation. This means that the method acts as a method of cognition, a method of transformation.

Various formulas are used to solve problems, compose new problems. Sometimes such formulas are identities. That is, we use it with the method of identical transformations. Consider the sum

$\frac{1}{a} + \frac{1}{b} + \frac{1}{c}$ , square it:

$$\left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c}\right)^2 = \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} + \frac{2(a+b+c)}{abc}.$$

If  $a+b+c=0$ , then  $\left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c}\right)^2 = \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2}$

or

$$\sqrt{\frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2}} = \left| \frac{1}{a} + \frac{1}{b} - \frac{1}{a+b} \right| \quad (1)$$

If in identity (1) a replace  $\frac{1}{a}$  or  $a$  and  $b - \frac{1}{a}$  and  $-\frac{1}{b}$ , respectively, then we arrive at two new identities:

$$\sqrt{a^2 + \frac{1}{b^2} + \frac{a^2}{(ab+1)^2}} = \left| a + \frac{1}{b} - \frac{a}{ab+1} \right| \quad (2),$$

$$\sqrt{a^2 + \frac{1}{b^2} + \frac{a^2 b^2}{(a+b)^2}} = \left| a + b - \frac{ab}{a+b} \right| \quad (3)$$

Let us apply the obtained identities to solving problems.

**Task 1.** Find the sum:  $S = \sqrt{1 + \frac{1}{2^2} + \frac{1}{3^2}} + \sqrt{1 + \frac{1}{3^2} + \frac{1}{4^2}} + \dots + \sqrt{1 + \frac{1}{(n-1)^2} + \frac{1}{n^2}}$

Solution. Since  $1 = \frac{1}{1^2}$ , then using (1), we have:

$$S = \left(1 + \frac{1}{2} - \frac{1}{3}\right) + \left(1 + \frac{1}{3} - \frac{1}{4}\right) + \dots + \left(1 + \frac{1}{n-1} - \frac{1}{n}\right) = 1 + 1 + \dots + 1 + \frac{1}{2} - \frac{1}{n} = \frac{2n^2 + n - 2}{2n}$$



**Task 2.** Calculate:  $\sqrt{1 + 2019^2 + \frac{2019^2}{2020^2}} + \frac{2019}{2020}$

Let's transform the sub radical expression:

$$\sqrt{1 + 2019^2 + \frac{2019^2}{2020^2}} = \sqrt{2019^2 + \frac{1}{1^2} + \frac{2019^2}{(2019 \cdot 1 + 1)^2}}$$

Applying identity (2), we get:

$$\sqrt{1 + 2019^2 + \frac{2019^2}{2020^2}} = \sqrt{2019^2 + \frac{1}{1^2} + \frac{2019^2}{(2019 \cdot 1 + 1)^2}} + \frac{2019}{2020} = 2019 + 1 - \frac{2019}{2020} + \frac{2019}{2020} = 2020.$$

**Task 3.** Solve an equation in integers  $x^2 + (x-1)^2 + x^2(x-1)^2 = y^2$

Solution. Let us prove that the left-hand side of the equation is an exact square. According to identity (3), we have:

$$\begin{aligned} x^2 + (x-1)^2 + x^2(x-1)^2 &= x^2 + (1-x)^2 + x^2(1-x)^2 = x^2 + (1-x)^2 + \frac{x^2(1-x)^2}{(x+(1-x))^2} = \\ &= \left( x + 1 - x - \frac{x(1-x)}{x+1-x} \right)^2 = (x^2 - x + 1)^2 \end{aligned}$$

Means that  $(x^2 - x + 1)^2 = y^2$ , or  $y = \pm(x^2 - x + 1)$

If  $x = n$ , then  $(n; \pm(n^2 - n + 1))$ ,  $n$  – integer. Thus, our equation has an infinite a lot of solutions in the integers.

If  $n$  is a natural number, we note that

$$[\sqrt{n^2}] = [\sqrt{n^2 + 1}] = \dots = [\sqrt{(n+1)^2 - 1}] = n(2n+1) \quad (4)$$

We apply the obtained equality (4) in solving problems.

**Task 4.** Solve in prime numbers the equation  $[\sqrt{1}] + [\sqrt{2}] + \dots + [\sqrt{x^2 - 1}] = y$

where  $[a]$  – is the integer part of the number  $a$ .

Solution. Applying equality (4) we get:

$$\begin{aligned} [\sqrt{1}] + [\sqrt{2}] + \dots + [\sqrt{x^2 - 1}] &= ([\sqrt{1}] + [\sqrt{2}] + [\sqrt{3}]) + ([\sqrt{4}] + \dots + [\sqrt{8}]) + \dots + ([\sqrt{(x-1)^2}] + \dots + [\sqrt{x^2 - 1}]) = \\ &= \sum_{n=1}^{x-1} n(2n+1) = 2 \sum_{n=1}^{x-1} n^2 + \sum_{n=1}^{x-1} n = 2 \cdot \frac{(x-1)x(2x-1)}{6} + \frac{(x-1)x}{2} = \frac{x(4x^2 - 3x - 1)}{6} \end{aligned}$$

So, we need to solve in prime numbers the equation

$$\frac{x(4x^2 - 3x - 1)}{6} = y,$$

$$x(4x^2 - 3x - 1) = 6y$$

Location  $x = 2, 3, y$ . If  $x = 2$ , the  $y = 3$ .

If  $x = 3$ , the  $y = 13$ . If  $x = y$ , then we get equation  $4x^2 - 3x - 1 = 6$ , which has no prime solution. This equation has two solutions:

$x = 2, y = 3$  and  $x = 3, y = 13$ .

**Task 5.** Knowing that

$$S = 1 + \frac{1}{2^2} + \frac{1}{3^2} + \dots + \frac{1}{n^2} = \frac{\pi^2}{6} \quad (5)$$

to calculate the integral  $\int_0^1 \frac{\ln(1+x)}{x} dx$ .

Solution. For any kind  $n$  are equality  $\ln(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \dots + (-1)^{n-1} \cdot \frac{x^n}{n} + \dots$

Then

$$\begin{aligned} \int_0^1 \frac{\ln(1+x)}{x} dx &= 1 - \frac{1}{2^2} + \frac{1}{3^2} - \frac{1}{4^2} + \dots + (-1)^{n-1} \cdot \frac{1}{n^2} + \dots = \left( 1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \frac{1}{5^2} + \frac{1}{6^2} + \dots \right) - \\ &- 2 \left( \frac{1}{2^2} + \frac{1}{4^2} + \frac{1}{6^2} + \dots \right) = \left( 1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \frac{1}{5^2} + \frac{1}{6^2} + \dots \right) - \frac{2}{2^2} \left( 1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \frac{1}{5^2} + \frac{1}{6^2} + \dots \right) = \\ &= \frac{1}{2} \left( 1 + \frac{1}{2^2} + \frac{1}{3^2} + \dots \right) = \frac{1}{2} \cdot \frac{\pi^2}{6} = \frac{\pi^2}{12} \end{aligned}$$

The goal of this method includes two groups of goals: educational, developing.

#### **Educational goals include**

- 1) assimilation of the system of mathematical knowledge, skills and abilities;
- 2) the formation of skills to carry out modeling in various mathematical situations (when solving equations, inequalities and their systems, when proving theorems);
- 3) synthesis and systematization knowledge that are associated with the data methods, the formation of the integrity of mathematical knowledge;
- 4) the formation of a scientific worldview: thanks to the method of identical transformations, on the one hand, it becomes possible to show the penetration of mathematics into other sciences, into practice; on the other hand, to form an understanding of the unity of mathematics and its methods;
- 5) education of mathematical culture, rationality of mental activity of students;

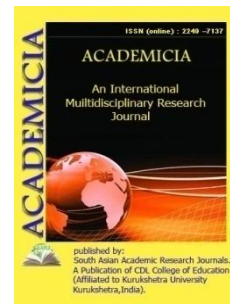
- 6) Aesthetic education of students: this method allows you to compare methods for solving the same problem, choose the most rational of them, it possible to sometimes get original, beautiful solutions to problems.

### **Developmental goals include:**

- 1) Development of students' creative thinking, the components of which, according to psychologists, methodologists and mathematicians, are dynamism, intuition, etc.
- 2) Development of students' mathematical abilities, the structure of which is: algorithmic or computing, abilities, logical abilities.

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## TECHNOLOGY FOR TEACHING SCHOOL CHILDREN TO CREATE TEXT IN RUSSIAN LESSONS IN ELEMENTARY SCHOOL

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### ABSTRACT

*This article discusses the development of coherent Russian speech in primary school students. This type of student activity is productive if this work is based on the creation of a text approach in the lessons of the Russian language and literary reading, in which the text is considered as the highest communicative unit of speech. The creation of a text in teaching elementary school students allows in the lessons of the Russian language to purposefully practice practical actions for mastering speech as a real communication activity. To develop metasubject skills, a text-centric approach should be used in the lessons of native and foreign languages.*

**KEYWORDS:** *Primary School; Teaching Russian; Creating Text; Communicative Competence; Development Of Coherent Speech.*

### INTRODUCTION

In the context of global transformations of society, an active and creative person is becoming in demand. State educational standards of primary general education are aimed at the formation and development of communicative competencies of students on the basis of a system-activity approach. Communicative competence makes it possible for students to carry out speech activities in accordance with the goals and situations of communication within a particular field of activity by means of the studied language. The most important component of communication-oriented teaching of the Russian language in primary school is the text.

"A text is a product of speech activity, a literary work that realizes the goal" [1]. Thus, it is the main communicative unit of speech. The development of coherent speech in the lessons of the Russian language allows for purposeful systematic work on the text, therefore, the modern

method of teaching Russian speech cannot fail to take into account the fundamental provisions of the linguistics of the text.

The problem of creating texts of various styles occupies an important place in modern linguistic and methodological research. Analysis of the linguistic, psycholinguistic and methodological literature showed that the research problem is devoted to the scientific works of such scientists as L.S. Vygotsky, N.I. Zhinkin, A.A. Leontiev, V.V. Vinogradov, V.G. Gak, I.R. Halperin, N.D. Zarubina, I.A. Zimnyaya, N.A. Ippolitova, N.S. Valgina, L.M. Loseva, E.P. Nikiforova, E.I. Passov, E.A. Referovskaya, E.A. Bystrova, M.T. Baranov, M.R. Lvov, T.A. Ladyzhenskaya, Ramzaeva T.G. and etc.

According to authoritative researchers, "The theoretical substantiation of the textocentric principle is the following: the use of language is, first of all, in the creation of texts to speak or write in a given language; the study of texts as ready-made, established speech works can be considered as the study of language in action: from this point of view, the text appears as a result of the use of the language system and its basic elements, and when we perceive this text, we observe how the language functioned and how it was used by those who created this text "[2]. The main goal of the textocentric principle of teaching the Russian language is the development of cognitive, intellectual skills and abilities, the formation of the personal qualities of students. The main means of organizing the educational process in the Russian language at school are scientific, artistic, journalistic, official-business texts, each of which has its own structure, lexical, morphological, syntactic, stylistic features and other typological characteristics.

The text-centered approach in teaching the Russian language is the methodological basis of the educational process, in which the text becomes an emotionally influencing object of study, aimed at organizing students' activities, contributing to the achievement of personal, meta-subject and subject results. The text is a means of cognizing language as a multifunctional phenomenon; it is the most important means of familiarizing with Russian culture; on its basis, cognition of grammatical categories, linguistic phenomena is carried out, a system of linguistic concepts is formed; the text acts as a speech work; the result of using the language system and the main means of mastering the oral and written forms of Russian speech; it is a means of creating situations in which real communication takes place.

Work on the text, in addition to enriching the vocabulary, stimulates the speech activity of students and is the basis for creating your own texts. The text centric approach to teaching the Russian language ensures the integrity of the process of forming the linguistic, linguistic and communicative competence of students.

As practice shows, primary school students do not have enough ability to analyze and produce texts. This is primarily due to the fact that in the lessons of the Russian language insufficient attention is paid to working with the text, and the language is studied as a system of lexical and grammatical forms. Usually in primary grades, teachers are limited to such forms of writing as dictation, presentation and composition. Systematic text work usually begins in middle and high school. In our opinion, work on the text should be started from the first grade, following the didactic principle from simple to complex. The main task of communicative training is that students must be able to correlate the goal of the activity with speech expression.

Working on the text in the Russian language lessons has a great educational potential for the formation of a comprehensively developed personality. For the formation of speech skills,

primary school age is extremely important, since it is during this period that students develop basic communicative competencies. A feature of children in modern society is that they perceive information mainly visually, as they masterfully use electronic means. It is very important for a teacher to rely on such a quality of primary school students as curiosity.

Speech, being a complex psycho physiological process, accompanies a person throughout his life, but the main foundation is laid at a young age. The desire and desire to express your feelings and thoughts is the main condition for the generation of speech in oral or written form. The motive generates an intention, a path that allows you to achieve communicative goals. The choice of strategies depends on the specific speech situation. Having chosen the path, the speaker realizes his intentions in certain speech utterances, thus, solving specific life tasks.

In the lessons of the Russian language in primary grades, the teacher should pay attention to how to make students feel the need to express their thoughts and teach how to plan speech to solve the assigned tasks. In order to formulate their thoughts, students must master all types of speech activity. At primary school age, in contrast to preschool age, children begin to realize causal relationships, to correlate words, phrases and sentences with lexical and grammatical categories. At this age, visual-figurative memory is developed. They better and faster memorize and retain in their memory events, persons, objects, facts than definitions, descriptions and explanations. During this period, it is important, based on the life experience of students, on their interests and needs, to teach how to correctly and accurately use words, build sentences, retell and express their thoughts. This gives the teacher the opportunity to rely on such thought categories as abstraction and generalization. In this period of study, the most effective forms of work are group activities. This form of work allows students to defend their opinions, listen carefully to each other, discuss and present the work of the group. Students are more motivated to learn and self-esteem, as well as responsibility for the results of their common work. In primary school, attention should be paid to the technology of level differentiation, the creation of comfortable conditions for students with different abilities and interests. It is necessary to create a favorable speech environment, practice listening to literary texts performed by speakers, masters of verbal art, it is necessary to organize such conditions so that children have a desire to express their thoughts. As a result of listening to Russian literary speech, students develop a sense of language. Unfortunately, in the Russian language lessons, teachers cannot always rely on the linguistic intuition of bilingual children, since the speech environment does not allow this.

Teaching the Russian language at school should be aimed at developing the ability of students to solve certain problems by language means in different areas and situations of learning. In this regard, the development of speech occurs in the process of working with the text. Through it, students are introduced to Russian literature. The reliance on the text in the study of grammatical material creates conditions for the spiritual and moral education of schoolchildren and the development of their creative abilities.

In our opinion, journalistic texts from children's magazines and newspapers should also be used as didactic material, gradually introducing students to writing their own notes, small reports from the scene and chronicles.

From primary school, students learn to correctly formulate and form thoughts. The emerging speech gradually becomes coherent, allowing the presentation of complex semantic concepts. The gradual enrichment of the vocabulary of students with terminology allows them to express



thoughts accurately and concisely. At this stage, the use of reproductive methods plays an important role. Developed coherent speech of primary school students allows them to successfully master other school subjects.

Work on the development of coherent speech allows you to gradually use the learned words and their combinations in sentences, complex syntactic wholes, independently design simple texts, determine the topic of the statement, formulate the main idea, draw up a plan. To develop the skills of producing texts, a specially developed methodological system is needed, which includes materials that have enormous didactic capabilities. Educational texts are aimed at enriching the feelings of students, to form a certain attitude towards the surrounding reality. In Russian language lessons, work with the text should be carried out in an integrated manner.

We also believe that when developing and improving the skills and abilities of constructing texts, it is necessary to follow the following stages of work: 1) analysis of the sample text; 2) compilation of a text based on language materials; 3) construction of texts; 4) improving the written.

At the same time, it is necessary to comply with the didactic requirements for the gradual and consistent assimilation of language material. The analysis of the studied text begins with the completion of tasks related to the speech development of schoolchildren. This is an expressive reading of the text, the definition of a topic, main idea, type, style, genre; drawing up a simple or complex plan or algorithm of action. The analytical activity of students is aimed at the formation and development of the ability to understand the content of the text, to comprehend speech units. Various types of analysis are used: communicative, compositional, speech, linguistic and stylistic. These types of work make it possible for schoolchildren to realize the dependence of the content and its speech design on the communicative attitudes of the author, which the speech situation dictates to him. At the second stage, students collectively select words, phrases, speech constructions to compose their own text, discuss and analyze them.

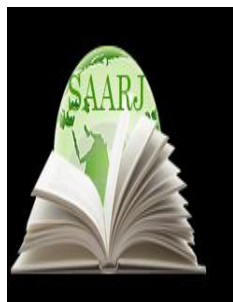
As practice shows, the most effective when working with texts of various styles, types and genres in elementary school are the following types of work: defining the topic and microthemes; dividing text into paragraphs; formulation of the main idea of the text; finding keywords and thoughts in the text; determining the meaning of words by context and the ability to work with dictionary entries; formulation of questions on the content of the text; adding new ideas to the text; transformation of texts; the ability to work with deformed texts; composing a text at a given beginning; the ability to write a text-reasoning according to the scheme: thesis, proof, conclusion, etc.

Working on the text in Russian lessons in primary school should also take into account the fact that its nature has changed, the modern text has become non-verbal, more often found in the form of pictures, diagrams, tables and diagrams. The main distinguishing feature of the new texts is their laconicism. Schoolchildren are increasingly hearing texts from electronic sources. Texts should be carefully selected as didactic material. They should correspond to the age characteristics of the student's perception, the reading and life interests of the student, in order to turn learning into an exciting process. You should teach how to work with texts from narration, then move on to texts such as descriptions and reasoning. In the elementary grades, as didactic material, one should turn to such genres as a fairy tale, riddles, counting rhymes, fables and shape-shifters, short essays in the form of movie scripts, congratulatory letters, announcements,

an information note in a newspaper, a report from the scene, annotation and others. Work on texts of various types, styles and genres should be based on the idea of semantic reading, which involves working at the meta-subject level. If at the initial stage of training the main goal is to teach how to read, then in basic school reading becomes a means for teaching, understanding the content of other more complex subject areas. The systematic work on the text proposed in the article is the basis for the production of their own texts by younger students.

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## METHODOLOGY TO ORGANIZE INDEPENDENT WORK OF STUDENTS IN MATHEMATICS LESSONS IN PRIMARY SCHOOL

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### ABSTRACT

*It is independent work that is the most important condition for self-regulation of the personality, its creative capabilities. But why are there so many people who are dependent, unable to make the necessary decisions in time, without looking back at others? This question comes up again and again in society, the long-standing dispute between teachers from different countries does not cease. The student's independent work is the main way of fostering independence. The school's many years of experience is the best proof of this. The article discusses the correctness of the organization of independent work, since I believe that independent work serves as an effective means of forming a personality, encourages mental independence in children.*

**KEYWORDS:** *Formation, Skills, Problem Solving, Independence, Mathematics Lesson, Primary School.*

### INTRODUCTION

Today, a student is defined not just as a subject of the educational process, he is recognized as a subject of social interaction, in the process of which there is a mutual development and personal development of all participants in the interaction.

The initial link of education is one of the sensitive school periods for the formation of such personality traits as independence, which is actively developing at this age in educational activity. Independent educational work is usually understood as any active activity of students organized by the teacher in a specially allotted time for this. As a didactic phenomenon, independent work is, on the one hand, an educational task, i.e. what the student must accomplish, the object of his activity, on the other hand, the form of manifestation of the corresponding activity: memory, thinking, creative imagination when the student performs an educational task,

which ultimately leads the student either to obtaining a completely new knowledge unknown in advance, or to deepening and expanding the scope of already acquired knowledge.

Independent work includes two stages: preparatory and executive. At the first stage, students get acquainted with the task, comprehend it, highlight what needs to be done, what tasks and actions will be required for this, and draw up a plan for completing the task. The second stage is that the students, having understood the task and drawing up a plan of action, carry out and check it.

In a modern lesson, the independent activity of students must necessarily be accompanied by evaluative (or rather, self-evaluative) activities (self-test by a key or standard, fixing and identifying the causes of errors and difficulties, adjusting the training route, etc.)

The following types of independent work can be distinguished, taking into account the level of activity of the thinking of children, to show the possibilities of their use at various stages of teaching mathematics.

#### 1. Independent work with the aim of updating the knowledge of students.

The teacher must update the basic knowledge and skills before introducing new material and before consolidating it. This work can be reproductive and reconstructive – variative in nature.

Reproductive works (or patterns) in the mathematics course are numerous typical examples and problems with fully specified conditions. In the course of performing these works, students formulate the conditions of the problems, determine the conditions of the problems, determine the data and the desired, and then reproduce the corresponding knowledge, find a way to solve. Students perform work of this type with detailed instructions.

For example, in order to prepare for the study of a computational technique of the form  $30 - 6$ , it is advisable to propose the following system of tasks:

##### 1). Replace the number with the sum of the sample:

$$50 = 40 + 10 \quad 70 = +$$

$$90 = 80 + 10 \quad 20 = +$$

##### 2). Fill in the "windows"

$$60 + = 65 \quad 72 + 6 = + 8 = 78$$

##### 3). Solutions in a convenient way:

$$(50 + 10) - 6 \quad (30 + 10) - 4$$

This work should be carried out in order to determine the level of preparedness of students for the perception of new material. The types of verification can be different: frontal, selective, using feedback, etc.

Works of a reconstructive - variable nature require from students various transformations, generalizations, relying on previously acquired knowledge and skills. Here, students must not only reproduce individual functional characteristics of knowledge, but also the structure of this knowledge as a whole. Thus, they deepen, their application expands, they become more perfect, and the thinking of students reaches the level of productive activity.

Let's imagine a system of preparatory assignments using the example of the same topic  $30 - 6$

1. Distribute independently the examples in two columns according to some criterion, justify your answer:

$$40-8 \quad 34 + 5 \quad 44 + 3 \quad 80-9 \quad 56 + 20$$

$$70-8 \quad 90-6 \quad 45 + 50 \quad 30-6 \quad 72 + 10$$

2. Among these examples, find those that will help solve examples of one of the columns recorded in the assignment.

$$(20 + 10) - 6 \quad (70 + 10) - 9$$

$$(30 + 10) - 8 \quad (60 + 10) - 8$$

$$(50 + 10) - 1 \quad (80 + 10) - 3$$

$$(40 + 10) - 2 \quad (80 + 10) - 6$$

3. The composition of what numbers do you need to know to solve these examples? Write them down yourself.

2. Independent work with the aim of learning new knowledge

The introduction of new material can be carried out at different levels of students' cognitive activity. It depends on the complexity of the material and the level of preparation of the class.

Works of a reproductive nature (or according to a model) are performed by students entirely on the basis of a model or detailed instructions, due to which the level of cognitive activity and independence does not go beyond the framework of reproductive activity.

For example, the chalkboard contains examples:  $48-3$ ;  $48-30$

The teacher announces the topic and makes a detailed record of the example solution:

$$48-30 = (40 + 8) - 30 = (40-30) + 8 = 10 + 8 = 18$$

- Look, the chalkboard contains an example solution with an explanation and a memo with reference words that will help you explain the solution.

- Guys, independently figure out the solution to this example. It is advisable to start the survey at will and with weak students. At the end, the teacher summarizes the students' answers.

Works of a reconstructive - variable character.

Here, students must see and apply basic knowledge and skills. And this requires a system of preparatory knowledge. Only a system of appropriately selected preparatory questions and tasks will allow organizing independent work of this type.

For example, you need to enter a computational device of the form  $30-6$ . We will proceed from the preparation that we presented in paragraph 1. Then the questions and tasks at the study stage will be as follows:

Take a close look at the examples we just solved. Are there any among them that will help solve this?

Children are given time to think. After the discussion, they are invited to independently write down an example with a detailed explanation, using the key words of the memo, and orally speak

the algorithm. At the end of such work, the teacher should give a sample reasoning for solving this example using the same key words.

Works of a partial search nature differ from the previous ones in a greater degree of students' independence. With this type of work, it is advisable to offer the student some kind of auxiliary material.

For example, consider familiarity with computational example  $47 + 5$

Guys, now you will learn to solve examples of the form  $47 + 5$ . You have bunches of sticks of different colors on your tables (two sticks of a different color) How is it convenient to calculate how many sticks there are in total? Children are given time to think. After the discussion, the teacher makes a generalization and invites the students to write down the solution themselves. What follows is a test and a sample algorithm for solving the example.

In the work of a research nature, students themselves solve the problem, draw up solution algorithms, and make generalizations. This type of work can only be organized in a strong classroom, where students have formed the skills necessary for research. The system of preparatory exercises also plays an important role here.

For example, it is necessary to acquaint students with a new computational technique of the form 42-5. We will proceed from the fact that we proposed the preparatory work that I spoke about in paragraph 1. Then, at the study stage, we can offer the following system of questions and tasks.

Guys, you need to solve example 42-5. Think about how you can calculate. There are sticks of the same color on the tables, but no practical help is offered to children. Our goal was to introduce material at a higher abstract level. Only those children who have not coped with the task, it is advisable to offer help - counting sticks.

After discussing the search for a solution, which should start with weak students and if desired, the teacher may offer to write down the solution with a full explanation and tell the algorithm using the cheat sheet.

We have considered 4 types of independent work that can be carried out in order to study new knowledge. These works can be carried out only in the indicated sequence, since the content is gradually increasing in difficulty, which entails an increase in activity in the thinking of students. The highest level of cognitive activity is manifested in research works.

### 3. Work with the aim of consolidating and repeating the knowledge and skills of students

The purpose of consolidation is memorization, systematization, generalization and practical application of knowledge and skills. Most often, in practice, we observe the repeated execution of similar tasks. This, of course, is not enough. Consolidation is a lengthy process and tasks should be offered in a certain sequence: solving similar tasks; performing tasks where knowledge is transferred to new conditions; further - the inclusion of new knowledge in the old system; the latter can offer tasks of a creative nature. For independent execution, you can offer tasks of any kind. When consolidated, independent work can be reproductive and reconstructive-variative in nature.

For example, for work of a reproductive nature, you can offer tasks:

1. Solve examples based on the pattern.



2. Solve the problem similar to the one that was analyzed orally.

3. Draw the same line, etc.

For works of a constructive-variative nature, it is advisable to offer such tasks where it is necessary to transfer knowledge to new conditions, having seen intra-subject connections, and tasks of a creative nature.

For instance:

1. Using the first example, compose the second for calculations:  $(20 + 10) - 6$   $(40 + 10) - 7$

2. Think of a problem that would be solved like this:  $30 * 6$ .

4. Independent work in order to test the knowledge and skills of students

The purpose of the test is to determine the level of assimilation of knowledge and skills of the student. The result of the check is the assessment. Work at this stage, as well as at consolidating knowledge, can be of a reproducing and reconstructive-variative nature, tasks are offered similar.

I have named the main types of independent work used in elementary school, which can increase the activity of students at various stages of the lesson, and further contribute to the independent mastery of new knowledge.

Independent work as a teaching method can be included in almost all teaching methods, applied at different stages of the learning process. In most cases, at the stage of comprehending the material being studied, independent work in mathematics lessons takes about 5-6 minutes, at the stage of developing skills in applying the studied material up to 10-15 minutes, and at the stage of developing skills - up to 30 minutes.

1. Working with the textbook:

- reading text;
- Reading to yourself;
- Reproduction of the read;
- Discussion of what has been read;
- Breakdown of the read into semantic parts;
- drawing up a plan of the reading;
- work with a table of contents, with a suggested index;
- work on the concept, term.

2. Implementation of written independent work in the lesson:

- performing exercises, tasks to consolidate the topic;
- drawing up tasks, equations, exercises, diagrams, tables;
- Work on errors;
- Work according to a drawing, graphic, table, diagram;
- laboratory and practical work;

- test tasks.

### 3. Types of practical work

Mathematical dictation.

Proceed from the tasks of the studied item:

- include tasks for repetition, poorly mastered material;
- all tasks should be as close to the studied material as possible;
- mastering the technique of self-control.

Lessons - reports:

- homework is given ahead for two weeks on a card.

Practical work to consolidate knowledge, skills and abilities at the final stage.

Drawing up schemes. Tables.

Tests.

Requirements:

- certainty;
- simplicity;
- unambiguity;
- equal difficulty.

The modern educational process cannot be imagined without a test control system. The use of tests allows you to save time, check a wide range of students' knowledge of the subject, the level of formation of certain skills and abilities.

Laboratory work

- construction of graphs and their application;
- use of models, drawing tools;
- data processing according to the formula and average results;
- the use of tables, reference books;
- connection with other disciplines.

Creative "Special Assignments"

Naturally, at different stages of learning, independent work is used to achieve various goals: at the stage of comprehending the educational material, independent work is aimed at understanding the meaning of the studied concepts and rules; at the stage of skills formation, independent work is primarily aimed at working out the correctness of the actions performed, and at the stage of skills formation, they are aimed at practicing the speed of the actions performed. Naturally, the formation of students' skills for independent study of mathematics at each of these stages has its own specifics.

Let's consider in more detail.

At the stage of acquaintance with the content of the studied material, independent work with the text of the textbook is fruitful. Generally speaking, the text of the textbook intended to be read after the teacher's explanation and the text that is designed for students to read independently should be different.

It should be remembered that independent reading of a mathematical text is a very difficult task due to the fact that this text is usually full of information, the references cited in it may slip out of sight of students, and some remarks may seem superfluous. Therefore, when choosing material for independent work with a textbook, the teacher has to take into account the level of accessibility of the text of the textbook. A combination of different methods is of great help. For example, the teacher explains part of the new material himself, while the other part from the textbook suggests studying on his own.

For the purposeful formation of this skill, some teachers use the following algorithm.

- 1) Read an example of solving a problem in the book and draw up a general plan for solving such problems.
- 2) Check if it can be used to solve another problem of this type.
- 3) Solve a number of tasks of a new type, using your plan and adjusting it if necessary.

The problem of enhancing the independent learning activity of students is closely related to the problem of developing their mathematical culture, with the problem of formulating a system of various educational and cognitive tasks in the process of teaching mathematics.

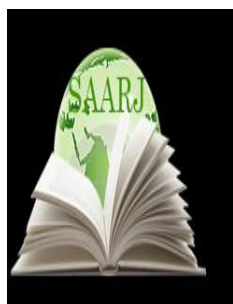
The ability to solve problems, the skill in solving them is, perhaps, the most important thing in teaching mathematics.

To develop skills in solving problems, of course, students will need to solve many and the most diverse problems; but they should be solved not mechanically, not indiscriminately, but consciously and deliberately, relying on indisputable logic.

Note that thinking through tasks on your own is the best way to get into the essence and spirit of tasks. Thinking over tasks can occur according to a given formula, rule or topic.

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## PROBLEMS OF TEACHING MATHEMATICS IN PRIMARY GRADES AND SOME WAYS TO SOLVE THEM

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### ABSTRACT

*The article is devoted to a retrospective analysis of the formation and development of methods of teaching mathematics at school. In the direction of the development of methodology and methodological training, there can be the integration of subject methodologies, as a dialogue of methods on the functional-target, organizational-activity and content aspects.*

**KEYWORDS:** *Primary Classes, Mathematics, Teacher, Students, Method, Method, Psychology, Tasks, Education.*

### INTRODUCTION

The modernization of the professional training of a modern primary school teacher, one of the key dominants of which is the methodological and mathematical component, provides for the study and use of the historical experience of the formation and development of the system of teaching mathematics in schools of the republic. This allows, on the one hand, to reveal the peculiarities of the domestic system of training primary school teachers, and on the other hand, it is the key to the creative use of the methodological heritage in the context of modern changes in school and teacher education.

Among school subjects, mathematics has appeared as long as the school system itself. In different historical periods, the attitude to the subject was ambiguous, but at all times school mathematics belonged to the compulsory general education subjects. Therefore, when determining the goals, content and tasks of the methodological and mathematical training of future primary school teachers, it is advisable to track their modern design for those reform processes in primary education that influenced the professional training of primary school

teachers. The foregoing requires a periodization of the process of formation and development of the methodology of teaching mathematics to younger students as a separate science.

Ya.A. Komensky (1592-1670) Illuminating the general didactic rules, he paid much attention to the study of arithmetic. For the first time in the history of didactics, he characterized visualization as the "golden rule of education", substantiated the principle of conformity of upbringing (the need to take into account the nature of the child), gave a theoretical justification for the classroom teaching system, he was familiar with the experience of fraternal schools in Ukraine. Ya.A. Comenius created the first illustrated textbook for young students "The World of Sensual Things in Pictures" (1768 published in Russian).

I.G. Pestalozzi (1746-1827) In his works "Lingard and Gertrude", "Small works", developed a methodology for teaching children arithmetic. He put forward the idea of developing education, formulated didactic principles of consistency and gradualness in learning, defended the principle of systematicity. I. Pestalozzi - the founder of the method of primary teaching of the native language, arithmetic, elementary geometry, geography, gymnastics. He tried to simplify the methodology of primary teaching of the native language, counting and measurements so that it could be successfully used not only by primary school teachers, but also by any peasant mother during classes with her child. Defining the main approaches to the methods of teaching arithmetic, I. Pestalozzi replaced rote memorization with free reasoning, the automatism of written calculations according to the rules - with oral exercises over the numbers of the first hundred. He initiated the concentric placement of arithmetic material, separating a hundred into a separate concentrate. However, work on this concentrate by I. Pestalozzi had no connection with the arithmetic theory. I. Pestalozzi considered the unit to be a simpler element of the number. By successively adding and subtracting units, he strove to create in the child's mind the correct concept of number, considering it as the ratio of the set and the unit. For teaching arithmetic in elementary school, I. Pestalozzi created a special didactic material - tables, where whole numbers were depicted using strokes. On this ground, the method of the German methodologist A. Grube grew up, which is called the method of numbers or monographic.

A.V. Disterweg (1790-1866 rr.) In his "Guide to the education of German teachers" (in 1829) posted arithmetic material on concentrates. Developing the positive that was contained in the system of I. Pestalozzi, A. Disterweg established the following stages in the study of integers: the first ten, the second ten, the first hundred, significant numbers. Within each of these concentrates A. Disterweg recommended to study not the composition of numbers, but actions (one after another). Thus, the foundations of the method were laid, which was later called the method of action or computational.

Mathematics is one of the most important disciplines that 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 academic subject contains the necessary prerequisites for the development of students' cognitive abilities, 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 to a particular problem, the

student acquires the skills of rational explanation of his actions, to do it accurately and concisely, without adding unnecessary words or expressions.

Math lessons in primary school are strikingly different from those in older grades. A mathematics teacher in primary grades should, like other teachers at this stage, have the skills of a psychologist and educator, in addition to their main responsibilities. Because training during this period implies not only the presentation of knowledge in various academic disciplines, but also its upbringing in the psychological and personal terms.

Like other subjects, mathematics presupposes the mastery of the following knowledge and skills: a) gives the concept of natural number, zero, natural number of numbers, their properties, the concept of ordinary decimal fractions; b) forms in the minds of students 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), units of measurement, various quantities and their ratios; c) gives the concept of the metric system of measures, measures of time; d) the ability to carry out four basic arithmetic operations (addition, subtraction, multiplication and division) with multi-digit numbers and fractions; e) develops in students the ability to solve simple and complex problems.

To achieve the above goals in mathematics lessons, various methods are used that are aimed at the most complete transfer of educational material to students.

Teaching methodology is a means of joint activities of a teacher and students, with the help of which the teacher transfers knowledge and skills to the student. These methods come in many varieties. The teacher chooses which of them will be 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 have managed to show their effectiveness. More often in other elementary grades, when explaining materials on various academic disciplines, including mathematics, the story method is used; when applied to mathematics, it is called the method of presenting knowledge. Along with it, they use the method of conversation. In the course of the conversation, the teacher sets tasks for the students, in the solution of which the latter will have to use the already existing knowledge.

The methodology of teaching mathematics is closely related to other sciences, primarily with pedagogy, developmental psychology, ethics, native language and literature. Recently, the use of modeling methods has been increasingly noticed. Teaching mathematics in secondary general education schools, including in primary grades, contributes to the formation of such personality traits as accuracy, punctuality, perseverance and strong will.

Also, mathematics can help educational purposes. This subject teaches students to think about rationality. If the lessons of the native language and literature help to reveal the child's creative abilities, gives him a field for improvisation, mathematics teaches us to firmly assess a particular situation, draw the right conclusions and make the most correct, acceptable decision in a given situation.

Mathematics forms in students such forms of thinking as comparison, analysis, and the ability to generalize conclusions. Also, solving a mathematical problem, the student gets the opportunity to improve the correction of memory, sharpen the 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 passing.

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 are to the students.

It is important to remember that a teacher whose teaching methods are considered to be interesting for students to perceive wins among them. Indisputable authority and as a result, in the lessons of such a teacher, they are engaged in more diligent efforts to get his praise. It is easier for such a teacher to convey to the students the educational material provided for this particular lesson.

Why do some teachers manage to gain confidence in children, while others, with all his undoubted pedagogical knowledge, do not succeed? Because, as noted above, they must first of all 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 for mathematics - they grasp the teacher's explanation on the fly, easily perform mathematical actions and solve problems of different levels of complexity. But, as a rule, there are few such children in the primary grades. In the course of research, it was found that a child who experienced difficulties with addition and subtraction in preschool age also has them in primary grades, which undoubtedly prevents him from assimilating mathematical material.

As the math problems get more difficult over time, the problems of these children get worse. It is all the more important that the teacher can find out the number of such children in a given class and build a lesson plan taking into account this detail.

Primary school teachers deal with this problem in different ways. Some practice dividing children into groups depending on their level of knowledge and ability in mathematics. In such cases, stronger or slightly weaker groups are formed. The teacher gives these groups tasks based on their abilities - the strong group solves more difficult problems, the weak ones are not so difficult.

The teacher gradually complicates the tasks of the lagging group, step by step bringing such students closer to the level of children from the strong group. It should be noted that this method has a number of its advantages, but it is also not without its disadvantages. Its advantage can be considered the fact that children in lagging groups have the opportunity to catch up with their classmates from a strong group, to strengthen their problem-solving skills to eliminate their shortcomings. But it must be taken into account that this method can lead to stratification of students, dividing them into leaders and outsiders. Since children in primary grades are not yet very confident in themselves and in their abilities, such a division can hurt his pride, and especially impressionable children, even traumatize the psyche. Therefore, the teacher who decides to use this method should be as attentive as possible to the psychological climate of the class, not to allow the arrogant attitude of students from a strong group in relation to children from a weaker group.

Another method of teaching mathematics is also known - the teacher transplants a strong student in mathematics to a weak student during the lesson, 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, feels more relaxed next to a peer and, using a live example, to see how problems are solved, a classmate can reveal the essence of the problem of a given problem in a language that is understandable for him. and explain how to solve it. But this method gives a result only when friendly relations are 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 expert on children's characters. Because in such teams there is always a leader and a follower. If the leading student learns well the follower can improve his problem solving skills he will actually learn to solve arithmetic examples. But if the leader in terms of character is stronger, but learns worse, this method will not give anything good, since he will dominate in the pair and a student who is strong in his studies but weak in character will do all the work for him. In such cases, the lagging student will not learn anything, all his activities in the team will only lead to cheating the problems solved by the other student. As you can see, teaching mathematics can be carried out using various methods and methods in order to use the time allotted for the lesson in the most rational way, in terms of conveying educational material to the consciousness of students. Although mathematics is an exact science, nevertheless, teachers can experiment, apply, various aids, music, movement, everything that can show children all the beauty and power, as well as the importance of this discipline in everyday life.

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## A STUDY OF MEASURING CUMULATIVE ADAPTIVE CAPACITY FOR CLIMATE CHANGE IN SRI LANKA

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### ABSTRACT

*Climate change is considered as the major threat to the human beings in the future. Vulnerability to the climate change refers to the potential of a system to be harmed by an external threat and it is a function of exposure, sensitivity to impacts and the ability or lack of ability to cope or adapt. Adaptive capacity represents the ability of a region or community to cope and thrive in the face of change. In this context, an attempt has made to construct an index to measure the adaptive capacity using five assets as economic, social human, physical and natural. The data set obtained from Sri Lanka Household and Expenditure Survey covering 25000 households. The algorithm used to construct index of adaptive capacity in this paper follows as Weighted Principal Component (WPC). Positive relationship between adaptive capacity and social assets is clear followed by economic assets and physical assets, but human assets have been attributed a negative association. Batticaloa, Jaffna, Ampara, Moneragala, Trincomalee, Vavuniya and Puttalam districts had lower adaptive capacity, alone with Colombo and Gampaha had a higher level of adaptive capacity.*

**KEYWORDS:** *Adaptive Capacity, Cumulative, Weighted Principal Component, Climate Change*

## INTRODUCTION

Disaster affecting human beings are the result of complex interaction between human and natural system. Due to this interaction most of the activities are totally based on environment activities even simply breathing. It will have multi directional effect on humanity in terms of several socio-economic factors like agriculture, health (disease prevalence), sea level rise, scarcity of labour etc. Several damages will be taken place unless proper adaptation strategies are implemented in proper time.

Natural climate variability has always been a challenge to human livelihoods. Human-induced climate change has lent a complex new dimension to this challenge. Evidences show that the natural climatic variability, compounded with climate change will adversely affect millions of livelihoods around the world (IPCC, 2007). The rural communities in the developing countries are expected to be affected more due to their extensive dependence on climate sensitive livelihood options, and limited adaptive capacity to adapt to the changes.

Adaptive capacity is defined as the capacity of an economic, social, environmental or other system to cope with or recover from a potentially damaging external influence. These external influences can be identifying as natural or manmade. When considering about the climate change concept, adaptive capacity is generally describes the ability of the system to cope with the impact of climatic changes. Meantime adaptive capacity can be defined as the capacity of a system to adapt if the environment where the system exists is changing. It applied to ecological systems and human social system

According to the ADB report in 2009 showed that as one of the most vulnerable regions in the world, Southeast Asia is likely to suffer more from climate change than the global average due to its long coastlines, high concentration of population, economic activity in coastal areas and heavy reliance on agriculture, natural resources and forestry. So considering about Sri Lanka is also heavily sensitive natural resource based activities and agricultural activities for uplift their livelihood as a main source.

## LITERATURE REVIEW

Concept of adaptive capacity comes most of the time assistance with vulnerability assessment. Adaptive capacity is broadly defined as the ability of a system (region and community) to cope and thrive in the face of change. According to the definition of Intergovernmental Panel on Climate Change's (IPCC), it denotes 'the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities or to cope with consequences'.

Interactional theory posits that a geographically bound local society and locality-oriented collective action are the foundations of community (Wilkinson, 1991). From this perspective, social interaction over time is the structure of community and occurs primarily through different loosely bound, constantly evolving and interacting fields. Communities vary in their physical exposure to threats, and it is widely recognized that adaptation is place, culture, and issue specific. This means that strategies to facilitate and enhance adaptive capacity also must attend to context (Armitage and Plummer 2010:291) and recognize that capacities do not exist or are not developed uniformly across all communities (Adger et al. 2007). For example, Smit and Pilifosova (2001:19) observe that "what may work in one place or with one socioeconomic group

may not work or may not be feasible elsewhere.” While all communities have some degree of adaptive capacity, some analysts have observed that it is generally not developed specifically to respond to environmental change (Handmer 2003) and might actually be hazard specific (Brooks 2003). Finally, temporal scale is often overlooked but important to consider. For example, adaptation (e.g., installation of air conditioners) at one time can “impose externalities” at others (Adger et al. 2005:80) and the temporal characteristics of disturbance events vary (e.g., in Florida hurricanes occur in a predictable season whereas wildfires can occur throughout the year), affecting potentially different timing of adaption for different disturbances.

New studies present that adaptive capacity is influenced not only by economic development and technology, but also by social factors such as human capital and governance structures (Klein and Smith, 2003; Brooks and Adger 2005; Næss et al., 2005; Tompkins, 2005; Berkhout et al., 2006; Eriksen and Kelly, 2007).

### **PROBLEM OF THE STUDY**

Capability assessment has now been accepted as a requirement for the effective development. There are various rational for investigating the significance of adaptive capacity of climate change. Many of the analytical frameworks for assessing adaptive capacity based on large scale such as national level, and less attention was given to represent capacity at local and community levels. In this research mainly will focus on to address this three questions as who are the less adaptive capacity district in the country?, what socioeconomic factors influence the adaptive capacity of the different district level deviations? and what is the extent and nature of their adaptive capacity in relation to climate extremes?

### **RESEARCH OBJECTIVES**

The primary aim of this research is to construct an index of adaptive capacity to climate change for district level aggregation. In the context of the global warming problem, assessing adaptive capacity is an important component of any attempt to define the magnitude of the threat.

A secondary aim of this article is to clarify the links between conceptualized adaptive capacity index and the fitted adaptive capacity index and to identify the deviation of those two situations. Adaptation is a topic of considerable policy relevance and concern but, to date has not been effectively assessed, to address the relationship between the indicators and theoretical models of adaptation relevant for incorporation into global integrated assessment

### **METHODOLOGY**

#### **Study area**

To discuss the adaptive capacity, Household and expenditure survey 2009/2010 was used. Population frame for the HIES Survey 2009/2010 was the housing units in all census blocks. However, only 22 districts out of 25 were completely enumerated in this census of the remaining three districts in the Northern Mannar, Kilinochchi and Mullaithivu were not enumerated.

#### **Sampling method**

Stratified sampling: - when the population is heterogeneous or of different segments or strata with respect to the variable or characteristic under study, then it is stratified. First the population divided into a number of sub- groups or strata. Each stratum is homogeneous and random. In the

collection of data in HIES 2009/2010 is also follow stratified random sampling. A two- stage stratified sampling procedure was used as the sample design. The population frame was first stratified into three sectors (rural, urban and estate) and later districts in the nine provinces.

### **Statistical tool**

The algorithm used to construct indices of adaptive capacity in this paper follows, with the inclusion of data standardization for the input variables and the final index scores. The computations are carried out using the following steps:

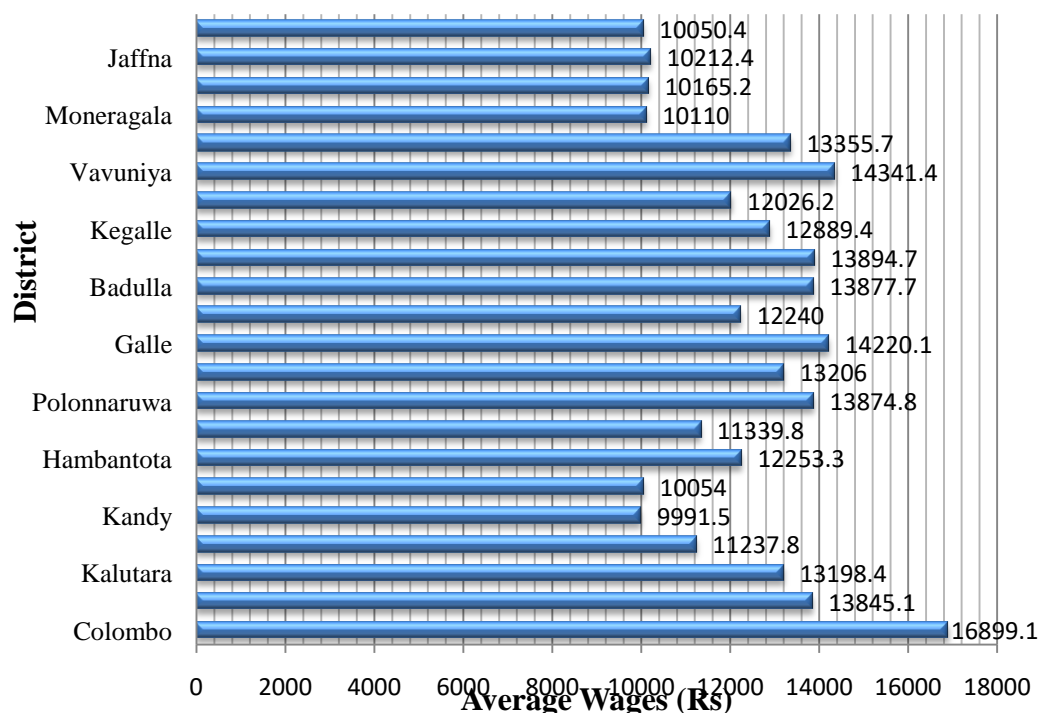
Having choosing the suitable variables, standardize all input variables by subtracting the mean and dividing by the standard deviation. As a next step weights should be assigned to these indicators an appropriate means of creating sub-indices need to be chosen. The application of weighting in this paper assigned as weight by Principal Component Analysis (Nelson et al., 2010b; Gbetibouo & Ringler, 2009; Cutter, Boruff, & Shirley, 2003).

Loadings from the first component of PCA are used as the weights for the variables and the weighted value for each variable varies between -1 and +1. The sign (+ or -) of the variables denoting the direction of relationship with other variables used to construct the respective index. The magnitude of the weights describes the contribution of each indicator to the value of the index. Stepwise PCA was run with the standardized input variables for the selected dimensions under each sub-index and statistical software (SPSS16) used to assign the weights. Select the number of components to be further used based on the un-rotated solution. If desired, rotate the initial solution which is presented as much as easy to interpret. For this case Varimax Rotation are applied: this rotation tends to load each variable highly on just one component. This often leads to easier component interpretation. Then the weights obtained from first-step PCA either in un-rotated or rotated solution, individual variables and their magnitude is explained separately against for the CACI.



**RESULTS AND DISCUSSION****FIGURE 01**

Distribution of average wages of the head of the family according to District



Source: (Household Income and Expenditure Survey 2009/2010)

For the calculation of average wages, first consider only wages of the head of the family. As a next step, divide the total wages by total number of households in a domain or in an area. Out of 19958 household data, higher average wages of the head of the family are reported in Colombo (Rs 16899) and lowest in Kandy (Rs 9991.5). Considering about North and West East provinces, average wages are comparatively low due to agricultural works, but in higher in West and Southern provinces

**TABLE 1 PERCENTAGE DISTRIBUTION OF MAIN OCCUPATION FROM THE EMPLOYED HEAD OF THE FAMILY**

District	Government	Semi-government	Private sector	Employer	Own account
Colombo	10.2	3.9	60.4	2.9	22.6
Gampaha	9.5	3.4	57.7	2.2	27.1
Kalutara	10.9	3.0	58.6	1.5	26.1
Kandy	13.3	6.1	51.1	2.6	26.9
Matale	13.7	7.6	35.4	1.8	41.5
Nuwara Eliya	8.2	31.6	34.0	1.5	24.8
Galle	12.6	3.4	54.8	2.8	26.3
Matara	11.7	3.2	51.6	2.5	31.0
Hambantota	13.8	3.4	37.6	1.2	44.0

Vavuniya	13.3	3.0	46.9	5.4	31.4
Jaffna	23.4	2.3	37.7	2.3	34.3
Batticaloa	15.1	1.4	50.0	0.6	32.9
Ampara	13.3	4.2	53.7	2.7	26.2
Trincomalee	21.2	2.8	45.3	1.3	29.4
Kurunegala	13.0	2.7	40.6	1.4	42.3
Puttlam	8.4	3.0	53.1	1.6	33.8
Anuradhapura	16.5	2.8	22.0	1.0	57.7
Polonnaruwa	18.2	3.5	23.2	0.9	54.2
Badulla	12.3	3.1	42.2	0.7	41.7
Moneragala	10.8	2.6	23.6	0.7	62.3
Ratnapura	10.4	1.7	49.2	2.2	36.5
Kegalle	13.6	1.8	60.4	1.2	23.0
<b>Total</b>	<b>12.3</b>	<b>4.3</b>	<b>48.5</b>	<b>2.0</b>	<b>32.9</b>

Source: (Household Income and Expenditure Survey 2009/2010)

Occupation is the one of key factor that determine the way of earning to the family. Since most of the families are totally depend on their occupation. With aim of evacuation these thing employed heads are considered and their age should be greater than ten. The survey has also found that among the total household employed heads in Sri Lanka, 48.5% are from private sector as listed in table 1 and it is around three time higher when comparing with both government employees and semi government employees. Second place is holding by both own account worker and unpaid family worker (32.9%).

Considering about the employed heads in Colombo(60.4%), Gampaha (57.7%), Kalutara(58.6%), Kandy(51.1%), Nuwara Eliya(60.4%),Galle(54.8%), Matara(51.6%), Vavuniya(46.9%), Jaffna(37.7%), Batticaloa(50%), Ampara(53.7%), Trincomalee(45.3%), Puttlam(53.1), Badulla(42.2%), Ratnapura(49.2%) and Kegalle(60.4%) are recorded in private sector is the highest employment status which is presented the same result in Sri lanka. while for the remaining districts are holding own account worker and unpaid family worker together as their main occupation (Matale-41.5%, Hambantota-44%, Kurunegala-42.3%, Anuradhapura-57.7%, Polonnaruwa-54.2% and Monaragala-62.3%).

## RESULTS OF WEIGHTED PRINCIPAL COMPONENT ANALYSIS

### Sub-indexes

From the weights obtained from first-step PCA, individual theme of sub- index values for in each asset types were calculate using aggregation method. Indicator's scores in first step were taken as input of second step. After determining theme of sub index then as a second step performed PCA to obtain weight on each sub index using aggregated theme as an indicators. Results of sub index are presented in bellow.

Economic asset: First principal component of the economic asset for three response variables are the linear compound

$$Economic = 0.585 \text{ Income} + 0.714 \text{ Employment} + 0.798 \text{ Expenditure}$$

and results from the first principal component for economic asset is recorded as their associated Eigen value is 1.489, accounting for 50 %, of the variation in the original data. All three variables are weighted as positively on economic indicator. Greater economic resources increase adaptive capacity. Lack of financial resources limits adaptation options. The poorest regions face higher risk levels. Level of adaptive capacity is highly dependent upon the economic status of community and nations. Lack of wealth is directly that makes a community vulnerable. The ability to absorb losses and enhances resilience to hazard in facts. Wealth enables communities to absorb and recover from losses more quickly due to insurance, social safety nets, and entitlement programs. Higher the economic status could be seen as higher the adaptive capacity.

Social asset: Relative to social assets below is the general form for the formula to compute scores on the first component extracted (created) in a principal component analysis with explaining 61.8% from the total variation  $Social = 0.645 Education + 0.778 Leadership + 0.913 Culture$

Skilled and trained personnel reduce adaptive capacity and measure it with the assistance of education which is recorded as direct relation with adaptive capacity. The greater the connectivity of the population to any association, then it is easier to promote disaster preparedness and early warnings that could substantially reduce vulnerability in the face of a hazard and increase the adaptive capacity.

Human asset: Using PCA for the human asset with two variables only the first component could be created with 83.49% from the total variation and calculated scores are with the following equation

$$Human = -0.914 Demography + 0.914 Dependence$$

In addition to economic and social status being important in the adaptive capacity to environmental shocks, the structure and health of the population may also play a key role in determining standard. Age is an important consideration as the elderly and young tend to be inherently more susceptible to environmental risk and hazard exposure (O'Brien and Militia, 1992). In general terms, populations with a low dependency ratio (high proportion of working age adults) and in good health are likely to have the higher adaptive capacity but generally in Sri Lankan context most are assumed to be having an excellent job after their pension. As well as in classifying younger dependent, do in fact contribute to household livelihoods and GDP (through the informal economy) in most of the areas.

Physical asset: PCA generated for the results of aggregated dimension under first step, two components with Eigen values greater than 1.0. These two components accounted for 87.48% of the variance in the defined five variables. First principal component of the economic asset for five response variables are the linear compound;

$$Physical = -0.609 House - 0.743 Land + 0.612 Communication + 0.935 Energy + 0.885 Transport$$

Better access and information enables a household planning proactive adaptation measuring against climate risk, greater access to information increases likelihood of timely and appropriate adaptation and greater variety of infrastructure can enhance adaptive capacity, since it provides more options, characteristics and location of infrastructure also affect adaptive capacity. Access to information and communications infrastructure is arguably important in influencing

vulnerability (Blaikie et al, 1994). Since loading on communication, energy and transport and access are recorded as positive weights against adaptive capacity

### Final index

PCA generated two components with eigen values greater than 1.0. These two components accounted for 82% of the variance in the dataset.

**TABLE 2 PCA ON SUB-INDEX**

	Component	
	1	2
Economic assets	0.827	-.674
Social assets	0.916	-.287
Human assets	-0.468	-.093
Physical assets	0.565	.832
Natural harm	-0.743	.714
Eigen values	2.366	1.747
% of total variance	47.32	34.95
Cumulative % of variance	47.32	82.27

Source: (Household Income and Expenditure Survey 2009/2010)

A data-driven aggregate index of adaptive capacity was formed through the weighted average of five composite sub-indices: economic well-being, social asset, demographic structure, physical asset and natural harm. Generally, as discussed early a sub-index with a positive score is associated with higher adaptive capacity, and conversely a sub-index with a negative factor score is associated with lower adaptive capacity. Social assets are the most important determinant of overall adaptive capacity followed by economic and physical.

The relationship between economic assets and adaptive capacity to climate change disaster is clear that the higher the level of economic assets available to a household in a particular district, the higher the level of their adaptive capacity, since they would likely be unable to afford changes to their livelihoods in case of hazard exposure. Ideally a quantitative analysis of the monthly household budget (income and outgoings), employment status could be used. Simply strong economy acted as a safety net in the case of environmental risk and hazard exposure.

Social capital inevitably plays key role in determining adaptive capacity in this case. Theoretically, the greater the number of these, the higher an adaptive capacity since, this indicator reflects adaptive capacity in two ways; one was education and other with leadership.

Physical capital is another type where showing a direct association with adaptive capacity. Typically physical capital can refer to the number of assets owned by a household, such as type of house, number of bed rooms, cultivated land and associated equipment, ownership of durable goods, things which are used for communication (radio, TV, phone) purpose and transport (car/van), access to facilities. Higher the ownership of these items, higher the adaptive capacity against climate risk.

It is useful to note that in this study, human assets have been attributed a negative weight from PCA. This implies, all things being used to determine adaptive capacity are family status and dependence. These proxies inevitably cooperate with negative lording on the PCA as concerned in totally.

Furthermore, final result of natural proxy on adaptive capacity is recorded as opposite relation compare with other sub index under adaptive capacity. When constructing natural sub index concerned due natural harm. Thus the above result is shown, indicating higher the harm from natural disaster lower the adaptive capacity in general.

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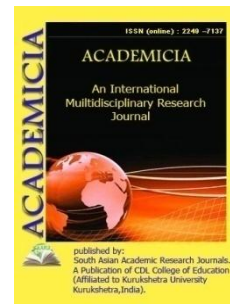
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## **INFLUENCE OF TECHNOGENIC IMPACT ON CHANGES IN ENGINEERING-GEOLOGICAL AND HYDROGEOLOGICAL CONDITIONS OF THE KASHKADARYA DEPRESS AND ITS ASSESSMENT**

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### **ABSTRACT**

*The article deals with the main problems of changes in the hydrogeological and engineering-geological conditions of irrigated areas during reclamation development. On the irrigated lands of the region, two main engineering and geological regions are distinguished. The first area - proluvial middle-, upper-quadernary and alluvial modern terraces. The terraces of this area are formed from the surface by loess-like loams and sandy loams (3-5 m to 20-35 m thick), the second area from the surface by loams and sandy loams (3-5 m thick), underlying gravel-pebble deposits with a thickness of 20-30 m and more. Engineering-geological assessment of the territory of irrigation and drainage construction is given on the basis of hydrogeological conditions transformed during irrigation. The issues of soil moistening, flooding of territories during irrigation, changes in the composition and properties of soils, subsidence of loess soils, etc. are considered. The assessment of the reliability of forecasts and recommendations for their implementation is given.*

**KEYWORDS:** *Depressions, Loess Rocks, Irrigated Lands, Groundwater Levels, Drainage, Canal, Subsidence, Water Distribution Devices, Engineering And Geological Conditions, Subsidence Of Soils, Filtration Properties Of Soils*

## INTRODUCTION

The natural conditions of the Kashkadarya depression are very diverse in engineering-geological and hydrogeological terms, and in general, complex. The piedmont weakly and strongly dissected plains are composed of a thick stratum of subsidence varieties of loess rocks. They are densely cut by a gully-block network. The foothill part of the depression belongs to a highly drained and very highly drained zone. Low relief elements form the alluvial and alluvial-proluvial terraces of the river, and the peripheral parts are occupied by proluvial deposits of the third and fourth terraces.

### Main part

Irrigated lands within the Kashkadarya depression are located mainly in two engineering-geological regions - on alluvial, alluvial-proluvial terraces. The terraces of the Kashkadaryarivers and its tributaries are characterized by the presence of middle and Upper Quaternary proluvial, as well as modern alluvial deposits. Alluvial deposits are represented by gray sands, and the upper one with a total thickness of 3-5 to 20-35 m consists of three layers: loam and sandy loam with a thickness of 3-5 m lie on top, below - gray sands 5-10 m thick, which are underlain by red-brown clays thickness from 3-5 to 7-10 m. Middle and Upper Quaternary sediments are represented by loess rocks with a thickness of 10 to 40 m, the maximum is traced on the right bank of the Kashkadarya, where it reaches 50-70 m. They are represented by typical loess and loess-like loams and sandy loams of pale yellow, yellow-brown color [1].

Irrigation, as a complex of reclamation measures, including the construction of an irrigation-collector network and reservoirs, vertical and horizontal drainage, canals and water distribution devices, pumping stations, planning, etc., dramatically changes the natural engineering-geological and hydrogeological conditions and landscape appearance of the territory. The assessment of regional changes in engineering-geological conditions under the influence of irrigation using the example of the Karshi steppe was carried out by the methods of comparison and analysis of hydrogeological and engineering-geological maps compiled for various periods, materials for interpreting aerospace images, stationary study of engineering-geological processes and other works. Based on the use of this approach, the following regional patterns of changes in those components of engineering-geological conditions, for which forecasts of their changes in connection with the forthcoming irrigation were made, were identified [2].

The development of irrigation of the territory of the Kashkadarya depression caused sharp changes in the rise of the groundwater level and the dynamics of the areas of their spatial distribution. According to the map of depths, the occurrence of groundwater compiled by E.V. Mavlyanov, K.P. Pulatov, I.U. Usmanov, Y. Irgashev, Y. P. Isomatov and others (1963, 1966, 1969) at the beginning of irrigation (1956), when the irrigated area reached 210 thousand hectares, groundwater in most of the Karshi steppe lay at a depth of 10 -20 m and more, areas with a depth of groundwater up to 3.0 m were only 98 thousand hectares and were noted within the deltaic parts of the Kashkadarya River, in endless depressions (Charagil, Shorsai, Tudakulshor, etc.).

In 1986-1992, when the irrigated area of the Karshi steppe reached 350,164 thousand hectares, respectively (the zone of old and new irrigation), in the distribution of groundwater depths compared to 1963, there were large changes: areas with shallow groundwater depths increased sharply by reducing areas with great depths. The area of sites with a groundwater depth of 2.5-5.0 m as of 1982 increased almost 4 times, 1992 - 8 times, 2010 - 12 times. At the same time, the area (almost 6 times) of areas with a groundwater depth of 5-10, 10-20 and more than 20 m has sharply decreased [3].

The rates of rise of the groundwater level were different depending on the initial depth of occurrence, the dynamics of the areas of spatial distribution, the intensity of groundwater flow, the amount of water supplied for irrigation, the regime and technique of water supply and the rate of irrigation and ranged from several centimeters to several meters per year. According to the materials of long-term regime observations by the Kashkadarya regional department "Kommunrenage", the average value of the average annual rise in the level of groundwater in 2015 on the left bank of the Kashkadarya River in the zone of new irrigation varies from 0.98 to 1.2 m / year, averaging 1.0 m / year ...

A significant part of the irrigated and promising for irrigation territory of the Karshi steppe is composed of loess rocks with subsidence properties. Moistening of loess soils with irrigation water from above, a rise in the level of groundwater from below can cause their subsidence.

Subsidence properties of proluvial loess of siltlike rocks are characterized by unevenness and high values of the coefficients of relative subsidence at natural pressure (from 0.01 to 0.134 MPa). The main reasons for the high subsidence are a large value of natural pressure and a large thickness of subsidence strata (more than 20-30 m), high porosity (on average 48.9%), an unequal rate of irrigation, as well as the presence of virgin lands with undeveloped subsidence within the irrigated lands. deep bedding of the groundwater level [4].

## Results and Discussions

The assessment of the manifestation of subsidence of loess rocks was carried out on the basis of the analysis of materials from the stationary study of the dynamics of subsidence deformations in field conditions along canals, irrigated fields, at test sites located in different parts of the described region (Table 1).

**TABLE 1 RESULTS OF INSTRUMENTAL MEASUREMENTS OF DEFORMATION OF LOESS SOILS AT TEST SITES**

No	Characteristics of the site and the thickness of the subsiding strata on the day of the first measurement, m	date measuring	Number of sequential blocks	Capture area by subsidence phenomena, m <sup>2</sup>	Subsidence crack width, mm	The total amount of surface sinking, mm	Drawdown value in m for the period of measurements
1.	The upper part of the Djalavashsayhollo w (Kashkadarya	11.06.1986	3	8,6	4	32	0,086
		22.06.1987	3	12,0	6	48	
		04.07.1988	3	13,6	8	53	
		15.06.1989	3	14,4	10	69	

	hollow, 14.0	19.09.1990	3	16,9	13	75	
		12.08.1991	4	20,2	16	86	
2.	The left side of the Bozbichkenskaya hollow (Kashkadarya depression), 22.0	15.09.1981	3	14,0	8	61	0,192
		24.08.1983	3	13,6	11	84	
		13.08.1984	3	16,0	11	96	
		25.09.1986	3	17,5	12	122	
		18.06.1987	4	28,4	18	135	
		24.08.1992	5	44,0	20	156	
		14.07.2000	5	44,0	22	163	
		23.07.2005	5	44,0	28	192	
3.	Along the Eski- Ankhor canal (Kashkadarya depression), 14.5	11.05.1984	2	32,0	12	134	0,640
		18.07.1985	4	186,0	36	485	
		24.08.1986	6	248,0	44	620	
		26.07.1990	6	262,0	46	636	
		17.08.1995	6	263,0	46	638	
		28.07.1999	6	264,0	48	639	
		23.07.2005	6	284,0	49	640	

As a result of stationary studies, it was found that the subsidence of loess soils within the test ranges occurred relatively unevenly, and its magnitude varied from 0.086 to 0.640 m. The mode of subsidence deformations of soils is mainly associated with the propagation of the moistening contour from above due to irrigation water and water saturation from below when the groundwater level rises. The level of groundwater, occurring within some test sites before irrigation at a depth of 14-20 m, due to irrigation, rose to a depth of 2.5-4.0 m from the earth's surface. The degree of groundwater mineralization varied from 10.0-15.0 g / l to 3.0-10.5 g / l. The largest subsidence of loess soils occurred in the zone of influence of the canal, its value is 0.640 m. In the area of sections 1 and 2, where the territory is not irrigated, subsidence is very weak. In general, for the study area within the irrigated area (site 4) and the influence zone of the Eski-Ankhor canal (site 3), the value of subsidence of loess rocks can be taken on the basis of averaging observation results over two characteristic sites equal to 0.487 m [4].

Assessment of the reliability of forecasts and recommendations for their implementation. The reliability of forecasts is characterized by the absolute and relative magnitude of their probable error in assessing changes in engineering-geological and hydrogeological parameters; lead time - the duration of the period from the moment of transmission of the forecast to the interested organization to the moment for which the forecasts are calculated. The assessment of the accuracy of the previously compiled engineering-geological forecasts was carried out by comparing the forecast estimates with the actual (field) changes in individual components of engineering-geological conditions under the influence of long-term irrigation. At the same time, to obtain a quantitative assessment, E. V. Mavlyanov [2] proposed to use the expression

$$K = \frac{A_{\phi}}{A_n}$$

where K is the criterion of convergence;

Af - values of actual (full-scale) changes in the components of geotechnical conditions;

Ap - predicted values of changes in the components of engineering and geological conditions.

Using the value "K" as an evaluation characteristic of the comparison, it is possible to assess the degree of reliability of the previously compiled forecasts of changes in engineering and geological conditions in connection with the irrigation of the Karshi steppe [1]. For this, taking into account the experience of engineering-geological and hydrogeological substantiation of projects for irrigation of large areas of South-West Uzbekistan, it is tentatively proposed to distinguish three categories of reliability of regional forecasts, depending on the value of "K" (Table 2).

**TABLE 2**

Credibility categories	Assessment of forecast accuracy	The value of convergence criteria
I	The forecast is good (reliable)	$0,8 \leq K \leq 1,2$
II	The forecast is sat is factory	$0,5 \leq K < 0,8$ $1,2 < K \leq 1,5$
III	The forecast is unsat is factory	$0,5 > K > 1,5$

Presenting the values of forecasts and actual estimates of changes in individual components of engineering-geological conditions under the influence of irrigation into the formula, the convergence criterion was calculated to determine the category of reliability of engineering-geological forecasts compiled by various authors to justify irrigation projects for the Kashkadarya depression.

The results of calculating the convergence criteria are shown in Table 3, from which it can be seen that for all the considered components of the engineering-geological conditions there are certain coincidences and differences of the forecast estimates with the actual changes depending on the methodology adopted by the authors of the forecast development. Calculations for assessing the accuracy of forecasts of the rise in the level of groundwater, compiled by Khodzhibaev N.N., Alimov M.S., Neiman B.Ya., Samoilenko V.G., Mavlyanov E.V., Aripov K.I. and others, show a fairly close convergence of the predicted values with the actual values [5].

According to the proposed categories of forecast reliability, the forecasts of groundwater level rise, compiled by these authors, are good (reliable) and satisfactory. The forecast of the groundwater regime, compiled by V.G. Gafurov, is assessed as unsatisfactory. The actual values of the rise in the level of groundwater exceed the forecast by more than 1.5 times [2].

The assessment of the accuracy of regional forecasts of subsidence of loess soils, compiled by G.A. Mavlyanov, Kh.A. Askarov, E.V. Mavlyanov, K.P. Pulatov, Yu.Irgashev, and others, gave quite good results. As can be seen from Table 3, the value of the criterion of convergence of the predicted and actual values of subsidence of loess soils varies from 0.409 to 1.184, which indicates the proximity of the predicted data with their actual implementation. The above results allow the forecasts of subsidence, compiled by G.A. Mavlyanov, Kh.A. Askarov, G.L. Urmanova, P.M. Karpov, E.V. Mavlyanov, K.P. Pulatov, Yu.Irgashev, can also be estimated as satisfactory. Estimates of the accuracy of forecasting the subsidence of loess soils, compiled by Kh.A. Askarov, G.L. Urmanova, using the laboratory method under natural load, showed

unsatisfactory results. The actual values of soil subsidence exceed the predicted values by more than 3 times. Also, the forecast of soil subsidence, compiled by VG Gafurov, turned out to be unsatisfactory, the predicted value exceeds the actual value by more than 2 times [2].

**TABLE 3 RESULTS OF ASSESSING THE RELIABILITY OF FORECASTS OF CHANGES IN ENGINEERING-GEOLOGICAL AND HYDROGEOLOGICAL CONDITIONS IN SOME REGIONS OF UZBEKISTAN IN CONNECTION WITH IRRIGATION**

№	Forecast author	Predicted components	Forecast values	The actual meaning	Prediction convergence criterion	Estimating the convergence of forecasts (after E.V. Mavlyanov)
1	2	3	4	5	6	7
1.	Khodzhibayev N.N., Alimov M.S.	groundwater level	$\frac{2,8 - 3,0}{2,9}$	$\frac{1,8 - 2,0}{1,9}$	0,655	Satisfactory
2.	Neiman B. Ya.	groundwater level	$\frac{1,7 - 2,6}{2,3}$	$\frac{1,8 - 2,0}{1,9}$	0,826	good (reliable)
3.	Khodzhibayev N.N., Aripov K.M.	groundwater level	$\frac{0,9 - 1,1}{1,0}$	$\frac{0,8 - 1,0}{0,9}$	0,900	good (reliable)
4.	Gafurov V.G.	groundwater level	$\frac{1,0 - 1,5}{1,25}$	$\frac{1,8 - 2,0}{1,9}$	1,52	unsatisfactory
		subsidence of soils at natural pressure	0,95-1,05	0,392-0,426	0,409	unsatisfactory
5.	Mavlyanov E.V.	groundwater level	$\frac{2,0 - 2,5}{2,25}$	$\frac{1,8 - 2,0}{1,9}$	0,844	good (reliable)
		subsidence of soils at natural pressure	$\frac{0,16 - 0,50}{0,33}$	$\frac{0,392 - 0,425}{0,409}$	1,26	Satisfactory
		Shore processing	$\frac{45 - 75}{60}$	$\frac{51 - 72}{61,5}$	1,02	good (reliable)
6.	Askarov Kh. A., Urmanova G.L.	subsidence of soils:				
		a) at natural pressure	$\frac{0,07 - 0,14}{0,105}$	$\frac{0,392 - 0,426}{0,409}$	3,900	unsatisfactory
		b) underload 0.3 MPa	$\frac{0,28 - 0,43}{0,355}$	$\frac{0,392 - 0,426}{0,409}$	1,352	Satisfactory
7.	Mavlyanov G.A.	subsidence of soils	$\frac{0,5 - 1,0}{0,75}$	$\frac{0,387 - 0,632}{0,547}$	0,73	Satisfactory



8.	Mavlyanov G.A., Pulatov K.P.	subsidence of soils	$\frac{0,59 - 0,73}{66,5}$	$\frac{0,64 - 0,92}{0,780}$	1,02	good (reliable)
9.	Pulatov K.P. Irgashev Yu. Isomatov Yu.	subsidence of soils	$\frac{0,42 - 0,66}{0,54}$	$\frac{0,57 - 0,71}{0,640}$	1,184	good (reliable)
10.	Karpov P.M.	subsidence of soils:				
		a) at natural pressure	$\frac{0,650 - 0,760}{0,650}$	$\frac{0,382 - 0,626}{0,549}$	0,84	good (reliable)
		b) under load 0.3 MPa	$\frac{0,15 - 0,50}{0,325}$	$\frac{0,382 - 0,626}{0,549}$	1,66	unsatisfactory
11.	Irgashev Yu.	Filtration properties of soils	$\frac{0,10 - 0,50}{0,32}$	$\frac{0,08 - 0,62}{0,36}$	1,12	good (reliable)

Note: The numerator contains the minimum and maximum values, the denominator is the mean.

## CONCLUSIONS

1. The study shows that the consistent implementation of projects for irrigation and economic development of the territories of the Kashkadarya depression causes profound changes in engineering and geological conditions not only within the irrigated area, but also in the whole region. At the same time, there is no sufficient amount of materials presented on the study of regional changes in many of the most important components of engineering and geological conditions under the influence of prolonged irrigation.
2. Based on the results of assessing the reliability of the forecasts, it can be noted that the regional forecast of the rise in the level of groundwater, the forecast of subsidence of soils and changes in the filtration properties of soils in the aeration zone, were compiled for some areas of the Kashkadarya depression in accordance with the categories of reliability we proposed are satisfactory and good.
3. The methods of the previously developed regional engineering-geological forecasts, which received good and satisfactory assessments, can be recommended for practical use when conducting regional engineering-geological studies and surveys related to the justification of irrigation and reclamation of large territories of Uzbekistan at the early stages of design.
4. Special attention should be paid to the development of integrated regional studies in the irrigated regions of Uzbekistan for the purpose of studying the changes in all the main components of the hydrogeological and engineering-geological conditions of large territories under the influence of irrigation. These studies will serve as the basis for the development and improvement of the scientific and methodological basis for integrated engineering and geological forecasting of changes in the geological environment in connection with irrigation

and reclamation development and related other types of construction of civil, industrial and other structures covering large areas of the arid zone.

5. The proposed comprehensive approach to assessing the reliability of regional engineering and geological forecasts, which makes it possible to present it in quantitative form, can be applied in other irrigated regions of Uzbekistan.

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## OUR MEDIEVAL ORAL AND WRITTEN LITERARY HERITAGE - AS NATIONAL AND UNIVERSAL VALUES

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### ABSTRACT

*This article discusses the importance of teaching the peoples of the Turkic world a common cultural heritage in patriotic education. It is known that Karakalpakstan is a country where great culture flourishes. Our great ancestors Beruni, Khorezmi, Zamakhshari, Rabguzi were born here. The homeland of the Karakalpaks is vast, and once they lived on the banks of the Syrdarya. Turkestan was the homeland of the Karakalpaks. Ahmed Yassavi and Ahmed Yugnaki, who were born in Turkestan, are also representatives of Karakalpak literature. Deep teaching young people the life and work of such great scholars serves to enhance their sense of patriotism.*

**KEYWORDS:** *Turkic World, Cultural Heritage, Turkic Peoples, Patriotism, Youth, Oguznama, Korkytata Book.*

### INTRODUCTION

The cultural heritage of the ancient Turkic peoples plays a special role in educating the youth in the spirit of patriotism and thus realizing that the peoples of this country are brothers, friends and relatives. Such heritage includes Orkhon-Yenisei written memoirs of the X-XIV centuries, Oguznama, Korkytata book and others. It is difficult to say that I did not fully understand the history of the emergence and formation of national literature without studying this heritage, from the Turkic-speaking peoples of Central Asia, Kazakhstan, the Caucasus and the Altai Mountains to the Ottoman Turks. This is because these heritages arose as the common ancestral property of all the peoples or tribes of the same Turkic-speaking peoples in the periods created by them in the same ethnic groups, in the same political circles, and in the same state structures.

**Main part**

From the Turkic-speaking peoples of Central Asia, Kazakhstan, the Caucasus, and the Altai Mountains to the Ottoman Turks, it is difficult to fully comprehend the history of the emergence and formation of national literature without studying this heritage. This is because these heritages arose as the common ancestral property of all the peoples or tribes of the same Turkic-speaking peoples in the periods created by them in the same ethnic groups, in the same political circles, and in the same state structures.

But this is only the theoretical side of the issue. The practical and methodological side of the problem is even more important. Because this cultural heritage is not only one of the obstacles to the emergence and formation of any national literature belonging to the Turkic-speaking peoples, but also the younger generation of those Turkic-speaking peoples, especially those seeking their own national neutrality. Loyal love is one of the most important and inseparable means of protecting its impartiality and thus educating and strengthening these peoples in the spirit of friendship and brotherhood.

In educating the youth in the spirit of respect and love for such sacred values as the heritage of these ancestors, first of all, the qualities of this cultural heritage, which are characteristic of all Turkic-speaking peoples, have a great educational value. When a teacher teaches these heritages to young people, he must take into account the principles of common heritage, the right of inheritance equal to the heritage of ancestors, as the guiding principle of his method of teaching his heritage. Only then will he be able to fully achieve his successful, noble goal of educating the youth to the above-mentioned sacred feelings through this cultural heritage. To do this, it is not enough for the teacher to explain to the students the ideological and artistic differences of these common cultural heritages. These cultural heritages must be interpreted in close connection with the history of the people, nation, state and homeland that created that spiritual artistic world. In such a situation, this common heritage itself helps the teacher to prove his point.

In these legacies, including the Karakalpak heroic epics, which are an integral part of these legacies, the concept of homeland is given as follows:

Arjaǵı – Túrktan, berjaǵı – Qoqan, Háziretimnińmákanbasqanjayları.	The other side is Turkestan, the other side is Kokand, The places where my Lord lived.
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or:

Jaylawım - Úrgenish, arqası – teńiz (Ájiniyaz)	Pasture is Urgench, and north is Sea (Azhiniyaz)
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or:

Xorezm, Túrktan – máskanıń meniń, Bes qala, teńizdiń átirapı – elim (Berdax)	Khorezm, Turkestan is my homeland, Five cities, around the Sea are my country (Berdakh)
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These writings and epic works show us that the boundaries of the sacred feeling that we are the homeland of the Turkic peoples are wider.

According to cultural heritage and history, the concept of homeland for the first time for the Turkic peoples is in the foothills of the Altai and Ural Mountains, in the deserts of Mongolia, on the slopes of the Balkans, Aral and Issyk-Kul, beyond the Ceyhun-Sayhun River. . Also recently, the Baburids in India, the Safavids in Iran, Turkestan and the Golden Horde were ruled by various Turkic states and khanates. The Turkic peoples formed the Seljuk and Ottoman Turkic empires in the Middle East, Anatolia and Rome. The homeland of the Turkic peoples is also understood as a vast area stretching from the Altai Mountains to the Atlas Mountains, from the Viana Gates to the latitudes of the Ganj, and from the Volga to the Sahara Desert [1, pp. 24-30].

The cultural, lyrical and epic heritage confirms not only that these regions were the homeland of the Turks, but also that the Huns, Oguz-Kipchaks, Pechenegs and their descendants, the Khagans and Khans, were active in building this homeland. For example, the blue Turks in the Orkhon inscriptions were the descendants of the Huns who were the first to establish world domination and statehood. In 545, when the Chinese ambassador came to Tuman (Bumin), the first blue Turkish kagan, all the Turks congratulated each other on the arrival of the ambassador - a sign of the maturity of the Turkish state [2, pp. 227-228].

These facts in Orkhon inscriptions tell young people that the historical roots of patriotism are very ancient. Because, like Istemikagan and Bilge kagan, their ancestors were involved in statehood and homeland building.

For example, in the inscription "Tonikok" Tonikok says that, "Kapagankagan ascended the throne at the age of 27, did not sit during the day and did not sleep at night. I was in his service, sweating my red blood and shedding my black skin like water. The Turkish nation has won because we are united"[3, pp. 290-291].

The story "Oguznama" is about Oguzkhan, the king of the Hun-Turks in the late third century BC [4, pp. 3-4]. Oguz Kagan founded the first Hun-Turkish state of Oguz state. This epic mythical state is historically similar to the state of the Huns and Turks, founded by a great historical figure - Tan Yusuf Mete. Mete (Mode - AK) is the Oguz khan in Turkish folk epics, and Alp Er Tunga in Turkish written sources is the great Turanian king Afrosiab in Ferdousi's Shakhnama [5, pp. 3-5].

Oguz - Alp Er Tunga - Afrosiab committed many heroic actions on the way to the formation of the Great Turanian state and died bravely.

There are talked about him in such ritual songs:

Alp Er Tońǵa óldi me? Yalganshı dúnya qaldı ma? Zamana óshin aldı ma? Endi júrek jarılar.	Is Alp Er Tunga dead? Is it a false world? Has time taken its toll? Now the heart breaks.
--	--

These lines in the poem teach students the need for heroism for the sake of security and unity of the Motherland, the Turkic world.

The book "Korkyt Ata" is one of the legends proclaiming that the Turkic peoples are a brotherly people.

The history of the Pechenegs, which dominates the ethnogenesis of the Karakalpaks, is connected with the history of the Oguz-Kipchuk people, who published the book "Korkyt Ata" [6, pp. 8-11].

It is a mistake to say that the songs "Korkyt Ata" belong only to the Bayandur (Seljuk-Azerbaijani), Kazan-Salor (Seyilkhan-Turkmen) tribes.

This poem was first written orally by the Syr(Turkestan) tribes in the 9th century, and was written in the 15th century in the Bayandurkhan palace in the Caucasus. It is dominated by the genealogy and history of the Oguz-Kipchak-Pecheneg (Karakalpak – A.K.) ulus, which existed along the Syr Darya in the 9th-10th centuries. Therefore, he is at the forefront of the epic of all Turkic tribes [7, p. 183]. This is clearly seen in the storyline between the poem "KorkytAta" and the Karakalpak heroic epics and the typological similarity of heroic motives [8, pp. 39-48].

Such a common heritage can be found in the written and cultural literature of our ancestors Beruni, Ahmed Yassavi, Ahmed Yugnaki, Suleiman Bakyrangani, Rabguzi, Al Kerderi and others who were engaged in creative activities in the Karakalpak lands or in areas where certain groups of Karakalpaks lived in the X-XV centuries [9, pp. 3-4].

These scientists cannot be identified as representatives of literature, culture and science of this or that nation. These scientists and creators became bright stars of all Turkic peoples in their epochs as representatives of one nation.

Many scientists were born in Karakalpakstan.

Abu Raikhan Al Beruni, the great encyclopedist of the 10th century, was born in 973 in the Kiyat (now Beruni). Abulkasim Mahmud al-Zamakhshari, who was called "God's neighbor" in the Turkic and Arab-Islamic world in the 11th-12th centuries, was born in 1075 in a village between Gone Urgench and Takiyatas.

Suleiman Bakirgani, one of the leading figures of Sufism in the 12th century, was buried in the cemetery in the village of Bakirgan near Kungrad. Rabguzi, also known as the with his book "Contribution of the Prophets", was born in the 1920s in the town of Rabotoguz (now Tok-Kala) in the village of Akmangit. If we turn to the history of culture of the 14th century, then the famous historian, jurist and philosopher of that period Mahmud bin Ali Sheikh Al Kerderi was born in Kerder, which is considered the ancient state of the Karakalpaks. The author of the famous epic "Muhabbatnama" Khorezmi was born in Kat (Beruni). All these are our great compatriots.

Such ideas can be said about one of the poets of the Turkic world of the XII century Khoja Ahmed Yassawi, Ahmed Yugnakiy. One of the great representatives of Sufism, the poet Khoja Ahmed Yassawi, was born in the 11th century in Sayram, one of the ancient cities of the SyrdaryaKarakalpaks. He died in 1166 in Turkestan. Turkestan was the homeland of the Karakalpaks. Ahmed Yugnaki, the author of HibbatulHaqoyiq, one of the oldest philosophical and didactic epics in the Turkic world, was born in the Karakalpak village of Yugnak in Turkestan. Most importantly, there is no doubt that Suleiman Baqirgani, Rabguzi, Yassau, Yugnaki, Khorezmians were famous masters of artistic expression in the Turkic world. Beruni, Zamakhshari, and Kerderi, who were great encyclopedic scholars, were also great representatives of the world of literary expression. For example, Beruni was the author of a collection of selected poems "Mukhtar-ul-ashar", as well as a prose work in Turkish literature entitled "Memories of



the ancestors of the past." Zamakhshari also wrote many artistic and philosophical treatises, songs, and epics. His works "Fundamentals of Words" and "Introduction to Literary Studies" prove that he was the first literary theorist in the Turkic Islamic world. Kerderi's book, Naqsh-al-Faradis (The Open Path of Paradise), written in 1357, is not only a scholarly work, but also a written literary work of the period. This book also contains a number of fairy tales, legends and myths that are close to the spirituality of the Karakalpak people.

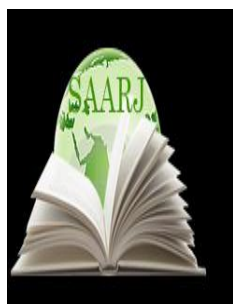
These sources show, firstly, that the Karakalpak region is an integral part of the ancient great Turkic world, including the hearth of Khorezmian civilization, and secondly, it shows that our ancestors also made a great contribution to the development of Turkic culture.

## CONCLUSION

In general, the study of these cultural heritage, common to all Turkic-speaking peoples, first of all calls on the Turkic-speaking peoples to love the Turkic world, the Turkic homeland, its independence, their ancestors, kinship. Second, they awaken a sense of national pride. The reason is that these common heritages form the basis of national and universal values.

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## **TPOLOGY OF CONSONANT SYSTEMS OF RUSSIAN AND UZBEK LANGUAGES (TO THE PROBLEM OF POSSIBLE INTERFERENCE OF THE NATIVE LANGUAGE)**

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### **ABSTRACT**

The article provides a comparative typological study of the phonological systems of the Russian and Uzbek languages. Such a study made it possible to reveal not only the similarities and differences, but also the phonological specifics of each of the compared languages to determine the alleged interference of the native language in the Russian speech of Uzbeks. Using the comparative typological method and methods of internal interpretation and oppositions, positional methods, significant differences in the phonemes of the Russian and Uzbek languages were revealed in acoustical and articulatory features, the specificity of the system of consonant phonemes of the Russian language was determined, which generates interference in the Russian speech of Uzbeks (substitution, under-differentiation, semi-differentiation, over-differentiation, reinterpretation) on the paradigmatic axis, taking into account the differential features of phonemes. The interference of the native language is shown, associated with the existing discrepancies in the positions and the implementation of the phonemes of the Russian and Uzbek languages.

**KEYWORDS:** *Typology; Comparative Typological; Phoneme; Consonantism; System; Substitution; Under-Differentiation; Semi-Differentiation; Re-Differentiation; Reinterpretation; Neutralization; Opposition.*

## INTRODUCTION

In modern conditions, typological study of languages is one of the most important tasks of modern linguistics. It is directly related to the theory of linguistic contacts in general and to the problem of bilingualism, in particular, it is relevant for understanding the interference in language and speech. Typological research of languages will help to reveal not only their common features, differences, but also reveal most fully the individual characteristics, the specifics of the compared languages. But such research is also important in practical terms. Its study is a necessary condition for the successful organization of teaching the Russian language: long-term observation of the Russian speech of Uzbek students has shown the great practical importance of this problem. The theoretical and practical aspects of this problem are inextricably linked, since life itself brings to the fore the problem of mastering the Russian language perfectly as the language of international communication.

The purpose of this article is a comparative typological study of the phonological systems of the Russian and Uzbek languages. Such a study made it possible to reveal not only the similarities and differences, but also the phonological specifics of each of the compared languages to determine the alleged interference of the native language in the Russian speech of Uzbeks.

The main method was comparative typological. In the work, as necessary, the techniques of internal interpretation and oppositions, positional techniques are used.

Let's consider the consonants of the Russian and Uzbek languages in order to identify possible interference in the Russian speech of the Uzbeks. The sound aspect of a language in this sense can be described in two directions: acoustic-articulatory and phonological, in which phonemes act as units that differentiate linguistic meanings, i.e. functional. It seems to us that taking into account both the acoustic-articulatory and functional aspects is mandatory in terms of comparison in order to predict the interfering influence of the native language. After all, it is well known that for the sound system of the Russian language, it is not the presence of voicedness or softness of consonants per se (these signs, as acoustic-articulatory, are characteristic of consonants in the Uzbek language as well), but the opposition of signs. This means that in the process of learning the Russian language, one should study consonants not in isolation, but in opposition like /з- ц/, /з'-ц'/, /б-п/, /б'-п'/ (Reformed, 1961, No. 4, p. 23).

## THE MAIN FINDINGS AND RESULTS

In this case, it is usually believed that the ideal would be the simultaneous assimilation not of individual pairs, but of the entire system of consonant correlation, since under these conditions the student would perceive the consonants of the Russian language not as a set of sounds with certain characteristics, but as a system built according to special rules ... But a speaker of another language is not able to convey the entire range of opposition in terms of hardness - softness, deafness - voicedness, etc. pairs of consonants of the Russian language, if he has not previously mastered their articulation. Therefore, only taking into account the combination of acoustic-articulatory and functional sides of sounds when subordinating the first to the second can give significant results.

In the practice of teaching Russian to non-Russians, the effectiveness of the comparative method raises no doubts. Therefore, many courses of practical phonetics are written on the basis of comparing the sound structure of the native language and the target language, since "... the path

that can to some extent guarantee students from the dangers of mixed bilingualism is the path of conscious repulsion from the native language". (Shcherba, 1947, p. 57; Reformed, 1961., No. 4, p. 27). The purpose of this article is a comparative typological study of the phonological systems of the Russian and Uzbek languages. Such a study made it possible to reveal not only the similarities and differences, but also the phonological specifics of each of the compared languages to determine the alleged interference of the native language in the Russian speech of Uzbeks.

The main method was comparative typological. In the work, as necessary, the techniques of internal interpretation and oppositions, positional techniques are used.

This approach is determined not only by methodological requirements, but also by the theoretical position on the importance of comparative - comparative learning of languages.

Any - phonetic - comparative research cannot do without comparing the phonemic composition of languages. By phonemes, we mean: "... the sound units that are used to distinguish between words and word forms are called phonemes ... Each phoneme is a set of essential features that distinguish it from other phonemes." (Barannikova, 1973, p. 81).

So for the phonemes /д/, the essential features are hardness, voicedness, consistency, (дентальность) -denticity/ detail. These features constitute a single, phonological content of a phoneme, inextricably linked with its relationship to other phonemes. N.S. Trubetskoy wrote on this occasion: "The definition of the content of a phoneme depends on what place this or that phoneme occupies in a given system of phonemes, that is, ultimately on what other phonemes are opposed to it" (Trubetskoy, 1960, p. 74).

A phoneme in a speech stream can be realized only in the form of one of its variants. Among them, it is important to highlight: a) the main variants are those phonetic variants in which the implementation of the phoneme is less dependent on the environment. The most independent is the pronunciation of phonemes in an isolated position, where the influence of only the subsequent sound is possible; b) phonetic variants caused by the conditions for the realization of the phoneme, i.e. her position, environment, influence of previous and subsequent sounds (Barannikova, 1973: 83).

I must say that the main options are of decisive importance for comparison, but it is necessary to take into account the secondary ones associated with the influence of ambient sounds.

As you know, the process of setting the sounds of a foreign language begins with mastering the sound types of a given language in their basic version, i.e. with the implementation of the corresponding phonemes in a less dependent position. Only after this is the consideration of their phonetic, combinatorial variants. For example, when studying Russian consonants, you must pronounce them in a strong position, and only then - at the end of the word, before the consonants. Consequently, the basis for setting the pronunciation of the main variant of Russian consonants in Uzbeks should be their comparison with the corresponding sound types of the Uzbek language, also taken in the main variant. The fact that the characteristic of the main variant of the phoneme most closely corresponds to a single phoneme is the basis for comparing the consonant system of phonemes of the Russian and Uzbek languages outside the flow of speech.

The consonant system of Russian phonemes is formed by /б/, /б' /, /п /, /п' /, /в /, /в' /, /ф /, /ф' /, /г /, /г' /, /к /, /к' /, /д /, /д' /, /т /, /т' /, /з /, /з' /, /с /, /с' /, /ж /, /ж' /, /ш /, /ш' /, /л /, /л' /, /м /, /м' /, /н /, /н' /, /п /, /п' /, /х /, /х' /, /ц /, /ч' /, /й / (see: Musatov 2006, p. 173; Modern Russian language, 2002, p. 64), and the Uzbek language - /б /, /в /, /г /, /д /, /ж /, /з /, /к /, /л /, /м /, /н /, /п /, /п /, /с /, /т /, /ф /, /х /, /ч /, /ш /, /к /, /ғ /, /х /, /нг / (see: Abdurasulov, 2006, p. 30-31; Abdurakhmonov, 1995, pp. 17-24).

Comparison of consonant phonemes of Russian and Uzbek languages shows significant differences in acoustical-articulatory features.

1. In quantitative terms, the Russian language is characterized by the presence of a relatively large number of consonant phonemes, primarily due to the soft consonants that do not correspond in the Uzbek language; in addition, the phonemes ц, ф are absent in the primordial Uzbek words.

2. Only a few phonemes of the Russian and Uzbek languages have a great acoustic-articulatory similarity. These are phonemes: /б/, /п/, /м/, /с/, /з/, /д/, /т/, /н/, /п/, /ч/. The Russian consonant phonemes /в/, /л/, /ж/, /ш/, /к/, /г/, /х/ are very different from the corresponding consonants of the Uzbek language.

3. Specific consonants of the Uzbek language that have no correspondence in Russian are: /к/, /ғ/, /х/, /нг/.

In general, the differences in the articulatory bases of the Russian and Uzbek languages are quite significant. The Uzbek articulation base, in contrast to the Russian, is characterized by less active work of the speech organs in the anterior-middle position and more active work in the posterior-middle, posterior and deep-posterior positions. The work of the lips when pronouncing Russian consonants are more active and energetic than when pronouncing Uzbek consonants. (Abdusamatova, 1971, p. 32.).

The softness of a consonant in the Uzbek language is a phenomenon of a combinatorial order, due to the quality of the neighboring vowel: with the vowels /е/, /и/ some consonants are somewhat softened. The non-combinatorial softness and hardness of consonants in the Uzbek language can be said only in relation to consonants /к/ - /к/, /г/ - /ғ/ (Kononov, 1960, p. 38).

The specificity of the system of consonant phonemes of the Russian language generates in the Russian speech of the Uzbeks on the paradigmatic axis the following relations, taking into account differential features: 1) substitution, 2) underdifferentiation, 3) semi-differentiation, 4) overdifferentiation, 5) reinterpretation (see: Rabinovich, 1970.)

Consider them in sequence below:

1) Substitution, i.e. substitution occurs when there is a one-to-one relationship in the systems of the languages being compared. So, in the consonant systems of the Russian and Uzbek languages, the following relations are observed (The number 1 under the phoneme denotes the belonging of this phoneme to the phonological system of the Russian language, the number 2 - to the system of the Uzbek language. The sign = means: the phoneme of the Russian language can be equal when implementing the phoneme of the Uzbek language.)

$$/ч_1/ = /ч_2/, /й_1/ = /й_2/, /у_1/ = /у_2/$$

The Russian phoneme /ч/ is realized as the sound /ч'/ which the speakers of the Uzbek language can easily reproduce, because Uzbek /ч/ coincides with Russian. When the Russian phoneme /j/ is played, insignificant phonetic interference can be observed, because the Uzbek phoneme /j/ is pronounced much more intensely than the Russian one. When reproducing the phoneme /w/ of the Russian language, Uzbeks replace it with their own phoneme /ш/, which is pronounced with palatalization.

2. Under-differentiation, i.e. facts of confusion, non-discrimination of phonemes. They appear when two or more phonemes of the Russian language are perceived as one phoneme. Thus, paired lip-lip phonemes of the Russian language can be perceived as one; /б<sub>1</sub>/ - /б'<sub>1</sub>/ = /б<sub>2</sub>/; /п<sub>1</sub>/ - /п'<sub>1</sub>/ = /п/; /м<sub>1</sub>/ - /м'<sub>1</sub>/ = /м<sub>2</sub>/, so that the six labial-labial phonemes of the Russian language correspond to three labial-labial phonemes of the Uzbek language. For Uzbeks, soft consonants are especially difficult, but when pronouncing hard consonants, deviations can be expected, since "when pronouncing the Uzbek consonants /б/, /п/, /м/ the preliminary mouth solution is somewhat wider than when pronouncing the corresponding sounds of the Russian language" (Reshetov, 1959: 214).

The four labiodental phonemes of the Russian language correspond to two phonemes of the Uzbek language: /ф<sub>1</sub>/ - /ф'<sub>1</sub>/ = /ф<sub>2</sub>/; /б<sub>1</sub>/ - /б'<sub>1</sub>/ = /б<sub>2</sub>/ . In the pronunciation of labiodental phonemes in the Russian speech of Uzbeks, one can expect interference by changing the location of the gap, and for soft ones also by palatal articulation.

The ten front-lingual consonants of the Russian language correspond to the five consonant phonemes of the Uzbek language: /ц<sub>1</sub>/ - /ц'<sub>1</sub>/ = /ц<sub>2</sub>/; /з<sub>1</sub>/ - /з'<sub>1</sub>/ = /з<sub>2</sub>/; /т<sub>1</sub>/ - /т'<sub>1</sub>/ = /т<sub>2</sub>/; /д<sub>1</sub>/ - /д'<sub>1</sub>/ = /д<sub>2</sub>/; /н<sub>1</sub>/ - /н'<sub>1</sub>/ = /н<sub>2</sub>/ . Phonemes /ц/, /з/, /т/, /д/, /н/ of the Russian language are equal to the corresponding phonemes of the Uzbek language. When playing soft phonemes of the Russian language: /ц'/, /з'/, /т'/, /д'/, /н'/ in the Russian speech of the Uzbeks, their softness is not differentiated.

Under-differentiation is also observed in the pronunciation of posterior linguals: /х<sub>1</sub>/ - /х'/ = /х<sub>2</sub>/ . In addition, when reproducing the hard phoneme /х/ of the Russian language, a peculiar pronunciation is expected in the Russian speech of Uzbeks, because in the Uzbek language /х/ is pronounced when the back of the tongue wall approaches the back of the soft palate and with more vigorous articulation than Russian /х/ (Kissen, 1952, p. 119).

3. Semi-differentiation is manifested when two phonemes of the Russian language correspond to one in the Uzbek language, which differs from both hard and soft consonants. Semi-differentiation is established between the following phonemes of the compared languages /л<sub>1</sub>/ - /л'<sub>1</sub>/ = /л<sub>2</sub>/; /п<sub>1</sub>/ - /п'<sub>1</sub>/ = /п<sub>2</sub>/; /к<sub>1</sub>/ - /к'<sub>1</sub>/ = /к<sub>2</sub>/; /г<sub>1</sub>/ - /г'<sub>1</sub>/ = /г<sub>2</sub>/ . The phonemes /к/ /и/ /г/ in the Uzbek language, like и /п/, /л/, are semi-soft sounds (Reshetov, 1959 p. 220).

But in the Russian speech of Uzbeks /п/, /к/, /г/ are not softened before the back vowels (including before their advanced variants, i.e. before /а/, /у/, /о/), and before the front vowels /е/, /и/ are almost completely pronounced as soft, i.e. here the principle of combinatorial softness, characteristic of the Uzbek language, is manifested. The phonemes /л/, /л'/ of the Russian language in the Russian speech of the Uzbeks are pronounced as /л'/, see: /лу/на' /л'у/бит = /л'у/на, /л'у/ in both cases, pronounce a semi-soft sound /л'/.



4. Redifferentiation is manifested when more than one phoneme of the Uzbek language corresponds to one phoneme of the Russian language. This relationship is formed between the following phonemes of the compared systems: /ж<sub>1</sub>/ = /ж<sub>2</sub>'/, /дж<sub>2</sub>'/; /г<sub>1</sub>/, /г<sub>1</sub>'/ = /г<sub>2</sub>/, /г<sub>2</sub>'/; /х<sub>1</sub>/, /х<sub>1</sub>'/ = /х<sub>2</sub>/, /х<sub>2</sub>'/; /к<sub>1</sub>/, /к<sub>1</sub>'/ = /к<sub>2</sub>/, /к<sub>2</sub>'/. In a systematic comparison, these relations stand out, but this phenomenon is not observed in the oral Russian speech of Uzbeks, which is associated with a significant difference in the Uzbek language phonemes /к/ and /к'/, /х/ and /х'/, /г/ and /г'/ and the rare use of the phoneme /ж'/, which occurs in only a few words.

5. Reinterpretation, or re-decomposition, stands on the verge of paradigmatics and syntagmatics. Reinterpretation-based interference can occur when the phoneme of a secondary language is reproduced by a combination of two sounds. This phenomenon can be attributed to the relationship between /с/ system of the Russian and Uzbek languages, i.e. ц<sub>1</sub> = с<sub>2</sub>.

Based on our observation, /ц/ can be turned on

a) In under differentiation: /ц<sub>1</sub>/ = /с<sub>2</sub>/ (see: court, here, the circus is pronounced by Uzbeks /с/уд, /с/уда, /с/ирк);

b) In reinterpretation: /ц<sub>1</sub>/ = /т<sub>2</sub> + с<sub>2</sub>/. For example: pronounce бор/тс/о instead of бор/ц/о.

It should be noted that the long soft sounds /ж'/ and /ш'/ of the Russian language are especially difficult for the Uzbeks. Uzbeks, even very fluent in Russian, replace long sounds /ж'/и/ш'/ with short /ж'/ and /ш'/ or /ш' ч'/.

The phoneme /нг/ of the consonant system of the Uzbek language has no correspondences in the consonant system of the Russian language.

The originality of the articulatory base of the Uzbek language is reflected in the ratio of the system of phonemes of the Russian and Uzbek languages. The most important difference is the absence of hardness-softness opposition, which is one of the specific features of Russian consonantism, in the consonant system of the Uzbek language. Hence, a number of characteristic features in the pronunciation of consonants of the Russian language in different positions.

At the absolute end of a word, before consonants and non-front vowels, i.e. vowels /а/, /о/, /у/ consonants of the Russian language, differing in hardness-softness, coincide in the Russian speech of Uzbeks, compare: бра/т/ instead of бра/т/ and бра/т'/, /глу/п/ instead of /глу/п/ and /глу/п'/; го/рк/ а instead of го/рк/а and го/р'к/а, га/лк/ а instead of га/лк/а and га/л'к/а; тры/б/а instead of тры/б/а and тры/б'/я; /ох/ instead of /вол/ and /вол'/; /мал/ instead of /мал/ and /м'ал/. The opposition /л-л'/ is neutralized in the Russian speech of the Uzbeks, since pronounced as semi-soft /л`/ : /мол`/, /мил`/, /пыл`/ instead of /мол/, /мил/, /пыл/.

The consonants of the Russian language in position before the vowels /и/, /е/ in the Russian speech of the Uzbeks remain soft. The exception is always the hard pronunciation of soft consonants т'/, /д'/, /н'/ of the Russian language in the Russian speech of Uzbeks before /и/, /е/ - this is due to the fact that in the Uzbek language /т/, /д/, /н/ before и/, /е/ do not acquire positional softening. As for the soft pronunciation of consonants of the Russian language before /ы/, this is explained, in our opinion, by the fact that Uzbeks associate /ы/ и /и/ in the positions of consonant + ы and consonant + и with Uzbek /и/ in the position of consonant + /и/. Unpaired soft consonants /ч/, /ж/ in the Russian speech of Uzbeks retain their softness. A solid /ш/ is

replaced by /ш'/ Uzbek. Hard /ц/, /ж/ undergo various changes of another plan /см.выше/, not related to the opposition in hardness-softness.

In other respects, the differences in the phoneme system are less significant. Thus, the sign of deafness-voicedness is phonologically significant for the system of phonemes of both Russian and Uzbek languages. And in that, and in the other language there are consonants that are unpaired in voicelessness. In Russian, these are sonorics, affricate, voiceless /х, х'/; in the Uzbek language - voiced sonorous /ж/, /м/, /н/, /л/, /р/ and voiceless - /ш/, /ф/.

The facts of the preservation and neutralization of the opposition in terms of deafness-voicedness to a large extent coincide. Thus, the position in front of vowels, sonorous and /в/ and /ж/ is strong for consonants in both Russian and Uzbek languages. Hence the consistent preservation of this opposition in the Russian speech of the Uzbeks: был-пыл = /б/ыл - /п/ыл; дам - там = /д/ам - /т/ам; одних - отних = /о/д/них - /о/т/них, etc.

In the Uzbek language, voiced at the end of a word are deafened (The consonants б, д are deafened to a large extent; consonants з, г, ж/джь are deafened somewhat weaker (see: Kissen, 1952, p. 44), therefore, as in Russian, the opposition is deafness-voiced hence, in the Russian speech of Uzbeks: луг - лук = лу/к/; газ - газ = га/с/; пруд - прут = пры/т/, etc. The same neutralization is observed in the position in front of voiceless consonants: обходить - о/пх/одить, разведка - разве/тк/а. But the neutralization of consonants by voicelessness in the position before voiced consonants is not the same: in the Uzbek language, as a result of progressive assimilation, the subsequent voiced is neutralized (аппир - ка/пк/ир»; асбоб - а/сп/об, ниҳоятда - ниҳоя/тт/а, and in Russian, with regressive assimilation, the previous sound is neutralized /сбить - /зб/ить, отдать - о/дд/ать/. Therefore, it is no coincidence that the pronunciation of Uzbek words such as request, unpleasant, asbestos etc. like про/сп/а, не/ст/обровать, а/сп/ ест0

The correlative opposition /ж-ш/ of the Russian language in the Russian speech of the Uzbeks is replaced by the opposition /дж'-ч/ characteristic of the Uzbek language at the end of a word and before voiceless consonants. For example: ло/ч/, но/ч/, но/ч/ка instead of лош/, /нош/, /но/шка.

Opposition /в-ф/ in the Russian speech of Uzbeks is realized as /в-п/. Since the final phoneme 17 of the Uzbek language is not stunned, pronunciation is possible: кро/в/ or кро/п/ instead of кро/ф' (Azizov, 1965: 15).

With regard to oppositions by the method and place of formation, the differences are less.

For the Uzbeks, the opposition /т - ц/, /с - ц/ presents a particular difficulty, which leads to the replacement of /ц/ through /с/ or /тс/: улись/ or /ул'ит-са\_/ instead of /ул'иць/; /л'иса/ instead of / /л'ица./, /л'ица/.

In contrast to the place of education in the Russian speech of Uzbeks, it turns out to be difficult to maintain the opposition: /ф-с/, /ф-х/, /ф-ш/. There are such oppositions in the system of the Uzbek language, but in them /ф/ is realized as /п/. It is appropriate to recall the words of A.V. Mirtov, who, revealing the reason for the wrong pronunciation of the sound f, he wrote: "... the Uzbeks have a tendency (the influence of their language) to pronounce this sound by bringing both lips together, and not the lower lip and teeth, as we pronounce. Hence, their ph is a sound close to n, and in some dialects and completely replaceable 14 "(Mirtov, 1940: 229). Cf. pronunciation: сей/п/, /п/акт, /п/ерма, за/пт/ра instead of сей/ф/, /ф/акт, /ф/ерма, за/ф/тра.

Oppositions 11, 12 are realized in the Russian speech of the Uzbeks as 13. They pronounce 14 instead of 15.

Thus, the existing discrepancies in the phonetic systems of the Russian and Uzbek languages lead to the fact that 1) in the Russian speech of the Uzbeks, oppositions are violated in terms of softness-hardness in all positions (the exception is part of the consonants before and, e), and in terms of voicelessness-voiced in position after voiceless consonants; 2) a number of phonemic oppositions acquire a different realization: /a/ at the end of a word, the phonemes /ж-ш/ and /в-ф/ of the Russian language are pronounced by Uzbeks as /ж/ - /ч/, /в/ - /п/; /б/ opposites /т - п/, /с - п/ are realized as /т/-/тс/ or /с/, /с/-/тс/ or /с/; /б/ opposites /ф - с/, /ф - х/, /ф - ш/ are represented as /п/ - /с/, /п/ - /х/, /п/ - /ш/; 3) there is a distortion of the quality of individual consonants of the Russian language, included in certain oppositions, a loss of softness, changes in the methods of education, etc. These are the most typical cases of interference at the phoneme level.

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## RELIGIOUS TOLERANCE IN EARLY MEDIEVAL SUGH D SOCIAL LIFE

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### ABSTRACT

*In this study, the issue of religious relations, which is one of the most important processes in social life, is revealed through the existing religions in Sughd. The study also provides facts on the spread of Christianity, Monism, and Zoroastrianism throughout the Sughd region. The role of the above-mentioned religions in ensuring religious tolerance throughout the mythology has been explored.*

**KEYWORDS:** *Sughd, Religious Tolerance, Christianity, Monism, Zoroastrianism, Panjikent Posters.*

### INTRODUCTION

At all times, religious relations have been a topical issue. This factor also applies to the early medieval Central Asian region. We all know that Nestorianism played an important role in the penetration of Christianity into Central Asia in the early Middle Ages, a process that played an important role in shaping the interethnic relations of Sughd and Khanate through spiritual and cultural synthesis.

The Nestorians were followers of Patriarch Nestorian of Constantinople. Although the Nestorian doctrine believed in the divine question of Jesus Christ, they had a different opinion on the question of his birth. For this reason, Nestorianism was declared heresy at the Christian cathedral in Ephesus, Byzantium, in 431. As a result, Nestorian Christians left the Roman Empire and called themselves the "Church of the East," to the east of Iran, Central Asia, and other countries carried out propaganda work. Because of the simplicity of their beliefs, the influence of Nestorianism grew very rapidly. As a result, a Zoroastrian priest sat to the right of the Iranian king, and a Christian monk to the other. This situation, of course, provoked the displeasure of the ruling circles, the Zoroastrian priests. As a result of the opposition's ability to convince the king

that Christians are trying to destroy Iran's traditional culture, Christians have left Iranian territory.

However, since the Nestorians could not return to Byzantium, the only available route for them was to the east.

### THE MAIN FINDINGS AND RESULTS

On Christianity in Central Asia, V.V. Barthold: "... there is nothing new about the spread of Christianity in Trans-Saxony during the Sassanid period, which may be the basis of historical research, but based on the fact that Christians already existed in Sughd in the sixth century, they have a bishopric in Samarkand" [4.272].

The emergence of Christian societies and metropolises in Samarkand in the 5th century confirms Barthold's opinion.

In 420 there was a metropolis in Merv. Yazdigard III, a pine ruler killed by the Arabs near Merv, is buried in a metropolitan courtyard, indicating his sphere of influence. Based on this information, we can conclude that Christianity probably came to Sughd from Merv in the V-VIII centuries.

In the VI century in Samarkand there was a department of bishops, and in the VIII century the metropolis was established.

In the centuries of Arab writers of the VIII-IX centuries there are reports of Christians living in the cities of Bukhara, Samarkand and **Zhetysu**. The existence of Christian communities is also confirmed by archeological finds - Christian inscriptions in Turkey, Sughd and Syria.

The sources found justified that Christianity was primarily embraced by urban merchants, aristocrats involved in international trade, and local governors.

Christians were greeted with hospitality in Sughd, where they commemorated the apostle Thomas and his disciples, who passed from Sughd to India. There are also sources that as a result of the development of Christianity in Samarkand in 412-470, Christians in Sughd, Bukhara and Chach established religious organizations such as bishops and metropolitans [5.12.].

The Sogdian ethno-cultural society has enabled people to realize their full potential. In Urgut, for example, there was once a Christian monastery, a Zoroastrian temple, and the Jartepa Buddhist temple. Based on the above historical fact, no one interfered with the activities of the religions operating in Sughd, which in turn portrayed the early medieval Sughd as a center of religious tolerance and tolerance.

The results of our analysis have shown that in Central Asia, religious harmony and tolerance, the synthesis of cultures, have created favorable conditions for the promotion of Christianity.

At the same time, monotheism occupies a special place on the page of interethnic relations in the history of Central Asia. The founder of Monism was Moni ibn Fatak, whose teachings consisted mainly of Christian-Gnostic ideas based on a clear understanding of the Bible. As Zoroastrianism and Buddhism became widespread in the countries, monasticism led to the assimilation of many aspects of these religions. Moreover, its passage through hidden and revealing stages has enabled the creation of new religious doctrines in the most diverse cultural contexts as a result of efforts



on the concept of the common feature of true religion. Nevertheless, Monism has not become a world religion.

During Moni's lifetime, his missionaries entered Central Asia. By the end of the third century AD, Monic communities began to emerge in Egypt, while in the 1970s; Rome became acquainted with the teachings of Monism. Moni, emphasizing that his faith knows no bounds, said: "My faith will be spread in every country and in every language to open and distant lands" [10.74.].

Although Sughd followed traditional (Zoroastrian) beliefs at this time, an analysis of Panjikent murals shows that the religious art of India and Bactria reflected the influence of their iconography of repentance on Sughd. This serves to reveal the cultural ties in interethnic relations.

Among the Sogdians there were communities of monasticism. By the fourth century, monastic communities existed almost exclusively in the Roman and Sassanid empires and in neighboring countries. The Roman government fought against monism: In particular, Diocletian first issued an anti-monastic decree in 297, and later decrees of this content were issued by the Christian emperors in 326, 372, and 381-383. As a result of the work mentioned above, by the sixth century, monasticism in the West had disintegrated.

At the same time, the struggle with all non-Zoroastrian religious organizations began in the Sasanian state, which is why most of the Monks were forced to come to Central Asia. A center for the propagation of monasticism was established in Samarkand, and the center had excellent links and connections with the West and the East. Naturally, in order to continue the spread of monasticism to the east, it was considered very important that the monastic religion had a base in Samarkand and Tashkent, the main cities of Sughd. According to many Arab sources, the Mani was found in Samarkand. The translation of religious literature into the Sogdian language was considered expedient in the widespread propagation of the Monism religion. For this reason, the large number of texts and fragments of the existing monastic teachings in the Sogdian language today indicates that the Sogdian language is widely used in Monism.

The first monastic monastery appeared in Sughd in the IV century. Kang Juan-Chan Min (Eternal Shadow) from Samarkand had a special role in propagating this doctrine among the Turks of the Khanate [8.184].

Under the influence of Sughd, Monism spread to China, and in 584 the first monasteries were built in East China. In the VII century. The official language of Eastern Monism is Sughd, which is why all the works of Monism have been translated into Sughd. Moni's teaching focuses on the visual arts. The first books with a religious content were described by Moni [10.75].

The influence of this was reflected in the miniatures of Afrasyob, Varakhsha, Penjikent, and the early Middle Ages of Central Asia.

The Sogdians traded with China. Even in the early Middle Ages, the Great Silk Road from China to western countries was very popular, Sogdian merchants dominated along the International Transit Road, and built trade colonies along the way. As an example, we can mention the colony south of Lubnor. The Sogdian inscription was found even in the upper reaches of the Orkhon River in the remote Karabalgazun. These data highlight the importance of Sughd in interethnic relations and religious tolerance.



The importance of Zoroastrianism in the life of the Turks in Sughd is reflected in the documents of the Mug archives. 3 – “Sughd marriage certificate” and Nov. 4 – “Duties of the groom to the bride”. These documents record the marriage of a Sogdian girl - Dugduncha (nickname Chata) - daughter of Vius and a Turkish Ottakin (nickname Nidon). The document was drawn up in the House of Law in the presence of several witnesses in the presence of the son of its chief, VakhgukanVarkhuman (*wywyk'n ZKn βrym'n BRY*).

The fact that the documents did not specify the religion or nationality of the boy and girl was also a sign of tolerance in Sughd. The Dugduncha in the document was from the Sogdians, and Ottakin was from the Turkic takin (*tkyn*) of Sughd. The son of the head of the House of Law (*βwntyn'k 's'ny*) Vakhg'ukanVarkhuman (*wywyk'n ZKn βrym'n BRY*) and witnesses of the marriage agreement (*Skatch Shishchor Gigchogli - sk'tc ZK šy-šc /yy-yc BRY*, ChakhrinRamchogli - *cyr'yn ZK r'mc BRY*, ShavMahakogli - *š'w ZK m'y'kk BRY* and secretary RamtishAgushfarnogli - *r'mtyš ZKn 'γwšprn BRY*) were all representatives of the Zoroastrian religion. The logical continuation of Nov.3. In 4, Ottakin confirmed his obligations to the bride with an oath before Mitra-mydr, one of the main deities of Zoroastrianism: "In the testimony of Mitra, I undertake the following - *rtβy ZKn βyy ZY ZKn mydr' nβ'nty* " [6.166].

The Sogdians believed in the god Nana, who was revered not only in Bactria but also in Parthia. This shows that the Sogdians believed not only in foreign religions, but also in anti-Zoroastrian religions [1.252-254]. According to Hen, the negative attitude of the Zoroastrians towards the giants in the dictionary of the Sogdian language, especially in Ustrushan, the word "giant" means "god". However, as a result of archeological research, the gods believed by the Sogdians living in Ustrushona, Ettisuv and Otrar were identified in the same form as the gods believed by the people living there. In our opinion, the reason for this was not in local differences, but in the fact that the Zoroastrian doctrine was propagated without coercion by a strong state apparatus.

Panjakent's sixth-century terracotta sculptures depict a woman wearing a crown. If we classify the position in the statues, they have images of wild animals with their hands tied to their chests (a sign of obedience) and at the bottom [13.129]. We can see that the images quoted are similar to the demonic form and ancient sirens in Babylon [11.119]. Also on the walls of Assyria there is an image in this form with only the wings painted [7.149]. Our terracotta is wingless, unlike the analogues cited. The head of the demons adorned the ossuary with underwater ornaments in the sky (the scene of the soul coming to heaven) and the Erkurgan furnace [12.65-69].

We can see almost everywhere the idea that the depiction of demons served as a tumor against evil forces. For example, in the seals of the Sassanids, too, images of evil hated by Zoroastrians are described as helping to offset its harm [2.35].

However, Panjakent terracotta is not entirely suited to such ideas. They are joined by a belt wrapped in images of pantheon gods depicting the submissive pose of the beast. The above condition indicates the existence of such a deity [3.42].

In pictures depicting epics in Panjikent, demons are often likened to gods. For example, the image of a three-headed demon with a three-horned spear is very similar to Veshparka. Only in one of the episodes does his death at the hands of the protagonist show that he is not a god. Because the evil god Wayne did not suffer such a death.

In addition, the iconography of the pantheon gods depicts the spirit of the harvest sitting on the background of a grain of grain in the ethnography of the Tajik people. The above composition is part of the celebration of the new harvest. The images in the Sogdian icons demonstrated simple forms of worship of ancient farming factors. In the image, the spirit of fertility is seated on a throne, and the royal pine gardens are adorned with the image of a burning fire on his shoulders.

## CONCLUSION

To conclude, in the early Middle Ages, Sughd was characterized by its own tolerance and religious tolerance. Its inhabitants not only believed in Zoroastrianism, Buddhism, Christianity, Monism, and the Qom-Shaman religions, but were not an obstacle to the development of these religions. In addition, the religious ceremonies and customs of some regions are closely intertwined and have played an important role in the spiritual life of the society, religious tolerance and interethnic relations. In the early Middle Ages, the interaction of existing religions in Sughd had a major impact on the development of material and spiritual culture.

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## FEATURE OF THE USE OF TEMPERAMENTS IN THE SOCIO-POLITICAL TEXTS OF THE MODERN CHINESE

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### ABSTRACT

*In modern Chinese, unlike other languages, the expression of time is expressed in auxiliary words, fixed constructions, and word groups. There is a slight difference in the use of temperaments between Chinese oral and written style, and this article discusses the features and peculiarities of the use of temperaments in socio-political texts. It should be noted that most Chinese temperaments are word-specific and need to be analyzed in different contexts. In addition, in socio-political texts, fixed constructions are widely used to represent time.*

**KEYWORDS:** *Temperaments, Time Category, Time Factor, Auxiliary Words, Auxiliary, Connecting, Temporal, Fixed Constructions, Language Tools, Grammatical Category.*

### INTRODUCTION

The category of time plays an important role in any language and traditionally represents the relation of action to time when speech is spoken. The expression of the category of time is common to all languages, and different languages have different views on the category of time.

However, when we study the concept of "time" as a direct linguistic term, we get a definition of this grammatical category from a linguistic dictionary. "The category of time is the grammatical category of the verb, which is a specific linguistic expression of objective time. It serves as a temporal localization of the event or situation in question. Localization by time category can combine lexical and syntactic devices (tenses, conjunctions, etc.) to describe time in more detail" [1, p. 89].

Temporality is reflected in "a person's perception and understanding of the timing of situations and their elements related to the spoken word or other point of reference" [2, p. 264].

## THE MAIN FINDINGS AND RESULTS

The main characteristics of temporality are the present, the past and the future. The main content of the present tense refers to the time that coincides with the time of the speaker's speech, the time before the speaker's speech in the past tense, and the time after the speaker's speech in the future tense.

According to the great Chinese linguist Wang Li, in general, people look at the relationship between fact and time as follows. First, attention is paid to the time of the event, not the proximity or length of time it took place. Second, special attention is paid to the duration of the event and the beginning or end of the event. Maybe it doesn't matter much at what time it happened. The first case belongs to the Romance language family (French, Italian, Spanish, etc.), the second to Chinese [3, p. 151].

In Chinese, temporal attitudes are expressed through the use of language tools that represent the time factor. This is done by using auxiliary words in the sentence that represent time [4, p. 304]. Auxiliary words denoting time 着 *zhe* (meaning that an action is in progress); 了 *le* (indicates that the action was completed in the recent past); 过 *guo* (reflecting that the action took place in the distant past). These auxiliary words are often used in conjunction with verbs.

In addition to auxiliary words, temporal forms, conjunctions, auxiliaries, fixed constructions, nouns, and rhyming phrases also play an important role in expressing temporal meaning. The following tenses serve to express temporal relations in Chinese: 曾 *céng*, 曾经 *céngjīng*, 已 *yǐ*, 已经 *yǐjīng*, 都 *dōu*, 正在 *zhèngzài*, 在 *zài*, 将 *jiāng*, 即 *jí*, 马上 *mǎshàng*, 立刻 *lìkè*, 立即 *lìjí*, 一下子 *yíxiàzi*, 迄今 *qìjīn*; conjunctions: 则 *zé*; auxiliaries: 自 *zì*, 从 *cóng*, 于 *yú*; fixed structures: 当... (时候) *dāng...shíhòu* can be cited as an example.

In this article, we will analyze some forms of time, the use of auxiliary, connecting and time-stable constructions in socio-political texts, their features and differences in the expression of temperaments in written speech and putunhua.

According to A.Khojiev's dictionary of linguistic terms, a form is a set of words that signify an action according to its place, time, cause, and so on [5, p. 71].

时间副词 *shíjiān fùcí* - according to the works of Chinese linguists such as Zhu Chingming, Wang Li, Liu Yuehua, we can cite the following:

Actions 曾 *céng*, 曾经 *céngjīng*, 已 *yǐ*, 已经 *yǐjīng*, 都 *dōu* are used to indicate whether a situation has occurred. These group forms represent the past tense, or the past, or the action completed in the past tense. “曾 *céng*/曾经 *céngjīng*...过 *guò*...”, “已 *yǐ*, 已经 *yǐjīng*...了 *le*” is a fixed construction, and sometimes it is possible to use 已经 *yǐjīng* auxiliary words after 过 *guò*. But at the same time, using 了 *le* auxiliary words at the end of a sentence is more grammatical.

农业在国民经济中已无足轻重

*Nóngyè zài guó mín jīng jì zhōng yǐ wú zú qīng zhòng*

*Agriculture is no longer important in the national economy [6, p. 22].*

This “已经” *yǐjīng* – is an older form of the word "already" “已” *yǐ*. Forms 已 *yǐ* and 已经 *yǐjīng* the same function and can be used interchangeably. 已 *yǐ* refers mainly to written speech, while 已经 *yǐjīng* refers to an action or situation that occurs before speaking in Putonghua or at a specific time. As long as it is spoken or for a certain period of time, the result will remain the same. The form 已经 *yǐjīng* can be followed by the negative, which can also be used to describe the future.

1936 年后，柬埔寨曾被法国，日本占领

*1936 niánhòu, jiǎnpǔzhàicéngbèifàguó, rìběnzànlǐng*

*After 1936, Cambodia was occupied by France and Japan [7, p. 23].*

曾 *céng* - the phrase "once upon a time" is used only in written speech. This form indicates the lexical meaning of the 过 *guò* suffixes in oral speech, indicating that an action has taken place in the past.

Form 将 *jiāng* is used in the following senses:

- 1) Used in the function to describe an upcoming event;
- 2) Represents the approach of any time;
- 3) Represents an event that occurs at a specified time;
- 4) Used as a sign of the future tense;
- 5) Inverted complement inversion as an auxiliary, i.e. it can take precedence over the verb. For example, 将 *jiāng* + noun + verb = "to do something in the future".

我方将于近期内函告我方的决定

*Wǒfāngjiāngyújìnqínèihángàowǒfāng de juéding*

*We will inform you about our decision soon [8, p.105].*

This style is often used in written speech.

巴西今年将进口 1500000 袋咖啡

*Bāxījīnniánjiāngjìnkǒu 1500000 dàikāfēi*

*This year, Brazil will import 1.5 million cans of coffee [9, p. 230].*

即 *jí* - the form "now, immediately" is the same as the function and meaning of the literary language in the sentence 即 *jí*. For example:

两国就建立外交关系，派驻外交代表等问题达成协议，并互派外交代表后，外交关系即正式建立

*Liǎngguójiùjiànliwàijiāoguānxì,*

*pàizhùwàijiāodàibīǎoděngwèntídáchéngxiéyì,*

*bìngghùpàiwàijiāodàibīǎohòu, wàijiāoguānxìjìzhèngshìjiànli.*

Diplomatic relations between the two countries will be officially established after the appointment of diplomatic representatives and agreement on other issues, as well as the exchange of diplomatic representatives.

The morpheme 即 *jís* part of a two-syllable 立即 *lìjí* word meaning "now, immediately." In oral speech, meanings 立刻 *lìkè* and 马上 *mǎshàng* are the same.

The forms belonging to group 马上 *mǎshàng*, 立刻 *lìkè*, 立即 *lìjí*, 一下子 *yīxià* represent an action that can be performed very quickly. In most cases, it is possible to use 就 *jiù* steps to emphasize the speed of movement to the next level. There are a number of other words of this type in Chinese: 顿时 *dùnrshí*, 霎时 *shàshí*, 立时 *lìshí* and so on. The use of 一下子 *yīxià* is usually used only to describe the action that took place. In special cases, it can represent future actions in a language environment.

老师说了声“开始”，大家立刻就做了起来

*Lǎoshīshuō le shēng “kāishǐ”, dàjiālìkèjiùzuò le qǐlái*

*The teacher says, "Get started!" When he said that, they all did it immediately.*

我真恨不得一下子就找到他

*Wǎzhēnhènbúdéyīxiàjiùzhǎo dàotā*

*I really want to find it right away [10, p. 26].*

正在 *zhèngzài*- represents the process of action. It is more widely used in oral speech than in written speech:

北京天桥民俗园正在筹建中

*Běijīngtiānqiáomínsúyuánzhèngzàichóujiànzhōng*

The “Tianqiao” folk park is under construction in Beijing [11].

Figure 在 *zài* can also be used in conjunction with the particle 呢 *ne*, which represents the process of action, as well as 着 *zhe*, which indicates the duration of the action, indicating the process of action, such as 正在 *zhèngzài*. In the written style, the form 在 *zài* comes in the form of 在...中, 在...过程中 constructions and expresses meanings such as “in the process, at the moment, in...”. For example:

在活动中青年们进行了非常精彩的表演，并及朗诵了纳瓦伊的精美作品

*Zàihuódòngzhōngqīngniánmenjìnxínglěifēichángjīngcǎi de biǎoyǎn, bìngjǐlǎngsònglènnàwǎyī de jīngměizhuòpǐn*

*During the event, young people made wonderful speeches and recited the elegant works of Navoi [12, p. 54].*

在进行斗争过程中...*Zàijìnxíngdòuzhēngguòchéngzhōng... - during the battle ...;*



在进行合作的过程中... *Zàijìnxínghézuò de guòchéngzhōng*... –in the process of cooperation ...

在会议中共同发表公报 ...*Zàihuìyìzhōnggòngtóngfābiǎogōngbào*... - publishing a joint communiqué during the meeting ...

迄今 *qìjīn*, still, still ”is a phrase used in written speech, the meaning of which is expressed in the compound 到今天为止 *dào jīntiānwéizhǐ* putunhua. For example:

迄今科索沃局势依然紧张，民族仇视不减，冲突不断

*Qìjīnkēsūwǒjúshìyīránjǐnzhāng, mínzúchóushìbùjiǎn, chōngtúnbùduàn*

*The situation in Kosovo remains tense, with national tensions and conflicts continuing [13, p. 418].*

则 *zé*- when the conjunction is used in a sentence, it translates as "when..., if..., only when...". This conjunction is specific to the written style and represents the temporal-conditional relationship in complex conjunctions. For example:

缔约各方彼此同意废约时，国际条约则停止生效

*Dìyuēgèfāngbǐcítóngyìfèiyuēshí, guójìtiáoyuēzétíngzhǐshēngxià*

*An international agreement becomes invalid only if the parties to the agreement agree to terminate it [14, p. 717].*

It is clear from the above sentence that the 则 *zé* conjunctions are used in the second part of a complex compound sentence, before the verb, i.e., to express the conditionality of time.

The 自 *zì* auxiliaries are more commonly used in literary language and have the same meaning as the 由 *yóu* auxiliaries. Putunhua is similar with 从 *cóng* assistants.

Auxiliary 自 *zì* is part of the constructions representing time, such as 自...起 *zì ... qǐ* (since then), 自...后 *zì ... hòu* (since then, after this time), 自...以来 *zì ... yǐlái* (since then, since then).

双方决定自 1992 年 8 月 24 日起相互承认并建立大使级外交关系

*Shuāngfāngjuédìngzì 1992 nián 8 yuè 24 rìqǐxiānghùchéngrènbìngjiànlìdàshǐjìwàijiāoguānxì*

*The parties recognized each other on August 24, 1992 and decided to establish diplomatic relations at the ambassadorial level [15, p. 230].*

In Putunhua, constructions such as 从...起 *cóng... qǐ*, 从...以来 *cóng... yǐlái*, 从...以后 *cóng... yǐhòu*, 由...至 *yóu... zhì* are used. But they can also be found in socio-political texts:

从 70 年代开始，由于外国干涉，柬埔寨经历了长期的战乱

*Cóng 70 niándàikāishǐ, yóuyúwàiguógānshè, jiǎnpǔzhàijīnglìlèchángqí de zhànluàn*

*Since the 1970s, Cambodia has experienced many years of war due to foreign intervention.*

从 今 以 后 我 们 应 该 加 强 关 系  
*Cóngjīnyǐhòuwǒmenyīnggāijiāqiángguānxì*

*From today, we need to strengthen our relationship* [16, p. 85].

The auxiliary 于 *yú* is used in literary language, and in modern language only in written speech, and is close to the meaning of the auxiliary 在 *zài* in putunhua. The words it combines can create both a state of place and a state of time. A sentence can sometimes be placed before verbs and sometimes after verbs. For example:

柬埔寨是历史悠久的文明古国，于公元 1 世纪建国

*Jiǎnpǔzhàishìlìshǐyǒujiǔ de wénmínggǔguó, yú gōngyuán 1 shìjìjiànguó*

Cambodia is a country with an ancient history of civilization, founded in the 1st century AD.

当...（时候）*dāng...shíhòu-...* during that time...; ... The time-constant construction is characterized by special lexical elements of type 时候 *shíhou* with or without auxiliaries, indicating that the two actions occur in part at the same time. The cut in the follow-up sentence of this type of sentence signifies an incomplete action. The cut in the preposition means the completed action.

➤ 当大脑皮层的机能产生障碍的时候，管理血管的神经中枢便失去控制。

*Dāng dànnǎo pí céng de jīnéng chǎnshēng zhàng'ài de shíhou, guǎnlǐ xuégǔǎn de shénjīng zhōng shū biàn shīqù kòngzhì.*

*When the cerebral cortex is impaired, the nerve center that leads to the blood vessels loses control.*

In the process of analyzing temperaments in modern Chinese socio-political texts, we can draw the following conclusions:

1) The use of the category of time in Chinese is unique in that it is reflected in speech through various linguistic means, such as auxiliary words, tense forms, auxiliaries, conjunctions, and fixed conjunctions. finds;

2) The use of the category of time in literary language and written style, especially in socio-political texts, is different from putunhua. While some words are used primarily in written speech, we see that some are used only in oral speech; Alternatively, temperatures in putunhua can take a concise form in written speech: 曾经 *céngjīng* putunhua, 曾 *céng* in written speech; We have witnessed its application in 已经 *yǐjīng* putunhu, 已 *yǐ* in written speech;

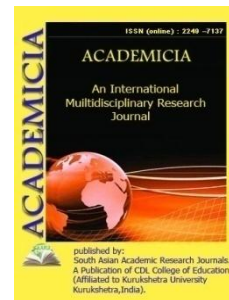
3) In Chinese, temporal relations play an important role. Because forms are always connected with verbs. A verb, on the other hand, expresses an action, and a sentence cannot exist without a verb.

4) Unlike some languages, the Chinese language system does not have a term related to temporal relations and its specific classification. 时间副词 *shíjiān* - except for the tense form, because in addition to tense forms, the expression of time in Chinese contains a number of auxiliary words,

auxiliaries, fixed constructions, temperaments belonging to the noun and rhyme groups, for which a single term not available.

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## IMPROVEMENT OF TECHNICAL AND TACTICAL SKILLS ON THE BASIS OF SPEED AND STRENGTH TRAINING OF ATHLETES IN THE UZBEK NATIONAL WRESTLING

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### ABSTRACT

*This article addresses the issues of improving the technical and tactical skills of Uzbek wrestlers on the basis of speed and strength training. The participants were offered various techniques for improving their technical-tactical, agility and movement skills, which are used in wrestling. The article is intended for wrestlers and coaches of Uzbek wrestling and other types of wrestling. National wrestling is not only a national sport, but also a competition of Uzbeks, which is very close to the world standards, and is one of the main tools of our Republic in the world. However, the skill of the athlete is refined in various competitions, wrestling, and discovers new content. On September 6, 1998, the International Wrestling Association was established in Tashkent with the participation of 28 countries. It was attended by delegates from Latin America, Europe and Asia. Its congress approved the international rules of wrestling under the name "Uzbek Kurashi".*

**KEYWORDS:** *Agility And Strength In Uzbek Wrestling, Technical And Tactical Physical Abilities, Skills, Scientific Knowledge.*

### INTRODUCTION

It has long been known that sport is a guarantee of health. Exercising the body through various physical exercises and strengthening human health is mentioned in the medical books of Abu Ali Ibn Sina. Our great-grandfather recommended various exercises for the development of different parts of the body. Probably, this is the reason for the diversity and variety of sports. For thousands of years, national sports have been developing and improving in Central Asia. This

type of wrestling is similar to the wrestling of the peoples of Europe, America and Africa in terms of its technical performance and the rule of law.

If we look at the physical exercises and sports that were included in the curricula of the former Soviet Union, then there is no place for national sports. After gaining independence, the country promotes and supports the development of national sports of the peoples of the republic, including national wrestling, the development of legal rules of Uzbek wrestling, its scientific study, stylistic improvement. This sport, in particular, Uzbek wrestling, is included in the curriculum. For the first time in our country, the Law "On Physical Culture and Sports of the Republic of Uzbekistan" was approved. This was the legal guarantee of the national wrestling.

The decision of the delegation of the Ministry of Public Education of the Republic of Uzbekistan dated February 11, 1994 2/2 developed measures for the introduction of national sports in the curriculum.

Approval of the National Program "Soglomavloduchun" in the Republic of Uzbekistan, the establishment of various levels of the National Government Awards "Soglomavloduchun", the steady strengthening of the material base of physical culture and sports in our country are the result of the care of the Government of the Republic, its President for the development of national sports.

Uzbek wrestling is developing as an important educational part of the sport, and its material technology is constantly improving. Various conditions and conveniences are created for athletes. This is the main source of the fact that the wrestlers of our Republic, in response to this care and opportunity, have achieved high results in wrestling at the Asian and World Championships and adequately defended the sports honor of our independent Republic.

### **Steps to improve technical and tactical skills on the basis of speed and strength training**

Another reason why Uzbek wrestlers are the strongest in the world is that the sport has been popularized and the training of substitutes is well organized.

It is a well-known fact that this sport, like any other, does not require proof from an early age. Because agility, strength, which bring success to the athlete, in difficult situations to find the most optimal solution in a matter of seconds, such as courage, physical qualities are formed from an early age.

In order to attract teenagers to the sport of wrestling, it is important to develop national wrestling techniques that are close to international rules in terms of technique.

World-renowned wrestlers are emerging in Uzbekistan, Kazakhstan, Tajikistan, Georgia, Armenia and other countries due to the high level of popularity of the sport of wrestling. If we look at the celebrations, folk festivals and other ceremonial gatherings held in these countries, the national wrestling is central event in them. Further development of sports that people love and respect has great prospects.

National wrestling is not only a national sport, but also a competition of Uzbeks, which is very close to the world standards, and is one of the main tools of our Republic in the world. However, the skill of the athlete is refined in various competitions, wrestling, and discovers new content. Due to this, the competitions for the prize of the President, At-Termizi, Bahauddin Naqshbandi,

Amir Temur, which are held at various stages to celebrate the pure spirit of the people, have become a traditional sport for young people.

Today, the internationally recognized positive results in this sport are based on the use of technical means of training athletes in this field, the use of advanced foreign wrestling technologies and methods, the preparation of athletes for competitions in a scientifically sound manner. From a methodological point of view, the training systems can be divided into 6 main interrelated factors.

1. Predicting the results of sports competitions;
2. Modeling the activities of athletes;
3. Accurate assessment of the movement and mental state of athletes at different stages, determining their physical fitness and skills based on the results of competitions;
4. Establish a system of preparation of athletes for competitions depending on their age and sports skills, rehabilitation of athletes and improvement of sports activities;
5. Availability of modern sports equipment and facilities that can improve the recovery of strength and skills after training and competitions;
6. The special knowledge, pedagogical skills and ability of coaches to work independently, to help the athlete to work independently to the extent that meets international standards;

At the same time, modern techniques of wrestling, a certain order of the style that supports the movement to win over the opponent, novelty and leading role in the offensive movement, the rapid development of physical abilities of athletes, the development of technical skills and modern techniques pay special attention and have three types of speed strength: absolute blasting; speed and power; differs in strength endurance.

The technical movements learned by the wrestlers have been shown to help them to think in new ways, to adapt and strengthen conditional habitual connections with training, and to form the basis of movement. Authors A.A. Novikov, G.S. Tumanyan, Y.V. Verkhoshansky, A.M. Astakhanov, V.M. Dyachkov play a leading role in the offensive movement, the development of physical abilities and modern technical skills of athletes. It is emphasized that in improving their skills, special attention is paid to the use of speed and strength. The authors believe that the efficiency and tactical skills of athletes in the performance of technical and tactical movements are determined by the accuracy and timeliness of their performance.

Athletes' abilities and skills are beyond their control. Therefore, the relationship between movement skills and physical qualities is inextricably linked.

The main problem for the coach is the choice of individual exercises to adapt to the development of the physical abilities, capabilities and technical movements of wrestlers to a certain extent, adapting them to the abilities of athletes.

Wrestling is characterized by a complex combination of movements, and the intensities accumulated in the wrestler at each minute of the fights can be achieved in different directions: speed, strength, endurance, by finding the right solution in a matter of seconds.



The development of physical abilities can be achieved mainly through the development of agility and strength of athletes, improving their technical and tactical training. Determining these on a scientific basis is one of the most important issues in the development of the national struggle.

The degree of connection between speed and strength training and technical and tactical training determines the effective means of training the athlete.

The effective use of physical education in the implementation of this work, the development of technical training of athletes through the correct choice of methods of their implementation.

In the style of Uzbek wrestling, the development of technical training on the basis of rapid-strength training and the interdependence of these two processes were identified. There is a correlation between the strength and technical and tactical training of wrestlers.

Effective means of improving the technical and tactical skills of wrestlers have been identified. Depending on the technique of performing speed and strength exercises, this method is aimed at perfecting the technique by selecting developmental, auxiliary and stimulating exercises.

At the same time, along with the general set of physical qualities, the speed and strength training of wrestlers helps to develop other qualities.

It is known that 68 hours of lessons were allocated for teaching this course in accordance with the standard curriculum approved by the order of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan dated August 23, 2008 No. 263. It consists of lectures, seminars, laboratories, practical classes.

During the years of independence, attention to the Uzbek wrestling has increased. On February 22, 1992, in Tashkent, the normative documents of the National Wrestling Federation of Uzbekistan were approved. On September 6, 1998, the International Wrestling Association was established in Tashkent with the participation of 28 countries. It was attended by delegates from Latin America, Europe and Asia. Its congress approved the international rules of wrestling under the name "Uzbek Kurashi". Islam Karimov, the first President of the International Wrestling Association, and Komil Yuupov were elected the permanent honorary presidents of the International Wrestling Association.

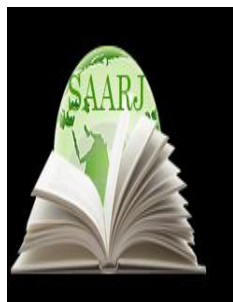
In recent years, the term "technical and tactical skills" has been widely used in wrestling operations. Wrestling techniques are the most sensible ways for a wrestler to perform winning movements.

Competitions between wrestlers between the ages of 7 and 70, the traditional educational weddings and celebrations of our people, based on the rules of the law "Uzbek Kurashi", are an important educational part of the sport - speed and strength.

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**THE EFFECT OF REPEATED CROPS AND ORGANO-MINERAL COMPOSTS ON AGOPHYSICAL AND AGROCHEMICAL PROPERTIES OF THE SOIL UNDER THE TYPICAL GRAY SOIL CONDITIONS AFFECTED BY IRRIGATION EROSION**

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**ABSTRACT**

*This article provides information about the effect of repeated crops and organo-mineral composts on the agophysical and agrochemical properties of the soil in the lower part where the soil is moderately washed (accumulated) particles from the slopes after winter wheat in the conditions of typical gray soils affected by irrigation erosion.*

**KEYWORDS:** *Irrigation erosion, typical gray soils, soil washed, soil particles washed away, organo-mineral compost, secondary crops, soybeans, potatoes, agrophysical, agrochemical, mineral fertilizers.*

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**INTRODUCTION**

Extensive work is carried out in the country to expand the area of secondary crops after winter wheat, to increase the share of crops obtained through the rational use of each hectare. In this regard, the Resolution of the President of the Republic of Uzbekistan dated June 1, 2017 No PP-3027 "On measures for the planting of secondary crops in the areas vacated by cereals in 2017, the timely supply of material and technical resources required"

In recent years, increasing soil fertility and crop yields based on resource and resource-saving technologies, the use of cheap and local raw materials has become a pressing issue.

In this regard, in order to study their impact on productivity and soil fertility, field experiments were conducted in 2017-2019 in time and space (every year in a new field). This experiment

held by Application of mineral and organo-mineral composts in different amounts to replanted crops planted on land vacated by winter wheat in the conditions of typical gray soils affected by irrigation erosion of the white-pumpkin research station of Research Institute of Cotton selections and Seed Production and Cultivation Agro technologies. The experiment consisted of 24 variants, of which variants 1–12 were placed in 3 replicates in the lower parts where the soil was washed moderately (field slope is 2 degrees), and options 13–24 were washed from the slope. The control of options 1-4 and 13-16, respectively, in the lower parts of the soil moderately washed and washed away soil particles, organo-mineral composts were not used for repeated crop shade in options 5 and 17. Under summer drive in repeated crop shade in options 6-8 and 18-20 -mine composts were applied to 10, 15 and 20 t / ha, in 9-21 options organic-mineral compost was not applied to replanted potatoes, in 10-12 and 22-24 replanted potatoes to summer crops under organic drive 10, 15 and 20 t / ha. Field experiments were carried out in the methods described in the sources "Methods of field experiments with cotton" [1], "Methods of agrochemical, agrophysical and microbiological research in the whole region" [2] "Methods of agrochemical analysis of soil and plants [3].

In typical gray soils, the increase or decrease in volume weight depends primarily on crop rotation. Crop rotation is a crop that improves the physical and agrochemical properties of the soil among all crops. In the year of uncultivated plowing, the volume mass of the soil is less than in the old plowed lands [4]. Studies have been conducted on the degree of soil erosion exposure and concluded that the volume weight increases as a result of soil washing [6].

It should be noted that the secondary crops are ore and not only grows well under the influence of composts, but also affects the change of water-physical and agrochemical properties of the soil. On the change of nitrates in crop rotation systems, Romanov Kh.S., Mirzajanov K.M., Tolibulin R.T. [7], Mahsudov S.S [5]. scientific work has been done by many scientists.

When applying mineral fertilizers N-60, P-90, K-60 kg / ha to the shade planted as a repeat crop after winter wheat in 2017 conditions, the volume weight in 0-30 and 30-50 cm layers (option 5) of the average washed part of the soil and porosity at the beginning of the season. It was 1.314-1.422 g / cm<sup>3</sup> and 51.3-47.3%, respectively, the amounts of nitrate nitrogen, mobile phosphorus, and exchangeable potassium were 18.8 and 10.0 mg / kg, 25.1 and 10.9 mg / kg, 200 and 170 mg / kg, respectively, 1,380-1,454 g / cm. At the end of the season, depending on the soil layers; 48.9–46.1%, 19.1 and 10.1 mg / kg, 25.4 and 11.1 mg / kg, 202 and 170 mg / kg, or the volume weight of the soil relative to the beginning of the season was 0 , 07 -0.03 g / cm<sup>3</sup> increased. The porosity decreased by 2.4-1.2%, nitrate nitrogen content was 0.3, 0.1 mg / kg, mobile phosphorus content was 0.3, and 0.2 mg / kg, the amount of exchangeable potassium was found to be higher between 2 and 0 mg / kg.

By the end of the season, compost was applied at a rate of 15 t / ha against the background of relatively high rates of mineral fertilizers (option 7). The volume weight and porosity were 1,348-1,442 g / cm<sup>3</sup> and 50.1-46.6%, nitrate nitrogen content was 20.5 and 10.5 mg / kg, the amount of mobile phosphorus was 27.1. And 11.5 mg / kg, and the amount of exchangeable potassium was 225 and 180 mg / kg, or 0.03-0.01 g / cm<sup>3</sup>, respectively, in exchange for the used organo-mineral compost less than 1.2-0.5% more, 1.4-0.4; 1.7-0.4 and 23-10 mg / kg were found to be high.

The above figures are slightly higher when the compost norms are applied to 20 tons per hectare against the background of mineral fertilizers in the shade of repeated crops higher values were obtained.

Relatively high rates in the lower part of the washed particles were obtained by applying 10 tons of organo-mineral compost per hectare on the background of mineral fertilizers in the shade of repeated crops. By the end of the season the volume weight and porosity in soil layers 0-30 and 30-50 cm was 1.317-1.418 g / cm<sup>3</sup> and 51.2–47.5%, nitrate nitrogen content of 31.0 and 16.4 mg / kg, mobile phosphorus content of 43.6 and 24.4 mg / kg, and exchangeable potassium content of 271 and 210 mg / kg. It was equal to or less than 0.02–0.01 g / cm<sup>3</sup>, 0.8–0.3% more than the control option, and the nitrate nitrogen content was 1.8–0.2; 1.3-0.6 and 23.0-5.0 mg / kg were higher.

Mineral fertilizers N-180, P-150, K-60 kg / ha and 15 tons of organo-mineral composts per hectare were applied to potatoes as an average washed repeat crop at the end of the season. 1,354-1,430 g / cm<sup>3</sup> and 49.9-47.0%, nitrate nitrogen 19.6 and 10.5 mg / kg, mobile phosphorus 26.5 and 10.9 mg / kg, exchangeable potassium 215 and 176 mg / kg equal or 0.04-0.01 g / cm<sup>3</sup> less, 1.6-0.4% more than 2.3-0.7, respectively, the control option 1.6-0.5 and 24-12 mg / kg were higher.

Control of the washed-out part of the soil Particle the data obtained in option 21 are compared with option 9 of the average washed-out part of the soil. In the 0-30 cm layer of soil at the end of the season the volume weight of the soil is less than 0.03 g / cm<sup>3</sup>, 1.2% higher, 10.5 mobile phosphorus was found to be 16.8 mg, and exchangeable potassium 44.0 mg / kg. This situation has a positive effect on the agrophysical and agrochemical performance of the soil due to the passage of washed soil particles from the slope to the lower part of the field can be explained by the fact.

In this section, relatively high rates were obtained for the application of organo-mineral composts of 15 tons per hectare on the background of mineral fertilizers. Similar data were obtained in the following year of the study.

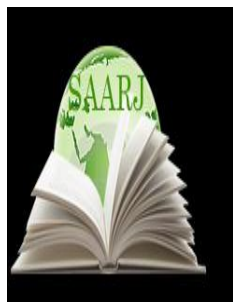
Thus, the application of organo-mineral composts to soybean and potato crops replanted after winter wheat improves the agrophysical and agrochemical properties of typical gray soils subject to irrigation erosion and creates optimal conditions for crop growth and development.

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## LEXICAL MEANING RELATIONSHIPS OF WORDS IN GERMAN AND UZBEK LANGUAGES

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### ABSTRACT

*This article discusses the lexical semantic relationships of lexemes and demonstrates their similarities and differences in different languages using the method of comparison. This situation is compared by comparing the lexical meanings of the word "water" in German and Uzbek, and the cases of disproportion between them are explained with the help of examples. This analysis explains the reasons for the differences in the meanings of words in languages. List the factors that affect the perception of the word.*

**KEYWORDS:** Word, Meaning, Content, Water, Difference, Similarity, Lexical Unit, Dictionary.

### INTRODUCTION

Speech is made up of words, phrases, and sentences that are connected by content. Words and phrases have one or more meanings in the speech process and perform morphological and syntactic functions. The word and the meaning of the word are important factors. Only a person who understands the meaning and content of the word correctly can use the words correctly in speech and express his thoughts clearly. To do this, you need to master the language.

Today, the study of the relationship between the meaning and content of the word is becoming more widespread, and it is covered in many works. Because every aspect of the phenomenon of meaning, which is extremely complex, deserves special attention. The study of one aspect taken separately requires the analysis of another. From time immemorial, we have been accustomed not only to proving the relationship between lexical units and their meanings, but also to noting them. For example, we note that the third planet in the solar system is called the earth and sometimes the globe, the world, the universe, and we are not so interested in the relationship

between the expressed and the expressive. In fact, the relationship is very complicated. It is a well-known fact that a particular part of reality is not perceived uniformly by people and does not have a linguistic form. This is especially true when comparing words in different languages. Proof of this can be seen in the analysis of the word water (das Wasser) in German and Uzbek:

<p><b>Das Wasser</b></p> <p>1. a) aus einer Wasserstoff- Sauerstoff-Verbindung bestehende, durchsichtige, weitgehend farb-, geruch-und geschmacklose Flüssigkeit, die bei 0°C gefriert und bei 100°C siedet.</p> <p>- <i>Wenn es heiß ist, trinke ich gern Wasser;</i></p> <p>b) Wasser eines Gewässers</p> <p>- <i>das Wasser ist sehr tief;</i></p> <p>2. Gewässer:</p> <p>- <i>ein tiefes, fließendes Wasser;</i></p> <p>3. Alkoholische wässrige Flüssigkeit:</p> <p>- <i>kölnisches Wasser;</i></p> <p>4. a) wässrige Flüssigkeit, die sich im Körper bildet:</p> <p>- <i>Wasser (eine krankhafte Ansammlung von Gewebsflüssigkeit) haben;</i></p> <p>b) (ugs.) Schweiß:</p> <p>- <i>das Wasser lief ihm von der Stirn;</i></p> <p>c) Urin:</p> <p>- <i>das Wasser nicht halten können;</i></p> <p>d) Tränenflüssigkeit.<sup>1</sup></p>	<p><b>water</b></p> <p>1. A salt-free clear liquid consisting of a chemical combination of hydrogen and oxygen:</p> <p>- Water is not only the blood and soul of the earth, but also a source of electricity;</p> <p>2. Aquifers of rivers, lakes, rivers, etc: - the other side of the water.</p> <p>3. Juices, juices, liquids in fruits, vegetables, etc.</p> <p>- Apple juice is very sweet;</p> <p>4. Portable: no mattress, juice or jam (about fruit or food):</p> <p>"It's not soup, it's water."</p> <p>5. Floral element in the form of a straight or wavy line in embroidery:</p> <p>- The water is white, the flowers are different;</p> <p>6. Esk. A unit of land equal to ten tanobs</p> <p>"Every ten acres of land was water, and a man was sent to clear the canal at the expense of this area."</p> <p>7. Various compound and compound terms include:</p> <p>- water eagle, water snake, water lily</p>
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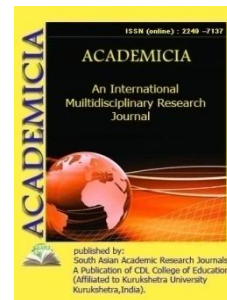
When we compare the meanings of the word das Wasser (water) in German and Uzbek, we can see similarities in the meanings of the words, as well as different aspects. The word das Wasser (water) has four meanings in German and seven in Uzbek. If we pay attention to the first meaning of this word, it is said in German that it is a colorless, odorless and tasteless liquid consisting of oxygen and hydrogen, and in Uzbek it is a salt without a chemical combination of hydrogen and oxygen. clear liquid; described as a substance found in nature in the form of water and ice, which is an integral part of all living organisms. This meaning of the word is one thing, although it is described differently. If we look at the next meaning of this lexeme, we can see another similarity. That is, the word das Wasser (water) is the part of the earth covered with

water, the meaning of naturally collected water is close to and similar to the Uzbek word for water surface of streams, lakes, rivers, etc. . But the difference is that in German, this meaning of the word has a poetic, artistic color. Let's look at the third meaning of the word. Here we can see the differences in the lexical meanings of the languages. The word alcohol in German does not mean alcohol in Uzbek. In contrast, in Uzbek, the word "water" can be used as a generic name for juices, juices, liquids in fruits, vegetables, etc. (pomegranate juice). In addition, the fluid secreted by living organisms, syrup (did not feel the continuous flow of water from the nose behind the flu); the word water is also used to refer to the liquid (bread that has run out of water) in various things. In the course of the analysis, in contrast to the Uzbek language, we did not observe the use of the German word *das Wasser* (water) in relation to liquids in various objects. All the paragraphs of the word in the fourth sense given in the German dictionary clearly show the disproportion between the two languages: in German, the word as a medical term also means the accumulation of damaged body fluids in tissues. In Uzbek it occurs in the form of fluid accumulation. The Uzbek lexeme cannot express the meanings of sweat, urine and tears in the following verses. Some of the meanings of this word in Uzbek are not found in German: the expression of taste in relation to fruit or food (it is not soup, but water). The word is used in embroidery as the name of a flower element in the form of a straight or wavy line (the water is white, the flower is a different curve). The reason why the word does not have this meaning in the German dictionary is that it is associated with Uzbek national handicrafts. In the history of Uzbekistan, the unit of land equal to ten tanobs was called water (Every ten tanobs of land was one water, and a man was sent to clear a ditch at the expense of this area). For this reason, this meaning of the word does not exist in German. In addition, the word "water" is used in the Uzbek language in various compound and compound terms. We can see this in the following examples: water eagle, water snake, water flower. Although this feature of the word is not included in the German dictionary, we find it in the form of a compound word in different contexts: *Wasserball*, *Wasserbau*, *Wasserbedarf*.

The analysis shows that in German and Uzbek there are some differences and similarities between the meaning and content of words. It would be a mistake to assume that words have similar meanings. But we don't think it's right to take certain differences for granted. There are a number of reasons for the differences. In the course of the analysis, we saw that factors such as the living environment of peoples, their worldview and life skills, emotional experiences, religious and national affiliation, achievements in science have an impact on the underlying image. All this proves once again that meaning is the fruit of intellect, of human cognitive activity. A person who understands the meaning acquires intelligence, uses the wealth of the nation with understanding - the language, preserves it and respects it.

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## USING MOVEMENT GAMES IN TEACHING ENGLISH IN PRESCHOOLS

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### ABSTRACT

*In this article you can find information about the structure of preschool education in the country, their decision-making, as well as recommendations on the correct and reasonable organization of lessons in preschool education, meaningful spending of children's time, what interactive methods to teach them languages and the importance of physical activity. In particular, the level of effectiveness of foreign language teaching depends on how the educator organizes the lesson, how to attract the attention of young playful children, how to teach new words for 20 minutes without tiring children.*

**KEYWORDS:** *Preschool, Young Children, Sample Program, Variable Work Program, Movement Games, Physical Activity, Account Of Mastered Words.*

### INTRODUCTION

Currently, a great deal of attention is paid to the use of interactive methods in all types of education. Interactive methods consist of innovative methods aimed at increasing the effectiveness of education. "Innovation" is derived from Latin and means renewal, change, innovation. In preschools, innovations mainly consist of technology integration within a play-based learning environment. Play is the main activity of preschool children and at the same time is an important tool for their physical and mental development. In the process of play, the child begins to form as a subject of personal activity. In fact, a child cannot be left in one place for a long time, he always strives to be on the move.

20 minutes are allocated for classes with young children in preschool institutions. The age characteristics of the children do not allow them to spend more time in the classroom. Even

during this time period, children will need to be involved in physical activity for several times. Therefore, the educator is required to compile each lesson minute by minute.

The state curriculum "Ilk qadam" ("First Step") developed for preschool educational institutions in the country has been adopted as a mandatory basic document of the variable curriculum, all preschool educational institutions develop their own working programs on the basis of this program in teaching children foreign languages. Nowadays, along with state-owned preschools in the country, private preschools have the right to develop their own working curriculum on the basis of the state curriculum.

It should be noted that the working curriculum is developed by teachers of the institution with the involvement of parents and approved in accordance with applicable law. In the varied curricula developed by preschool educational institutions, the content of lessons is enriched on the basis of teachers' experience, knowledge, new methods. The structure of the working program with a creative approach to the model program will further increase the effectiveness of young children's learning.



In the preschool education system, classes also start on September 2 and last till May 31. A summer recovery period will be held from June 1 to August 31. The following is the approximate number of classes for second language specialists during the week, month and academic year under the state program "First Step".

Analytical view of the school year in the preschool education system (in the example of a foreign language)	Held during the academic year the approximate number of sessions		
	per week	per month	during the academic year
	<b>1</b>	<b>4</b>	<b>36</b>




In the framework of the standard basic program "First Step" in teaching foreign languages to young children to learn an average of 4 new words in 1 lesson per week, as a result, the child learns an average of 16 new words per month, in 36 lessons during the school year on average 144 has been shown to master new words. This is definitely a high figure for children aged 6-7, and achieving it will depend on the level of effectiveness of the exercises.

In preschool education today, based on the needs of parents, additional classes in foreign languages (such as Russian, English, Arabic), mental arithmetic are organized. In particular, the level of effectiveness of foreign language teaching depends on how the educator organizes the lesson, how to attract the attention of young playful children, how to teach new words for 20 minutes without tiring children. In this case, the use of interactive methods aimed at ensuring the physical activity of children is extremely important.

Below we present a calendar and descriptive development of 1 lesson, which provides ways to achieve effectiveness through the involvement of children in physical activity in the organization and conduct of English lessons for children aged 6-7 years.

No	Type of training	Descriptive development of the lesson	Time allotted for training
1.	Saying hello and singing the appropriate song together	<p><b>Teacher:</b> Good Morning.  <b>Kids:</b> Good Morning  <b>Teacher:</b> How are you?  <b>Kids:</b> I'm OK.  <b>Teacher:</b> Are you ready for the lesson?  <b>Kids:</b> Yes!!!</p> <p>Each session begins with the simple sentences above. Although the former may seem a bit difficult, but from the third lesson onwards, children will be able to use these sentences in full, without any difficulty.  A good morning song is sung together:  Good morning, good morning, good morning to you  Good morning, good morning, I'm glad to see you  The songs may change in the sequence of lessons.</p> 	2 minutes
2.	Physical activity exercises	<p>At the end of the song, the children are involved in light exercise by the educator. These exercises help the child focus on the lesson. It is also easier to memorize action names by doing exercises. The exercise is performed in English.</p> <p><b>Stand up</b>  <b>Clap, clap</b> (twice)  <b>Arms up</b>  <b>Clap, clap</b> (twice)  <b>Step, step</b>  <b>Arms down</b>  <b>Clap, clap</b> (twice)  <b>Sit down</b></p>	1 minute
3.	Repetition of the previous topic: "Numbers"	<p>At the end of the exercise, the educator asks the children the question: How many fingers do we have? The children answer 10. Thus begins the counting of the fingers in English. If it is counted first as a chorus, then the sequence method is used. That is, children have to say the next number, not the number the teacher says:  <b>1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10</b>  The memorized poem on the previous topic is repeated:</p>  <p><b>1, 2, 3 - let me see</b>  <b>I like coffee, I like tea</b>  <b>I Like radio and TV</b></p> <p>Children memorize the poem by performing hand gestures that match the meaning of the poem.</p>	3 minutes



4.	New topic: "Family fingers" of	<p>In tune with Finger Counting, a new topic, Finger Family, begins. Now the names of family members are memorized with the help of fingers.</p> <p>Headline: Daddy Index finger: Mummy Middle finger: Brother Ring finger: Sister Little finger: Baby</p> <p>Each finger name is repeated several times in English. The educator uses play methods to reinforce children's skills in new words. Now it's your finger shows them one by one, without naming them. The children have to find the names of the fingers shown. For example, if the teacher shows the thumb, the children answer "daddy". This way the participants find the name of all the fingers. Then this situation is done in reverse. That is, the educator says the name of the finger in English, but does not indicate which finger it is, the children who hear the word "Daddy" point their thumbs. Thus 5 new words are easily mastered by children through play.</p>	4 minutes
5.	Song: "Family of fingers"	<p><b>"The finger family"</b> Daddy finger, mummy finger, brother finger, sister finger, baby finger where are you? Here I am, here I am, how do you do?</p>  <p>The song is first repeated 2 times with the teacher in the form of a poem. It is then sung together as a chorus via multimedia. Singing the song in groups also gives the children fun. In this case, children are divided into 2 groups, ie boys and girls. The lines of the song about the father and brother fingers are sung by a group of boys, the words of the mother and sister fingers are sung by a group of girls, and the part of the song that belongs to the baby finger is sung together.</p>	5 minutes
6.	Movement exercises	<p>At the end of the lesson, children stand up and perform interesting movement exercises with the teacher:</p>  <p><b>Run jump swim dance stop sit down</b></p>  <p>These exercises are performed by the children together with the teacher in a good mood, not while running around the</p>	2 minutes

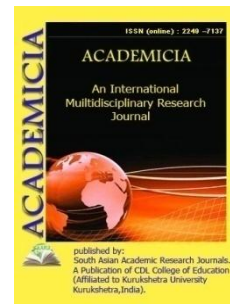
		group, but in a good mood, and the lesson ends in the same good mood.	
7.	Conclusion	New words: 5 pieces (family members' names) Theme song: <b>“The fingers family”</b>	<i>17 minutes</i>
		Average score of new words learned during the week	Average score of new words during the academic year
		<b>4</b>	<b>144</b>

As you can see, each type of work performed in the session is described minute by minute. All types of games and activities are designed to be performed as a team, with 20 minutes of physical activity, singing and poetry for children. The lesson on “Family” is based on the plan to teach 5 English words - Daddy, Mummy, Brother, Sister, Baby. By involving children in physical activity games during the lesson, the children will be able to learn 13 more action names as a result of repeating the teacher's instructions together.

Involving children in physical activity in language teaching in preschools makes them both physically and mentally healthy. Moving games help to keep children from becoming mentally exhausted, develop memorization and recall skills, and further enhance their interest in language.

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## PEDAGOGICAL ASPECTS OF PREPARING ADOLESCENTS FOR INDEPENDENT LIVING

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### ABSTRACT

*The article covers various conceptual approaches to the formation of ideas for preparing adolescents for independent living, approaches to preparing adolescents for independent living, solving various social problems in adolescents through seminars, developing skills to behave in difficult life situations, as well as homework with students. practical skills in working with materials and technical means. A template has been created to prepare teenagers for independent living. This model summarizes the views on the pedagogical conditions, factors, specific features and opportunities of the pedagogical process, the gradual implementation of pedagogical technologies in the preparation of adolescents for independent life.*

**KEYWORDS:** *Adolescent, Independent Living, Educational Process, Social Life, Conceptual Approach And Pattern.*

### INTRODUCTION

Since the emergence of humanity, the continuity of the nation, its power and the role of youth, especially adolescents, in its development has played an important socio-political role, and each state saw its great future in developing the physical, mental and intellectual potential of youth.

In this regard, the Prime Minister of Singapore Lee Kuan Yew said that any nation or country sees its future in the image of the rising generation and prepares them for independent family life is important not only in personal life, family relations but also in public administration. a new generation is being formed that is interconnected, has strong knowledge, and is psychologically and emotionally ready for the rapid challenges of the new era. They are different people: independent, self-confident, demanding to study, ready for any work. They do not expect blessings from anyone. Among them, there will be strong leaders who will take the flag from our hands and lead it to the future of the nation "[1; 259-260-p.].

**Main part**

In the past and in modern education, there have been various conceptual approaches to the formation of ideas for preparing adolescents for independent living, which we have tried to analyze and summarize in the table:

<b>Approaches and their representatives</b>	<b>The content and essence of the approach</b>
Western philosophical approach	It is scientifically interpreted in the directions of masculism and feminism in Western philosophy. While masculineism exhibits masculine traits such as willpower, perseverance, a desire to show strength, risk-taking, and toughness, feminism generalizes the traits of submissiveness, obedience, sensitivity, empathy, and grief that are characteristic of women.
Historical approach	Courage was the highest quality valued by the ancient Massagets, Persians, and Sak tribes. Boys from the age of five to twenty were taught three things - horseback riding, archery, and accuracy.
Religious approach (Zoroastrianism)	Based on the idea of preparing children for independent life, the Avesto instills in the hearts of children the virtues of goodness and virtue from an early age, strengthens faith, cultivates a sense of hatred of evil and wickedness, and teaches the mind to fight evil. From an early age, children were taught to plant trees, make household utensils, cultivate the land, and raise livestock. After all, living by one's own labor ensures the well-being of life.
Oriental philosophical approach (views of Eastern thinkers)	In the East, the upbringing of a harmoniously developed generation, morality and preparation of young people for life is a priority. Adolescents are taught to be mentally, aesthetically and physically nurtured, to be hardworking and professional, and to provide for the family through independent labor. It is said that health, well-being, abundance of food, a loyal friend and rest are the guarantee of a good life.
Views of Uzbek enlighteners	In their opinion, it is important to give a child a multi-component upbringing, consisting of physical, mental and spiritual upbringing, in order for him to reach full maturity. In order to bring up children to be self-confident, strong, resourceful, agile and intelligent, it is important to bring them up in the spirit of respect for their dignity and honor, to teach them to respect those around them.
Reproductive approach	In preparing the adolescent for independent living on the basis of a healthy lifestyle, the development of a culture of healthy living, strengthening the will, active movement,

	including physical activity and sports, adherence to the requirements of personal and general hygiene; ecology and health; protection from accidents and injuries, avoidance of harmful habits; to form a conscious attitude towards proper sexual upbringing and leaving a healthy offspring in the future.
An active approach	It is imbued with the ability to live a prosperous, independent life through continuous study, self-exploration, active work, meaningful recreation, and the achievement of productive results.

**Fig 1. Approaches to preparing adolescents for independent living.**

Given the importance of forming a sense of self-respect in a child at this age, the teacher should look for ways to raise his or her prestige in front of the school community. To do this, the teacher informs the public about the child's achievements in this or that area, does not immediately reveal some of his mistakes and shortcomings to the public, talks to the teenager and shows in practice that he believes in his strengths, knowledge and abilities. A teenager who feels good about such support is involuntarily exposed to the teacher, as the teacher now becomes the person needed to build the relationship with the teenager.

As a result of experimental work, we were able to develop a theory of raising the level of personal behavior in the preparation of adolescents for independent living and to shape the attitude of adolescents to independent living. The basic principles of this theory are: persuasion of theories of independent living; the predominance of conscious activity; behavior control and planning; feeling independent life; overcoming fear; behavior change; caution.

Based on this theory, the experience of a school practitioner psychologist should be widely used in preparing adolescents for independent living. It is advisable for practicing psychologists to conduct individual work with adolescents and conduct various sociological surveys. In order to adapt adolescents to social life, it is necessary to organize seminars and trainings on such topics as "School of Independent Life", "I-in the future", "We are ourselves".

Through the training seminars, adolescents developed the skills to solve various social problems, to behave properly in difficult life situations, as well as practical skills in working with household appliances and technical devices. It would be expedient to hold practical trainings on such topics as "Our rights and duties", "Clothing", "Purchasing", "Means of communication", "Household chores and savings".

Susan Merrill also acknowledges the need to prepare adolescents for independent living, noting that they need to have the following skills:

- ability to cook;
- know how to manage the household budget;
- care for health;
- communicative skills, ie the ability to communicate and behave;
- know and understand how to work with cars;

- have basic household skills;
- be able to understand what people are like;
- sense of responsibility;
- be able to separate true love from temporary passions;
- recognition of failures and striving for further progress [2].

The formation of these skills in adolescents is important in foreign countries, including Eastern countries. It is necessary to cultivate national identity in adolescents, especially in food, in the management of the economy, in the interaction with people, based on our national mentality.

The Republican Diagnostic Center has been closely assisting educational institutions and parents in preparing children for independent life by directing them to a profession based on their interests at school age.

The pedagogical conditions for the preparation of adolescents for independent living were analyzed from a scientific point of view, and a model for improving the pedagogical mechanisms for preparing adolescents for independent living in general secondary schools was created and put into practice.

This model summarizes the views on the pedagogical conditions, factors, specific features and opportunities of the pedagogical process, the gradual implementation of pedagogical technologies in the preparation of adolescents for independent life.

The template consists of two blocks: a target and a meaningful block. legal, social, economic, psychological, pedagogical, patriotic, spiritual and moral factors play an important role in preparing adolescents for independent living. It is worth noting that the adolescence is well aware of their rights, the level of legal literacy encourages him to carry out all his actions on a legal basis throughout his independent life. Knowing in advance the legal consequences of each action will help you not to go astray. It also does not allow his rights to be violated by others.

Adolescents enter independent life on the basis of social relations. Therefore, he must have an understanding and perception of the society that surrounds him, learn to behave in a micro, meso, mego environment, to interact with others. Only then will he be able to freely express his thoughts and achieve his goals throughout his independent life. The economic factor plays an important role in living an independent and prosperous life. The formation of basic economic knowledge in adolescents, teaching them to save, helps to form the knowledge and skills to organize their family budget, plan it properly, distribute income correctly and ensure the economic stability of the family during independent life.

Psychological preparation of the adolescent for independent living is one of the main tasks of parents and secondary schools. Practitioner psychologists working in general secondary schools work with class teachers, science teachers and parents to prepare adolescents for independent living. Stepping into the independent life observed in adolescents, the feeling of fear of their obligations is overcome through various psychological trainings, interviews, tests. Only when a teenager is mentally ready for an independent life can he overcome any problems and obstacles without difficulty. In this process, the cooperation of parents with the school practitioner psychologist allows to achieve effective results.



In Uzbek and Karakalpak families, the role of teachings and precepts, legends and stories, legends, ie folk pedagogy, is important in preparing a child for independent life. In the upbringing of adolescents, special attention is paid to the Karakalpak national traditions and customs, national values, and the task is to preserve and enrich their continuity. Therefore, in the families of Karakalpaks, the advice of ancestors is widely used in preparing adolescents for independent life, educating them in the spirit of respect for their native land, the formation of a sense of patriotism. The above-mentioned factors are the essence of the spiritual and educational work with adolescents. In general secondary schools, in-class and out-of-school activities, the main goal is to prepare the teenager for independent living.

Proper organization of the pedagogical process in the preparation of adolescents for independent living is desirable. Therefore, the idea of preparing adolescents for independent living is included in the content of subjects taught in general secondary schools. Pre-design of the goals and objectives of the subject is achieved through teaching through pedagogical and information technologies, as well as innovative management of the pedagogical process.

In this process, the motivation to prepare adolescents for independent life, the unity of goals, interests, needs, desires and aspirations for the acquisition of scientific and theoretical knowledge, the study and teaching of the laws of life are important. It provides creative cooperation between the subjects of the educational process, unanimous decision-making, free thinking, creating a spiritually friendly environment in the community, communicative cooperation aimed at a common goal.

In the pedagogical process, the preparation of adolescents for independent living can be organized on the basis of the following chain: Teacher-student; student-teacher; teacher-class team; class team-teacher; student-team of the educational institution; student-to-student; student, teacher, class community civil society institutions; student, teacher - parents; the school community is the general public.

The expediency of this template; humanism; community and community education; to treat the person with respect; relying on positive personality traits; to know the essence of the concept of independent life in adolescents, its gradual application to the educational process on the basis of the principles of membership, interaction in educational activities; the ability to control one's own behavior; to understand that service to the motherland and society is of the highest value; ensures that he is able to set a goal and be consciously ready to achieve it. As a result, knowledge, skills and abilities about independent living in adolescents are brought up in accordance with the age.

The use of effective forms and methods of educational work is important in preparing adolescents for independent living. In order to effectively organize this process, teachers, parents, students and adolescents in the community need to know the state of preparation for independent life, to determine their knowledge, imagination and skills, to know the level of respect for friends, teachers, especially parents, their place in the family. It is important to determine the behavior in the neighborhood, their physiological-hygienic and pedagogical-psychological aspects.

In particular, the interests, inner needs of adolescents, the separation of educational aspects, the organization of the educational process on the basis of special standards, the preparation, retraining and professional development of teachers in this process, the joint conduct of the

educational process, effective forms, methods and tools of education have the skills and abilities to use it, to manage it innovatively, to identify the criteria of education to be inculcated in the minds of adolescents by introducing advanced, acceptable aspects of pedagogical technology into the content of educational work, to monitor their results, to implement the acquired spiritual and moral qualities is a guarantee that they will grow up to be active citizens.

Thus, in preparing adolescents for independent living:

- adherence to psychological and pedagogical principles, conditions, factors, laws;
- Organization of psychological, physical and medical preparation of adolescents for independent living;
- Relying on advanced experience, theoretical ideas promoted in world science;
- It is important to prepare and publish popular science literature on the preparation of adolescents for independent living, to ensure their access to every family, to organize special sections in the media.

In short, the pedagogical views of Eastern thinkers, the content of legal and regulatory documents on the education of young people, scientific and theoretical ideas in the field of pedagogy, psychology serve as a methodological basis for the preparation of adolescents for independent life. The preparation of adolescents for independent life on the basis of spiritual and moral, social, economic innovations, life experiences in society plays an important role in the formation of a strong life position of young people.

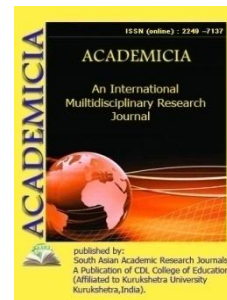
## CONCLUSION

Effective use of modern pedagogical technologies, interactive methods and information and communication technologies, taking into account the geographical and demographic conditions on the basis of the pedagogical model of preparing adolescents for independent life has a positive effect.

In determining the effectiveness of the preparation of adolescents for independent living, it is necessary to use clear indicators within the topic, relying on a clear methodology. In the preparation of adolescents for independent life, along with secondary schools, pedagogical cooperation of social institutions, the use of modern forms of organization of educational work, social projects give good results.

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## EQUALLY BENEFICIAL ECONOMIC COOPERATION BETWEEN THE UNITED STATES OF AMERICA AND UZBEKISTAN

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### ABSTRACT

*This article provides a historical overview of the economic relations established between the Republic of Uzbekistan and the United States during the years of independence. The main focus of the article is on major projects implemented with the participation of the two countries, and their significance.*

**KEYWORDS:** *Economic Ties, Cooperation, Joint Venture, Large-Scale Projects, Implementation, Cooperation Agreement, "Diversified" Economy, Technical Resources, Investment Climate.*

### INTRODUCTION

In the first years of Uzbekistan's independence the country's economic situation was very difficult, mainly cotton-growing industries are partially developed and most of the products needed for the daily needs of the population are imported from other parts of the former Soviet Union. Urgent economic measures were needed to rectify the situation. The need to establish economic ties with foreign countries as soon as possible was necessitated by the existing conditions. Our country's first economic ties with the United States were also related to food security. The first American-Uzbek joint venture, Uzbek chicken, was founded on September 15, 1991, and this joint venture was co-founded by America the New York-based firm Agritech International. The company was established to produce turkey and other poultry products[2]. Later, cooperation in this area did not develop, and the main reason for this was the low purchasing power of the population and the high cost of the planned projects.

The economic relations between the two countries do not have a clear advantage in any area, that is, large-scale projects have been implemented in many areas within the framework of economic relations. Economic relations between Uzbekistan and the United States can be divided into two

periods, and the chronological boundaries of these periods cover the period from 1992 to 2004 and from 2006 to the present.

Within the framework of economic relations between Uzbekistan and the United States in 1992-2004, a number of large-scale projects were implemented and manufacturing enterprises were established. In particular, on January 15, 1992, the first President of Uzbekistan Islam Karimov met representatives of the Newmont Mining Corporation of the United States, headed by Gordon Parker, President of the Newmont Mining Corporation. During the meeting, the sides discussed issues of cooperation in the mining industry, in particular in gold mining. The positive results of these meetings led to the signing of a document on the establishment of the Uzbek-American joint venture "Zarafshan-Newmont" on 20 February this year in Tashkent. The Zarafshan-Newmont joint venture, with a charter capital of \$ 85 million, had an equal share of the two countries, with 50% owned by the State Committee for Geology and Mineral Resources and the Navoi Mining and Metallurgical Combine, and the remaining 50% by Newmont. The main activity of the company was to extract gold by processing waste from the Muruntau deposit in Central Kyzylkum. The enterprise was launched in 1995 at a cost of \$ 225 million. In the first phase of its operation, it was able to extract 12 tons of pure gold in exchange for processing 13.8 million tons of ore per year[1].

While Uzbekistan has been cooperating with the United States in the economic sphere, there have also been opportunities for cooperation in the provision of mobile services. Because in the first half of the 1990s, the United States became the world's leading provider of mobile services. In Uzbekistan, this service has emerged as a completely new field. The presentation of the Uzbek-American mobile communication company Uzdunrobta on August 20, 1992 was a big practical step in this direction. The significance of this presentation is that the service provided by the joint venture "Uzdunrobta" was one of the leaders not only in our country, but also in the CIS.

When thinking about the development of economic relations between Uzbekistan and the United States, it is necessary to pay special attention to the projects implemented with major US financial institutions, the relationship with them. On September 28, 1993, the first President of Uzbekistan Islam Karimov, who was on an official visit to the United States, visited the head office of JP Morgan Bank, one of the world's largest banks, and held talks with the bank's managers. As a result of these negotiations, a cooperation agreement was signed with the National Bank for Foreign Economic Affairs of Uzbekistan and J.P. Morgan Bank. On the same day, the President of Uzbekistan signed a cooperation agreement between the National Bank and Chemical Bank, which visited the head office of another major bank Chemical Bank. These meetings and the agreements reached were a positive development for the banking and financial system, which is still in its infancy in our country. Because the banks of our country, which have low credit ratings and financial strength in international markets, have benefited in every way from cooperating with well-known banks. In particular, the participation of our banks in the implementation of major projects has increased, and their ability to lend and receive has improved and their ratings have improved.

In the early years of independence, the United States had a common program of economic cooperation with Central Asian countries, which included large-scale conferences, meetings and seminars for the countries of the region. One such international conference was held on May 5,

1994 in Washington, DC, with the participation of the Uzbek delegation. More than 300 American companies participated in the US-Central Asia: Partnership for Development international conference organized by the US Department of Commerce. Within the framework of the conference, the Uzbek delegation also held a number of important meetings, in particular, the meeting with the US Secretary of Commerce D. Brown. During the meeting, Mr. Brown noted that the US economic relations with Uzbekistan are developing rapidly in the Central Asian republics [3].

The participation of the Uzbek delegation in the international conference "US-Central Asian Republics: Partnership for Development" has become of great practical importance. After the conference, delegations of several American companies visited our country. In particular, on September 10, 1994, a delegation of the insurance company led by the Chairman of the Board of Directors of the American company AIG Maurice Greenberg paid an official visit to Tashkent. The delegation was received by President of the Republic of Uzbekistan Islam Karimov. On the same day, Deputy Prime Minister of Uzbekistan B. Hamidov and Maurice Greenberg signed an agreement on cooperation between the Government of Uzbekistan and AIG and the opening of an official representative office of the company in Tashkent. In addition, on November 1, 1994, a delegation led by the Chairman of the Board of Donovan Enterprise V.B. Donovan visited our country. The American delegation expressed interest in the processing of Uzbek cotton. During the visit, Donovan Enterprise presented its technologies for processing Uzbek cotton from its many years of experience [5. 99].

Initiatives to develop economic relations and trade between Uzbekistan and the United States have been strongly supported by officials of both countries. In particular, the US Department of Commerce has repeatedly organized official delegations to Uzbekistan, which included directors and chairmen of large firms and companies. At the same time, the initiatives of US Senator S. Brownback and Adviser to the Ministry of Commerce Jan Kolinski in developing economic relations with Uzbekistan should be noted. In the first decade of our independence, economic relations between the United States and Uzbekistan developed rapidly, but the implementation of major projects took some time. When we analyze the economic relations between the two countries, we can see that U.S. companies do not pay special attention to any area. That is, they have expressed a desire to cooperate with our country in any field, and this is a positive thing. This, in the language of economists, creates a "diversified" economy.

When studying the economic relations between the United States and Uzbekistan, we can see that mutually beneficial projects have been implemented in the field of agriculture. Major practical work in this area began on June 10, 1998 with the visit of Uzbek farmers to the United States. On the same day, the famous American company KELI Glottal INC, together with the Polytechnic University of California, the Republican Business Incubator and the State Property Committee of the Republic of Uzbekistan, developed a program for young Uzbek farmers to study in the United States. Under this program, 14 young Uzbek farmers have been trained in the United States for 11 months on modern farms in Indiana, Wisconsin, Massachusetts, Maine and Connecticut. During the course, young Uzbek farmers learned how to organize and apply the latest technologies in agricultural production. The Young Farmers Rapid Training Program planned to send more than 100 Uzbek farmers to the United States each year.



Mutually beneficial economic relations between the two countries have been developing rapidly in the field of agriculture. One of the most important agreements reached in this regard was the US-Uzbek Joint Venture Support Program of December 3, 1998, according to the decision of the Cabinet of Ministers of the Republic of Uzbekistan, equipment, material and technical resources, components provided by the American corporation "Keys" as a contribution to the statutory fund of the joint ventures "UzCasemash", "UzCasetractor", "UzCaseservice" and "UzCaseagroleasing" are exempt from all taxes for five years was made. It should be noted that the Uzbek-American joint venture UzCasemash was established on February 11, 1997 [4].

Cooperation between the Government of Uzbekistan and the American company Case New Holland has played an important role in strengthening the technical base of agriculture in our country. In particular, by the end of 2004, the number of Cases in the fleet of agricultural machinery exceeded 5,000. At the same time, 22 new machines were exported. The localization of the components of these machines was 35%. In 2012, as a result of cooperation between UzCasemash, UzCasetractor and other companies, the production of New Holland TL 100, NS135, Case IH 1200 agricultural machinery for farmers was launched in our country [5.127].

Mutually beneficial cooperation between our country and the United States has been developing rapidly in recent years. The policy of openness pursued by President Mirziyoyev is of great interest to American entrepreneurs and representatives of big business. In particular, Boeing, Cargile, Caterpillar, Kellogg and Neosho Ivey, IBM, Keys, Enron, Cummins, GM, Apple, Chevron, Exxon Mobil, General Electric, Honeywell UOP, Firms and companies such as United Investment Healthcare Group LLC, General Electric Gas Power Services, Silverleaf Capital are interested in investing directly in various sectors of the Uzbek economy and industry. In same time, our government has done a number of things to improve the investment climate in our country, which will serve to further develop existing economic ties with the United States.

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## DIACHRONY OF TERM FORMATION OF GERUNDIAL STRUCTURE IN ENGLISH

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### ABSTRACT

*The term formation with the –ing form in aspects of dictionary codification (lexical-semantic variance, nesting, interrelation of general and terminological vocabulary, monosemantic-polysemantic, derivation) are considered.*

**KEYWORDS:** *Variance, Nesting, Term-Formation, Derivation, Terminology, Gerundial Substantives.*

### INTRODUCTION

It is known that terms are words of a special function. They are distinguished by specialized meaning, semantic precision and intellectual certainty [Bushuy, 9]. In the terminology of the English language, gerundial marked formations are distinguished [i.e (ing) forms].

The formation of terms is one of the most striking processes in the development of the semantic structure of gerundial substantives in modern English. They are closely intertwined with the specialization of action and objectification of action, which may have terminological meanings [Aleksenko, 166].

In addition to the synchronous analysis of the tendency of gerundial substantives towards terminology, the diachronic approach is very indicative

[Caso, 101].

When analyzing the semantic structure of gerundial substantives in the diachronic plan for the data of dictionaries that cover a period of 80 years from 1933 to 2013:

OED 1933; OED - 1999; OED - 2010; Supplement to Oxford - 2012; 2013; and etc.

Consider the gerundial substance boxing as a terminological sample.

The following lexical-semantic variants of boxing were registered in OED - 1933:

1. The putting into, or providing with, a box.

Law The lodgment of pleadings and other documents in court

2. The applying of “boxes” or cupping-glasses in surgical treatment; cupping.

3. Naut. Box-hauling.

4. A structure or work of boxes.

5. Ship-building. A square piece of dry hard wood used in connecting the frame timbers of a ship; also a scarf joint.

6. The two cases, one on earth side of a window, into which shutters are folded.

In the dictionary WIND – 1959 the semantic structure boxing is given as follows:

Boxing – n. –

1. Act of enclosing something in a box.

2. A box-like enclosure or recess.

3. Material used in making boxes, casings.

4. Arch. The external case of the material used to bring any material to a required form.

5. Civ.Eng. A mold for concrete.

6. pl. Milling Course flower separated in bolting.

7. Naut. The scarf joint uniting stem and peel.

8. Shoemaking. A leather or canvas stiffening used in shoes to give permanent shape.

As can be seen from the comparison of the semantic structure Boxing in OED – 1933 and in WIND – 1959, in the latter five lexical-semantic variants are registered [3,4,5,6,8], which is not registered in OED – 1933. Four of them are terminological [4,5,6,8].

Supplement to OED - 2012 fixes the following additional lexical-semantic variants of boxing -

1. Various technical senses.

Mech. the fitting of a shoulder of a tenon in the surface of the timber, which is mortised for the reception of the tenon.

2. Coal and Metal Mining. A method of securing shafts solely by slabs and wooden pegs.

3. Shoemaking. A term used to designate the stiffening material placed in the toe of a shoe to support it and retain the shape; such as leather and composition of leather and paper, wire net etc.

4. A wooden casing, conduit, etc. constructed after the manner of a box; the lining of a well.

5. Austr and N.Z. boxing - when your sheep go and join another mob feeding close by, and you can't tell one from another except by the brand of the ear-mark.

All new lexical-semantic variants registered in Supplement to OED - 2012 have a certain terminological orientation.

It is advisable to bring information from specialized terminological dictionaries to the above data.

Thus, ARCJ - 1992, registers boxings [case of double lexicalization as an agricultural term]: boxings - coarse seeding (after sifting out the bran from flour).

In AMC - 1992 the following lexical and semantic variants of boxing are registered:

Boxing –

1. box, container, casing; 2. village Connection in an oblique lock (for example, a stem with a keel); timber; connecting the branches of the frame.

So, it can be seen that the filiations of meanings in boxing is due to the development of terminological lexical-semantic variants. A similar phenomenon is found in the substances winding, setting, reading, rating, landing, holding, heading, finding, dressing, drawing, bearing.

This variation due to the terminological lexical-semantic variants in the gerundial type of substantives is very intensive. Supplement to OED - 2012/2013 confirms this.

It is interesting to cite data from earlier editions of this dictionary, where a number of lexical and semantic variants of gerundial substantives are of a terminological nature.

So, in 1947. breeding has a registered lexical-semantic terminological variant that belongs to the field of nuclear physics:

Breeding - 1. Nuclear Engin. The production of fissile material. 1947.

In 1957. the indexing substantive had a terminological lexical-semantic variant that belongs to the computational domain: indexing - computers. The automatic increasing or decreasing of the address portion, following each execution by means of an index register so that a succession of operands is operated on.

The monosemantic term haloing belongs to the field of printing, which originated from the verb halo in 1967:

Haloing – Paper / Ink Terms for Letterpress Printing, the appearance of vehicle from the ink round half- tone dots or characters.

From the above, the following generalizations can be made.

1. Gerundial substantives function as

a) monosemantic terms:

arcing - email arc discharge, overlapping;

b) polysemantic terms:

blanking - 1.el. locking (cathode ray tube);

2. physical - extinguishing;

3. those. - stamping (or cutting) from a sheet;

c) terminological lexical and semantic variants of the common word:

loosening –

1. weakening;

2. loosening (soil);

3. relaxation.

2. Gerundial substantives are relatively rare in monosemantic and polysemantic functions. More often they are used as terminological lexical and semantic variants. Along with absolute terms, these terminological options are implemented on the basis of a common feature - belonging to the terms of this particular science.

Terminological lexical and semantic variants of the same substantive can

a) belong to one field of science or technology and

b) cover a variety of areas of science, technology, production and culture.

3. In modern English, the enrichment of the semantic structure of substantives is largely due to the development of terminological lexico-semantic variants.

4. The productivity of the process of terminology of substantives is explained by the fact that they most clearly express the concept. Hence the particular predisposition to function as a term.

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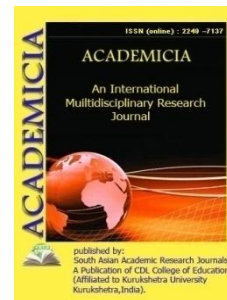
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## PICTURE LETTER FROM USMAN MUSHAFI AND ITS FEATURES

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### ABSTRACT

*The official letter of 'Uthman refers to the spelling style of the Mushafs copied under the leadership of Caliph' Uthman ibn Affan. The significance of the official letter is that from ancient times, all Muslim scholars have stressed the need to write the Qur'an only in this spelling. However, scholars have differed on whether this spelling was recorded by revelation or based on the knowledge of the Companions. Many claim that the spelling of the Qur'an was based on the knowledge and experience of the Companions, while at the same time under the control of revelation. This idea has a scientific basis. There are different aspects of the official letter from the current spelling, and researchers have interpreted this difference differently: 1. Some scholars, including many orientalists, have claimed that the features in the official letter arose because the Companions did not know the letter well. This idea has no scientific value. 2. A group of scholars have linked the features of the official letter to divine mysteries, tried to interpret them inwardly, and have gone deep into the matter. This idea also has no scientific basis and does not conform to the rule. 3. The features observed in the official letter were a requirement of the spelling rules and skills of the time. Ancient scholars and modern researchers have supported this view. Scientific research also proves this.*

**KEYWORDS:** *Holy Quran, Uthman Mushafs, Official Letter, Official Letter Features, Revelation, Hazf, Ziyoda, Badal, Hamza, Fasl And Wasl.*

### INTRODUCTION

Osman's mushafs are written in a form devoid of action and points. A group of scholars argue that the picture of the Companions was made so that it corresponded to the recitation of the letter. However, it is known from the history of Arabic writing that we have studied above that at that time the use of points and gestures in Arabic writing itself was not in circulation. However,

this does not deny that the Mushaf script was written in accordance with the recitations. In other words, the two conditions are combined - that the official letter conforms to the spelling rules of the time, and that it follows the discrepancies in the recitations.

Today, whether it is handwritten mushafs or printed ones, the picture in Osman mushaf is published according to the letter. Only when placing characters is the work done according to a certain reading. For example, in most of the mushafs in us, as well as in the world, dots, movements, and other signs are written according to Hafs' narration from Asim. It is possible to find the mushafs of other recitations as well.

It is known that the Qur'an was revealed in plain Arabic. There are a number of verses about this, enough mental evidence. However, since there have been different dialects in Arabic since ancient times, the question naturally arises as to which dialect of the Arabic language the Qur'an was revealed in. Some scholars say that the Qur'an was revealed only in the dialect of Quraysh, because the Messenger of Allaah (peace and blessings of Allaah be upon him) was from this tribe, while others say that the Qur'aan includes other dialects.

In the words of a number of great Companions, it is clearly stated that the Qur'an was revealed in the dialect of Quraysh. But it is also true that other dialects are reflected in the Qur'an. For example, in the Quraysh dialect, there is no hamza in the middle of a word, but there is a hamza in the recitation. Therefore, the scholars say that the words of the Companions, "The Qur'an was revealed in the dialect of the Quraysh," should be understood in the sense of "most of it, most of it," or "the beginning." However, this does not deny that the Mushaf was written in accordance with the Quraysh dictionary.

Abu 'Amr al-Dani said, "However, most of the official letter is written in the tawfiq (ie without the hamza). This is because the people who were responsible for moving the Mushafs during the time of 'Uthman were Quraysh. That is why many hamzas are written in the form of tashil - hamza with a vowel. It was in their natural skills, in their language. "

In conclusion, the Qur'an was revealed in the Quraysh dialect, and accordingly, the picture was written in a letter and recited in other Arabic dialects with the permission of the seven letters. It was definitely within the framework of those seven letters that were taught, not everyone read on their own based on their dialect.

It is not said that the Qur'an was written in seven letters in the time of the Prophet (peace and blessings of Allaah be upon him). However, a group of Salafi scholars have stated that seven letters are taken into account in the pages of Abu Bakr. Abu Amr Dani stated this openly in Muqni, and Imam Shatibi, who composed this work, also supported this idea.<sup>3</sup> However, in the commentary of that verse of Jabari al-Shatibi, he said: "But in the words of Abu Bakr and Zayd, this meaning is not clearly stated, but it is understood from the flow of their words."

As for the fact that the 'Uthman Mushafs contain seven letters, a group of scholars say that these Mushafs are written in only one letter, and the remaining six letters are invalid, while most scholars say that they contain all seven letters or a picture. Researchers support the latter view. The official letter here refers to the Mushaf inscription, the foundations of which were laid in the presence of the Messenger of Allaah (peace and blessings of Allaah be upon him).



From the time of the Companions to the present day, the scholars of the Republic have agreed that it is obligatory to write the Qur'an in accordance with the letter of the Mushafi Ottoman script.

As a result, a group of ecclesiastical scholars have argued that the letter is false. The first scholar to speak openly on this subject was Abdulaziz Dabbagh, who narrated it in his book *Al-Ibriz*, which he wrote to summarize what he had heard from his disciple Ahmad ibn Mubarak.<sup>5</sup> Dr. Ayman Rushdie Suwayd, one of the most prominent scholars of modern times in the field of recitation, and an academic teacher of Qur'anic sciences, also says that the official letter is *taqwa*.<sup>6</sup> However, this is a controversial issue, and most experts support the idea that the official letter is *ijtiḥad*, not *taqwa*. They provide a number of arguments for this statement. In particular, the differences in the personal mushafs of some of the Companions, in particular, the differences between the imam mushafs, are said to be evidence that the official letter was written on the basis of *ijtiḥad*. The other side responds to this evidence by saying that those contradictions were also narrated from the Messenger of Allaah (peace and blessings of Allaah be upon him). However, a person who has studied the history of mushaf katobati will not find any clear evidence from previous sources to indicate that the official letter is *taqwa*, which none of the ancient scholars have said.

In our opinion, these two ideas can be combined to the following point: Although the letter of the Mushaf is not *taqwa*, that is, the Prophet (peace and blessings of Allaah be upon him) did not teach how to write the words literally as he taught the pronunciation, it is important that they were written in the presence of the revelation reaches.

Reports that the Messenger of Allaah (peace and blessings of Allaah be upon him) re-read and corrected the verses to the scribe confirm our words. In other words, it can be said that the paper letter was supported by a circumcision. That is why the Companions copied the Mushaf from the writings written in the presence of the Prophet (pbuh) and tried not to change this letter as much as possible. However, they may have worked with *ijtiḥad* in problematic places when necessary.

The scholars have studied it very carefully and thoroughly, as it is considered that the secretary of the mushaf must follow it, whether it is *taqwa* or *ijtiḥad*. In the Mushaf picture letter, some words were written in a peculiar way, which differed from the usual spelling. In particular, as linguists corrected and improved spelling, the difference between mushaf writing and consumer spelling increased. In order to preserve the words of the Mushaf, the scholars copied them to the Mushafs in the form of an official letter, studied and narrated these differences with great precision, and began to create works on the subject. Hamza ibn Habib Zayat's statement, "I was afraid that I would lose my eyesight if I looked at the Mushaf too much," is an example of how much research scholars have done in this regard. As a result of research on this topic, a new science has emerged in the field of Islamic sciences, which has its own sources and scientific works - the science of Mushaf painting.

One can get an idea of how the science of formal correspondence was formed and developed by studying the history of its sources.

Since a letter is a written expression of speech, it must be consistent with oral speech. Although the Mushaf official letter is also based on this law, some words are written contrary to the rule of comparison. This, of course, had its own basis and goals. Therefore, the scholars not only studied the Mushaf picture letter, but also tried to explain its features. Early authors limited themselves

to conveying a picture letter. Perhaps this is because they know the reasons why some of the words in the mushaf are written in a specific way. Or they may have advanced the idea that "there is no need to open this subject, the mushaf picture is not comparative, it is to be followed, copied as much as possible, and to spend on other necessary sciences without spending time explaining it." However, by the fifth or sixth century AH, scholars began to focus on interpreting the characteristics of the mushaf painting. After the Middle Ages, some authors focused more on this topic and engaged in lengthy debates. In general, views on this issue can be divided into three groups:

1. The Mushaf secretaries mistyped some words because they did not know the rules of writing well, because in their time there were few literate people, and the spelling rules were not yet well formed. That is why a word is written in two different places.

According to those who hold this view, the Companions made spelling mistakes in copying the Qur'an because they did not know the letter well. The contradictory expressions in the writing of some words in the Mushaf are the result of this situation. However, since the narration of the Qur'an was mainly based on oral instruction, it was read correctly based on the teacher's teaching, even if there was an error in the writing.

Among the linguists, Yahya ibn Ziyad Farro (d. 207 AH), later Ibn Qutayba (d. 276 AH), Ibn Khaldun (d. 808 AH) and others put forward this idea. However, scholars argue that this view is unfounded and one-sided without a thorough study of the subject. Ghanim Qadduri concludes about this as follows:

"In short, this view of the official letter image stems from a lack of understanding of the history of Arabic writing, the nature of the letter, and its fundamentals. As the researcher examines the Mushaf picture letter, this should be far from a sectarian view. This is because the views of this sect prevent the correct understanding of the image of the letter and lead to the accusation that the Companions made a mistake when they wrote the Qur'an in the presence of the Prophet (peace and blessings of Allaah be upon him), compiled it into pages and copied the mushafs. However, they acted with great precision in their writings, and in their oral speech they complied with the requirements of *vasl* and *waqf* without allowing any excesses or shortcomings."

Ghanim Qadrudi substantiates this statement in the following pages of the book with very strong documents, material evidence. Those who wish can refer to that source.

In fact, the Companions first wrote the Qur'an in its entirety in the presence of the Messenger of Allaah (peace and blessings of Allaah be upon him), reviewed it, and revised it from time to time. In the time of Abu Bakr, he also made great scientific efforts to compile the Qur'an into compiled pages. In writing the Mushafs of 'Uthman, however, each word was copied with special attention and advice, and the Mushafs were repeatedly examined and compared. Under such a scientific approach, errors cannot be avoided, as Ibn Qutaybah said. Their opinions do not only correspond to the features of the letter, but also to the messages about the process of writing the mushafs.

2. There are hidden secrets in writings that do not seem to correspond to the speech in the official letter, and the mind is incapable of fully understanding them. However, only those who are open-hearted and those whom Allah has revealed can know the inner meanings of the letter as a precious power, or only through divine discovery.

The emergence of this sect may have been due to the fact that the people of the previous sect blamed the Companions for error and illiteracy, thus casting a shadow over the belief in the protection of the Qur'an.

After all, the representatives of this sect tried to present a number of arguments in support of their views, writing separate works on the subject. The greatest leader of this sect is Ibn Banno of Morocco (d. 721 h). Badriddin Zarkashi (d. 794 AH) narrated the spiritual interpretation of some words in Burhan and Jalaliddin Suyuti (d. 923 AH) in Itqōn.

Ibn Banno Morocco tried to provide certain rules for the spiritual interpretation of the official letter in his book *Unvōnud-dalīl fī mars ma'lummi hottit-tanzīl*. However, most of them did not rely on clear evidence. Sometimes the story went too deep and too far from the goal. But the belief that the features of the official letter were not in vain, and that the scientific efforts to study them were based on certain principles, led to new research, encouraging scholars to interpret the official letter from a linguistic point of view.

3. The Mushafi Sharif was written on the basis of the spelling rules of that period, and the Companions made the most of the existing rules in writing the Mushaf. The fact that some words in the Mushaf are written in a specific way, with the exception of the general rule, is based on ignorance, negligence, or simply not clear goals. Consequently, the view that the Companions made a mistake in writing the Mushaf is nothing but ignorance. It is clear that a person who has studied the features of the picture in depth will come to this conclusion.

To understand the features of the official letter, it is necessary to study the spelling of that period. Indeed, the scribes of the Qur'an wrote it according to the spelling rules of their time. The spelling rules known to many were formed in the second and third centuries AH.

The Companions mobilized all their knowledge and writing skills to express the Qur'an in the Mushaf as they received it from the Messenger of Allaah (peace and blessings of Allaah be upon him). They sometimes went beyond the usual spelling rules to express more clearly in certain words based on their tastes, their understanding. At the same time, they significantly reformed and developed the letter. These words are not just opinions, but conclusions that have a spelling basis.

The owners of this sect interpret the features of the official letter from a linguistic point of view, using spelling rules. In fact, this view is the oldest, earliest idea about the characteristics of a picture letter, and has been put forward by many experts in the field. However, in the Middle Ages, the idea of the previous two sects became more widespread. Modern research, on the other hand, supports the idea of this third sect and further clarifies the issue with unprecedented scientific advances made in recent years.

### **In conclusion, the following can be said:**

1. Neither in antiquity nor in the present did writing fully express speech. That is, both in ancient letters and in modern alphabets, writing and speaking do not completely coincide. Some letters are written but not read, and in some places one letter is written and the other speech sound is pronounced. This condition is present in the spelling of all languages. Numerous examples of this can be seen, especially in English and Russian. But no one calls it a mistake or a fault, but the possibility of writing itself is taken for granted.

There is also this phenomenon in the Mushaf spelling, although the writing possibilities of that period were highly developed. But reading skills and education have filled this gap. Indeed, the Qur'an was first taught and studied on the basis of oral narration.

2. Variation in spelling some words is not considered an error. In the Mushaf, sometimes words of the same type are written differently in one place and differently in another, which, as noted above, has been considered by some scholars to be a mistake.

In fact, it is not a mistake to write a word or a letter in two or three different ways, but it is a common situation in all spellings. There is a similar rule in modern writings today. For example, the word "faith" is now written in the works both with y and without the letter y in the form of "faith." A similar situation existed in the spelling written by the Companions. However, the Companions were also very careful in choosing one of the two different looks at such a time. For example, they wrote some words according to the wasl, some according to the waqf, and mainly tried to preserve the image in the presence of the Prophet (peace and blessings of Allaah be upon him).

3. If we study the process of writing the Mushafs, it becomes clear that the Companions of the Qur'an used all the possibilities of the Arabic script of that time in expressing the Qur'an and its recitations in writing. Imam Dani says in this regard: "The Salaf, may Allah be pleased with them, relied on a correct basis in every form of mushaf, at every point, and used language and analogy. Indeed, their knowledge, their status in eloquence, require it. He who knows knows, he who does not know does not know. Fazl is in the hands of Allah, He gives it to whomever He wills. God is of bounty.

Letters represent speech sounds, speech sounds mean words. Consequently, in fact, the number of speech sounds with letters must be common. However, just as the ancient Arabs tried to keep the sentence short on the subject of eloquence in speech, they also tried to keep the writing as concise as possible in spelling. Therefore, they did not express short vowels, or even dots, in the text. In some places, the long flourishes were dropped. At the same time, they tried to fully express the oral speech in writing according to their own feelings and tastes.

Osman Mushafi's picture is called "terminological picture letter" and most of the comparative picture corresponds to the spelling of the letter. Only in some places do they have their own peculiarities, which are explained by the scholars of official correspondence in their works.

The Companions wrote the Qur'an in the script they used. In addition to the Qur'an, they wrote agreements, letters, and some hadiths in the same letter. In those letters, as in the Mushaf, there were cases of omitting or adding certain letters. After the Companions, the followers and their successors also used this style of writing in all their dealings. By the second century AH, when the linguists of Basra and Kufa had perfected spelling according to the rules of language, the science of modern literature emerged and called it the science of comparative writing.

As the works on the comparative letter were being completed, books on the Mushaf letter began to be written alongside it. This was intended to keep the Mushaf picture letter in its original condition.

Ibn Duruswayh (d. 346 AH) said: We have found that the letters of the Book of Allaah are incomparable and do not contradict them. They will be accepted as long as they are placed in the mushaf.

The scribes insisted on keeping the Mushaf letter unchanged, even if the spelling changed. Imam Malik asked, "Is it permissible to write the Mushaf in a new spelling?" when asked, the man replied, "No, it must be written in the first letter."

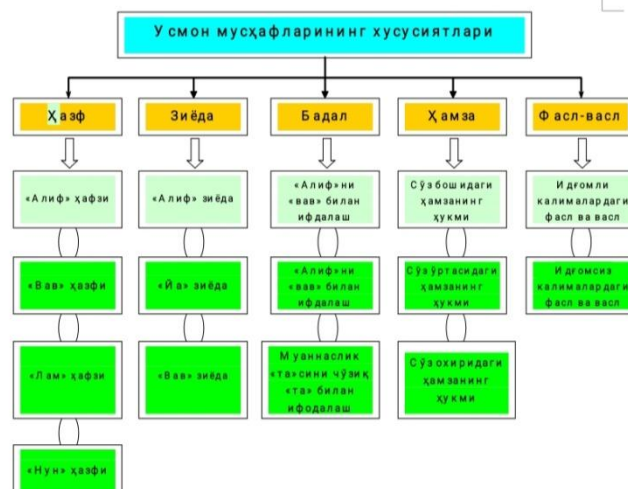
Abu Hayan said, "There are three types of the term Kitab: the term Aruz, the term Mushaf, and the terms used by the scribes in letters other than these two. That is why they said, "The two writings are not comparable - the Mushaf and the Aruz."

The characteristics of the Ottoman Mushafs are divided into five groups:

1. Hazf is to drop a letter.
2. More - letter addition.
3. Badal is the exchange of one letter for another.
4. Rulings on Hamza.
5. Section and vasl - to separate or write words.

Mutaakhir scholars also add a sixth group, which are words written in one of two different readings. However, this group of words is very rare and is studied separately from these groups because they do not have a specific rule and are not considered spelling.

Each of these five groups is divided into several networks. They can be seen in the table below.



In the works devoted to the Mushaf picture letter, the differences are explained verbatim, indicating which word is written in which Mushaf. Since our goal is to compare the mushafs, we think that the above information is sufficient to understand the topic.

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## ICHTHYOLOGICAL STUDIES OF FISHERY RESERVOIRS IN THE LOWER REACHES OF THE AMUDARYA

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### ABSTRACT

*In the past, Karakalpakstan was considered a "Lake district" and historically represented unique habitats for many species of flora and fauna. In the 30s of the last century, there were more than 140 large lakes in the Amu Darya Delta with a total area of about 600 km<sup>2</sup>. With the reduction of the Amu Darya river runoff and the inflow of water into the lower reaches, the studies were continued in terms of identifying changes in the hydro regime of the Aral and the river, changes in their ichthyofauna, distribution, biology and migrations of fish in the sea and coastal zone.*

**KEYWORDS:** *Ecosystem, Karakalpakstan, Ichthyofauna, Red Book, Hydro-Construction, Amu Darya.*

### 1. INTRODUCTION

The scale of changes in the ecosystem of the region due to the desertification of the Southern Aral Sea region is enormous; they have changed the ecological conditions of the habitat of animals, including ichthyofauna. In the lakes of Karakalpakstan, pelicans, swans, herons, wild gray geese, various species of ducks nested, a number of which are listed in the Red Book. Catching fish in lakes, hunting ducks, wild boars and other species of wild animals in tugai forests, cultivating skins and making various goods from them were the traditional craft of the local population.

Intensive hydro-construction, intra-annual redistribution of river runoff, limitation of spring-summer water flows, intake of large amounts of fresh water for irrigation and other economic needs, as well as pollution with pesticides coming from agricultural land, have led to a serious

deterioration in the conditions for the reproduction of valuable fish species in the main fishing water bodies. the lower reaches of the Amu Darya, a reduction in their stocks and catches.

The aim of this work is to analyze the literature data on ichthyological studies of streams and reservoirs in the lower reaches of the Amu Darya under conditions of river runoff transformation.

## 2. MATERIAL AND RESEARCH METHODS

Water bodies of the Republic of Karakalpakstan, the Aral Sea, the Amu Darya and their ichthyofauna and fish resources have historically been constant objects of attention and research.

We analyzed the scientific literature of the results of scientific research carried out by scientists on ichthyological studies, in particular, the fish population of the lower reaches of the Amu Darya River under conditions of a change in the hydro regime. With the reduction of the Amu Darya river runoff and the inflow of water into the lower reaches, the studies were continued in terms of identifying changes in the hydro regime of the Aral and the river, changes in their ichthyofauna, distribution, biology and migrations of fish in the sea and coastal zone.

According to the literature data, the first scientific studies on the ichthyofauna of the lower reaches of the Amu Darya River were carried out at the end of the 19th century by M.N. Bogdanov (1873, 1882); N.A. Severtsov (1874), A.M. Nikolsky (1886, 1900), A.N. Borodin (1904). Then the fish of the Amu Darya River were described by L.S. Berg in the monograph "Fresh water fish of the fish of the USSR and adjacent countries", published in four editions (1916, 1923, 1932, 1948).

According to G.Kh. Shaposhnikova (1950), the ichthyofauna of the Amu Darya river delta is represented by 29 species, the most typical are limnophils inhabiting lakes and represented mainly by reed forms of the Aral fish species.

From 1950 to 1965, a lot of work was done on fish resources: the state of stocks, reproduction, acclimatization of fish and their food supply (Volodkin, 1950, 1954-1956, 1958-1960, 1963, 1964; Bezdenezhnykh, 1953; Geller, Sorokin, 1953; Gosteeva, 1953, 1954, 1956, 1957, 1959; Dengina, 1954, 1956, 1957; Berdichevsky, 1957, 1964; Burevich and Solovyova 1957).

Studies of the ichthyofauna of the lower reaches of the Amu Darya River and the Aral Sea were launched with the organization in 1957 as part of the Karakalpak Integrated Research Institute of the fisheries sector. Subsequently, the Karakalpak branch of the Academy of Sciences of Uzbekistan was created, within the scientific divisions of which a laboratory of ichthyology and hydrobiology was opened, later renamed the laboratory of fish ecology.

Numerous ichthyological studies were carried out already in the 1970s in connection with the growing negative consequences of changes in the Amu Darya hydro regime and the degradation of the Aral Sea. The reasons for the restructuring of the ichthyofauna of the region were convincingly shown, the effect of blocking the Amu Darya channel by hydraulic structures and embankments in the lower reaches on the populations of anadromous and semi-anadromous fish, violation of breeding conditions, reduction of fish resources and the composition of catches (Tleuov 1966, 1981; Adenbaev, Tleuov 1970, 1972; Tleuov, Sagitov 1973; Tleuov, Tleubergenov 1974; Pavlovskaya, 1976, 1982, 1990; Barkhanskova, 1979; Sagitov, 1983; Zholdasova, 1977, 1987; Pavlovskaya, Yusupov, 1972; and others).

Many of the studied aboriginal cyprinids have now become rare and endangered. Sagitov N.I. (1983) conducted research 1970-1979. in the middle and lower reaches of the Amu Darya river. He studied the ichthyofauna and food base of this area. He noted the influence of the Takhiatash dam and the Tuyamuyun reservoir on the ichthyofauna and on their food base. In his work, he gave the ecological and morphological characteristics of certain fish species. He notes that 51 species of fish from 11 families lived in the Amu Darya River, and the largest number of species - 38 in the lower reaches of the river. Numerous in the number of species of the family Cyprinidae - 28 species, Cobitidae - 8, Acipenseridae - 4, Percidae - 3, Salmonidae - 2 species, other families - Esocidae, Siluridae, Sisoridae, Gasterosteidae, Poecilidae, Opiocephalidae are found in one species.

Pavlovskaya L.P. Zholdasova I.M. (1991) investigated the formation of fish populations during regulation of runoff in the lower reaches of the Amu Darya River. The study of the composition of the ichthyofauna was carried out based on the materials of the downstream migration of fish eggs and larvae. They noted the dominance of acclimatizers and further regression of the aboriginal complex.

According to R.O. Temirbekov. (2019) currently 51 fish species from 11 families live in the Amu Darya basin. Of these, in the lower reaches of the Amu Darya there are 37 fish species belonging to 13 families. As before, the richest family of cyprinids is 23 species, the rest of the families are represented by 1-2 species. He notes that favorable conditions for spawning and the formation of commercial populations in the water bodies of the lower reaches of the Amu Darya have developed for the rheophilic pelagophilic cyprinids of introduced species.

The change in the Amu Darya regime led to the loss of unique ecosystems and many species of animals and plants in the river delta zone. Most of the lakes and wetlands have dried up in the coastal area. The consequence was a great loss of biological resources and a violation of their reproduction. Fish resources were particularly affected. Of the aboriginal fish living in the flat part of the Amu Darya, almost all endemics of the Aral basin are in a depressed state. The sturgeon fishes have disappeared: relict endemics of the Amu Darya - large and small Amu Darya shovelnose and thorns - are on the verge of extinction. Like all sturgeon fish of the world fauna, these three species are protected on a global scale. They are included in the Red Lists of the International Union for Conservation of Nature and in the lists of the Red Book of Uzbekistan. In total, 15 species and subspecies of fish of the Amu Darya basin are included in the lists of the Red Book of Uzbekistan.

In the last decade, a set of works and activities has been carried out and local reservoirs have been created in the place of former (dried up) lakes. Examples of this are water bodies - lake systems: "Zhytyrbas", "Sudochie", "Domalak", "Mesopotamia", Muynak and Sarbass bays, Karadzhar lake system. In turn, all this gradually leads to the restoration of the microclimate around the lakes, conditions are created for the restoration of biodiversity.

But the water level in the lakes is still unstable. These dynamic processes in vast wetlands have a serious impact on the redistribution of biodiversity components throughout the Aral Sea region.

On average, since 2000, here it has amounted to a little more than 6 cubic km / year, while the previous average annual flow was 39.6 cubic km / year. The flow regime of the Amu Darya and the living conditions of fish were also affected by its regulation by the Tuyamuyun hydroelectric complex and the Takhiatash dam. In general, this level of transformation of the Amu Darya

hydrological regime in the lower reaches was the main reason for the change in the composition and structure of the fish population, its depressed state and a critical reduction in the number of endemics in the Amu Darya basin and most commercial species, and the loss of many aborigines from the fishing industry. Moreover, the quite successfully acclimatized cyprinids create quite productive commercial populations and have great prospects.

### 3. CONCLUSION

Thus, in order to increase the fish productivity of reservoirs in the lower reaches of the Amu Darya, it is necessary to continue research on the development of methods and technological solutions for the selective catch of fish, on the management of the development of a natural food base in water bodies of various types, fish diseases and the ecological safety of water bodies.

The fishing industry is an integral part of the agro-industrial complex of the republic and affects economic, social, administrative, political, legal and legislative issues. In this regard, the prospects for the development of the industry in a market economy largely depend on the agri-food policy of the state.

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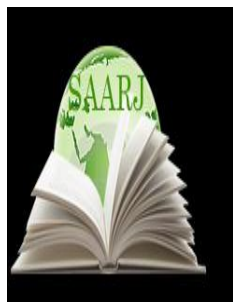
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## EFFECTS OF ALBIT STIMULATOR ON COTTON GROWING

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### ABSTRACT

*The article provides information on the use of Albit stimulator before sowing and during mowing, as well as its effect on seed germination and cotton yield. When seeds and cotton are treated with albite stimulator during flowering and flowering periods, even in adverse weather conditions, seed germination rate is 10-20%, healthy and uniform seedlings are obtained, which has a positive effect on cotton growth and development. 3.6-10.0 sm, the number of cocoons increased by 1.0-3.1, and the opening of cocoons accelerated by 1.4-16.6%.*

**KEYWORDS:** *Cotton, Seeds, Stimulants, Growth, Development, Cotton Yield.*

### INTRODUCTION

In cotton, seeds are treated with fungicides before planting for many years, but in recent years, methods of processing seeds with stimulants to increase seed germination and health, increase disease resistance, accelerate growth and development, increase productivity are also being developed and introduced. The natural climatic conditions of the country are unfavorable for cotton growing, spring rains and low temperatures or hot summers, droughts, water shortages, difficult germination in spring, reduced field germination, increased root rot and gonorrhea, thinning seedlings and weak growth. develops and yields less, resulting in a 15-20% decrease in cotton yield.

### Relevance of the problem

Sh.Abdualimov, K.A.Davronov (2007) found that the use of Vitavaks 200 FF and Unum stimulants before sowing in Fergana region can accelerate seedling germination, coordinate growth and development, increase cotton yield and reduce seed consumption by up to 25%.

According to G.Kholov (2000), in the conditions of dark gray soils of Tajikistan, before sowing when the seeds are treated with bronotak 7 kg / t, humus 4, 8, 12 kg / t and punnen 200-400 ml / t, germination of seeds are accelerated by 0.5-7.8%. In particular, when humus was used at a dose of 12 kg / t, root rot was reduced by 6.2%, gommos by 2.4% during the 2-4 chin leaf period, and by 1.8% during the budding period. In addition, the number of pods in the cotton stalks increased by 2.6-2.6%, with an increase of 3.6-5.6% and an increase in yield by 3.3-4.8 centner per hectare.

### Condition and Methods of the research

The research studied the biological effectiveness of the albite stimulator Andijan-37 cotton variety in the conditions of typical gray soils of Tashkent region in 2015-2017. In the experiment, the plant was treated with stimulants before sowing and during the growing season of cotton, and Dalbron fungicide and Uzgumi stimulator were tested as a general and control standard. Each variant in the experiment consisted of 4 rows, the width between the rows of cotton was 60 sm, the length of the variants was 25 m, the width was 2.4 m, the area of the experimental variant was 60 m<sup>2</sup>, the variants were arranged in 3 rows, 3 tiers (Table 1).

While the albite stimulator was applied at 50, 75, and 100 ml / t doses before sowing the seeds, 40 ml / ha were treated during the weeding period. However, the variant used in combination with Albit insecticides (entolucho) was also studied.

**1-TABLE EXPERIMENTAL SYSTEM**

	Experiment options	The norm of seed processing, l / t	The norm of cultivation during the growing season of cotton	
			honing	During flowering
	Control	Not processed		
	Dalbron	6,5 kg/t		
	Uzgumi	0,8 l/t	0,3 l/ha	0,4 l/ha
	Albit	50 ml/t	40 ml/t	
	Albit	75 ml/t	40 ml/t	
	Albit	100 ml/t	40 ml/t	
	Albit + insecticide	-	40 ml/t+insect	

### Results of the research

The soil of the experimental field is typical gray, the groundwater level is 18-20 meters deep. Albite stimulator is a brown liquid, has a weak odor of conifers, has stimulant, fungicidal and

antidote properties. The active substance is poly-alfalfa hydroxy acid -6.2 g / kg, magnesium sulfate-29.8 g / kg, potassium phosphorite -91.1 g / kg, potassium nitric acid -91.2 g / kg, urea-181.5 g / kg. Albite is used as an antidote to accelerate the growth of crops, protect against disease and stress, protect the soil and the environment, reduce the adverse effects of toxic pesticides on plants. Albite can be used in combination with pesticides and agrochemicals, toxicity class IV, less harmful, produced by the Russian company Albit Antidot.

The content of humus in the driving layer of the experimental field soil 0-30 cm is 0.552-0.551%, total form nitrogen 0.047-0.054%, phosphorus 0.055-0.118%, mobile form  $\text{NO}_3$  -2.6-3.3,  $\text{P}_2\text{O}_5$  -9.7-29, In the presence of 0 and  $\text{K}_2\text{O}$  -292 mg / kg, the amount of humus in the subsoil of 30-50 cm of soil is 0.396-0.449%, total nitrogen 0.031-0.042, phosphorus 0.037-0.120%, mobile form  $\text{NO}_3$  -2.1-2.9,  $\text{P}_2\text{O}_5$  77.5-23.2 and  $\text{K}_2\text{O}$  -276 mg / kg, indicating that the soil of the experimental field was low in humus, general and mobile form of nitrogen and phosphorus with very low, moderate and low supply of potassium.

In the experimental field, the annual norm of mineral fertilizers for feeding cotton was set at N-200, P-140, K-100 kg / ha and was applied stratified according to the level of nutrient supply.

In 2015, the seeds were treated with Albit stimulator in the sowing laurel and prepared for sowing at different rates. However, after heavy rains, seeds were planted in a field with high humidity. Initially, no significant differences between the experimental options were observed, and closely related data were obtained, with significantly higher results than controls in the Albit stimulator in the May 15 follow-up. For example, in the control variant, the germination rate was 61.4%, in Dalbron 57.3%, in Uzgumi 68.2%, Albit 50.7 / ml 68.7, Albit 75 ml / t 72.7 and Albit 100 ml / t 75 was found to be 3%. When seeds were treated with albite, germination was 7.3-13.9% faster than control.

In 2016, the seed germination rate was 76.0% in control, 78.7% in Dalbron, 86.2% in Uzgumi, and 86.8-88.0% in Albit 50-100 ml / t. At the same time, seed germination increased by 10.8-12.0% under the influence of Albit.

It is known that it is important to determine the effect of new physiologically active substances on the growth and development of cotton ontogeny. Therefore, when its effect on the growth and development of cotton was determined, it was found that Albit had an active effect from the earliest developmental stages. The height of the cotton, the number of true leaves, the number of fruiting horns, combs, flowers and buds are optimal. In particular, on June 2, 2015, the height of cotton was 13.1-15.1 sm, the leaves were 3.4-3.7sm, while the seeds were treated with Albit, the height was 0.5-1.2 sm, the leaves were chin. the number was more than 0.1-0.2.

In the experiment, on July 2, the height of the cotton was 36.8-44.4 sm, on July 30 - 75.1-84.8 sm, the number of branches was 5.6-6.5 and 12.4-13.3, respectively, the stems were 6.4-7.6 and 5.9-6.5, the flowers and buds were 3.0-3.3, and the stalks were 6.7-7.4 in a single stalk.

During the ripening period of cotton (29.08.2015) the height was 80.3 sm under control, 12.5 pieces of crop branches, 8.0 pieces of pods, of which 2.7 pieces (33.8%) were opened, 50-100 ml of seeds with Albit / t and at the rate of 40 ml / ha in the period of mowing, the height is 86.7-90.2 sm, the yield is 13.3-13.5, the buds are 9.1-9.5, and the opening is 3.2-3.7 pieces (35.2-38.9%), in the variants used Albit, the height of the cotton is 6.4-9.9 sm, the yield branches are 0.8-1.0 pieces, the stalks are 1.1-1.5 more, their opening rate was 1.4-5.1% higher. Positive

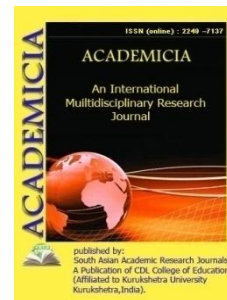
results were also obtained when the albite stimulator was mixed with entolicho and entomite pesticides and treated with cotton, which led to the conclusion that the albite stimulant could be used in combination with pesticides.

### CONCLUSION

Thus, in typical gray soils of Tashkent region and in natural climates, when seeds and cotton are treated with Albite stimulator during flowering and flowering periods, even in adverse weather conditions, seed germination rate is 10-20% higher and healthy and even seedlings can be obtained. A positive effect on the growth and development of cotton, height 3.6-10.0 sm, the number of cocoons increased by 1.0-3.1, and the opening of cocoons accelerated by 1.4-16.6%.

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## THEORETICAL BASIS OF STEEL SATURATION WITH CARBON AND NITROGEN AND THEIR FOLLOWING THERMAL TREATMENT

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### ABSTRACT

*The article investigates the theoretical foundations of steel saturation with carbon and nitrogen. The chemical composition, properties, microstructure, hardness, microhardness and depth of the surface coating of nitrocarburized steel samples and parts have been studied. The surface layers of cast parts of tillage machines with a coverage depth from 1.5 to 2.0 mm are analyzed. The results of abrasive wear of surface-coated cast specimens before and after heat treatment of quenching with subsequent tempering are presented. It has been proven that optimal heat treatment of parts increases the abrasive wear resistance and durability by 2-3 times.*

**KEYWORDS:** Carbon Steel, Bases, Saturation Of Surface Layers Of Steel With Carbon And Nitrogen, Thickness Of Surface Coating, Optimal Heat Treatment - Hardening Followed By Tempering, Microstructure, Hardness And Microhardness, Abrasive Wear Resistance And Durability Of Parts.

## INTRODUCTION

Until now, a lot of hardening methods are known, but among these methods of thermal hardening of machine parts, one of the leading places in the industry belongs to chemical-thermal hardening by saturating the steel surface with carbon or simultaneously carbon and nitrogen. In this case, you can apply carburizing or nitro carburizing. When carburizing in a solid carburizing agent, it is impossible to ensure constant contact of the active cementing component - carbon monoxide with the steel surface and control the steel saturation. The process of carburizing itself in a solid carburizer is very laborious, time-consuming (the process is very long) and therefore is everywhere replaced by more rational processes - gas carburizing or nitro carburizing. Than carburizing, nitro carburizing is not labor-consuming, short-lived, very reliable and more economical process [1]. Successive saturation of steel with carbon and nitrogen is called joint saturation of steel samples and parts.

It is known that many parts wear out due to abrasive and abrasive-corrosion wear [2,3]. At this time, recommendations on the choice of materials for the manufacture of machine parts subjected to abrasive or abrasive-corrosive wear, as a rule, do not take into account the effect of general corrosion processes, the contribution of which to the overall wear of machine parts and equipment with a relatively low level of external micro wear [4] is very significant. Therefore, the study of the regularities of abrasive and abrasive-corrosive wear in corrosive environments is of great scientific and practical importance.

Most parts of machinery and equipment operate under conditions of abrasive-corrosive wear, when the material of the part is required to simultaneously abrasive wear resistance and corrosion resistance. The service life of these parts is limited due to the simultaneous abrasive and corrosive effects of the environment [4,5]. All this requires a constant renewal of the technological equipment and spare parts park.

**The purpose of this work** is to develop technological methods for saturating the steel surface with carbon and nitrogen. Obtaining cast parts of land-working machines with a surface coating by the method of chemical-thermal treatment - nitrocarburizing, followed by quenching and tempering. The goal was also to establish the possibility of efficient surface hardening and increase the wear resistance of steel by treating its working surface with an effective and reliable nitrocarburizing layer (quenching and tempering).

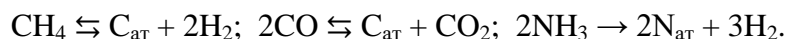
## RESEARCH METHODOLOGY

The nitro carburizing process consists in heating parts in a gaseous medium consisting of nitrogen and carbon-containing gases to a temperature of 820-860 ° C, holding for the time necessary to obtain a diffusion layer of a given depth and cooling at a rate that provides the necessary properties of the surface layer and steel core. The saturation of the surface layers of steel with carbon and nitrogen during chemical thermal treatment (CTT) depends on a complex of complex processes occurring at the interface "gas medium - surface of the part", as well as in the surface layers of the metal [6].

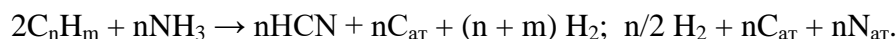
The main solubility of molecular nitrogen in iron is insignificant and is only 0.026-0.028% at 900 ° C, and the dissociation energy of nitrogen is the highest among diatomic molecular gases (225.1 kcal / mol).



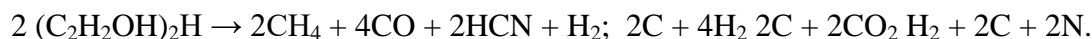
In this regard, the saturation of steel with nitrogen is possible only under the condition that reactive atomic nitrogen is supplied to the metal surface, which is released during the decomposition of relatively easily dissociating ammonia molecules. Similarly, to saturate steel with carbon, it is necessary to supply active carbon atoms to the steel surface. Active carbon and nitrogen atoms are formed when the dissociation reactions of methane, carbon monoxide and ammonia occur in a gas environment:



With the interaction of hydrocarbons and ammonia, the formation of a very active gaseous hydrocyanic acid is possible:



When triethanolamine is used for nitrocarburizing, carbon and nitrogen are formed during the following reactions:



In practice, atomic nitrogen and carbon are involved in the reactions of interaction with the metal, which are released at its very surface in a very thin layer of the gaseous medium with a thickness of about 2-3 Å. The atoms formed in the rest of the working space of the furnace are bound into inert molecules and do not participate in saturation processes. At the gas-metal interface, under the conditions of the catalytic action of the metal surface, complex physicochemical so-called sorption processes (adsorption and absorption) take place. If the sorption processes proceed at a sufficiently high rate, then on the metal surface and in the surface layers there appears a significant difference in the concentrations of these atoms and an intense diffusion saturation of the surface layers of the metal with carbon and nitrogen occurs.

The main relationship between the rates of reactions in the gas phase, sorption processes on the surface of steel and the rate of introduction of atoms through diffusion into the surface zone of steel in real processes of nitrocarburizing is such that a certain equilibrium is established between the composition of the gas atmosphere and the content of carbon and nitrogen in the surface layers of the steel being treated.

If the reaction rates in the gas phase are insufficient to saturate the boundary gas layer and do not provide the maximum diffusion rate of atoms into the surface zone, as a result of which the saturation process slows down and the concentration of carbon and nitrogen on the surface decreases, then methods of special preparation of the gas mixture are used before it is introduced into the working space of the furnace (in endothermic or exothermic generators) or actively dissociating additives are introduced directly into the furnace. If the rates of dissociation of molecules in the gas phase and absorption are higher than the rate of diffusion into the outer zone of steel, then the equilibrium conditions are violated and a phase of free head appears.

*Influence of nitrogen and carbon.* Nitrogen, diffusing into steel together with carbon, has a significant effect on the saturation kinetics. Previous studies have shown that nitrogen significantly lowers the temperature of the onset of saturation in comparison with the cementation process from 750 °C to 400-450 °C as a result of a decrease in the temperature range of  $\gamma$ -iron existence. Simultaneously with the release of active carbon and nitrogen atoms, significant amounts of hydrogen (as a result of the dissociation of methane and ammonia) and

carbon dioxide (as a result of the dissociation of carbon monoxide) are released in the reaction zone. Therefore, the initial high concentrations of methane and carbon monoxide in the reaction zone at the surface of the parts decrease and approach the values corresponding to equilibrium states. As a result, a difference in the concentrations and partial pressures of the active components of the mixture is created over the thickness of the reaction zone of the gas phase. This concentration difference causes diffusion processes leading to a decrease in the concentration gradient. Moreover, hydrogen and carbon dioxide diffuse into the depth of the gas mixture from the surface, and methane, carbon monoxide and ammonia - to the surface of the part from the depth of the gas mixture.

Carbon and nitrogen, diffusing into austenite or ferrite, form an interstitial solid solution, since the actual radius of the carbon atom (0.77 Å) and nitrogen (0.71 Å) is less than 0.59 of the actual atomic radius of iron (1.28 Å). Interstitial solid solutions are characterized by the predominant diffusion of only one component (with a smaller atomic radius), whose atoms are incorporated into the interatomic interstices of the matrix. With this nature of diffusion, the mathematical description of the process is simplified. The mathematical expression of the processes of atomic diffusion has no complete form. Fick's equations are used to determine the diffusion rate.

Diffusion is caused by a gradient of the chemical potential, which is proportional in the case of carburizing and nitrocarburizing to the concentration gradient of the diffusing substance. The concentration gradient is large at a small thickness of the diffusion zone and sharply decreases with its increase, which leads to a decrease in the diffusion rate. A decrease in the diffusion rate can also be caused by a decrease in  $\Delta C$  due to either an increase in the concentration of a diffusible substance in the core (for example, when various steels are saturated with carbon), or a decrease in the concentration of a diffusible substance on the surface (for example, during decarburization of steel subjected to carburization and nitrocarburizing). In this direction, Russian scientists have made a great contribution to the study of the mechanisms and kinetics of diffusion processes. They found that diffusion is determined not by the concentration gradient, as was commonly believed, but by the gradient of the chemical potential (the gradient of partial free energy).

The main direction and intensity of diffusion depend on the thermodynamic activity of a substance in a solid solution, associated with its chemical potential. A chemical element that lowers the thermodynamic activity of a substance dissolved in the matrix, accelerates its diffusion into the matrix. In real processes of saturation of the steel surface with carbon and nitrogen, the initial and boundary conditions that predetermine the legitimacy of the use of mathematical dependencies (for example, the constancy of the concentration of a diffusing substance on the surface) are rarely observed. Therefore, the nature of the structure and properties of nitrocarburized layers is most justified to describe depending on the technological parameters, i.e. process temperature, gas composition, holding time and cooling rate.

Cast steel samples were made of steel 35, 40 so that a 0.7-1.0 mm layer of coating was on the working surface of the part. Nitrocarburizing was carried out at a heating temperature of 820-860°C, steel has a relatively high wear resistance and impact strength. The low quenching temperatures of the poured metal contributes to complete penetration and good contact with the base metal. The choice of such metals as an object of research is due to the need to study the

effect of additions of alloying elements in the structure and on the abrasive wear resistance of steel castings of parts on the coatings.

Macro- and micro-studies were studied with optical metallographic microscopes МБС-1, МБС-9, ММ-8М and Neofot-21. Samples for testing were 12x12, 15x15, 15x20, 20x20, 22x22 mm in size.

The microstructures and microhardness of surface coatings change significantly after optimal heat treatment. If quenching is performed from a heating temperature of 840-860 °C [7], then the pearlite component of the structure undergoes a martensitic transformation. The location of the carbide component does not change. The total depth of the coating, including both the surface layer and the high-carbon sublayer, does not change either. So, for example, after quenching with a heating temperature (t) of 840-860 °C of special samples obtained by casting with a thickness of 0.6-1.0 mm, the structure of the eutectic component and the location of secondary carbides did not change. Only, instead of the pearlite component, fine-needle martensite is observed [8].

When heated for quenching to a temperature of 860 °C, all secondary carbides dissolve in austenite, only primary carbides remain in the eutectic. Specimens whose surface coatings were obtained by casting into earthen molds with a thickness of up to 1.0 mm, on the surface is formed a structure consisting of eutectic carbides and martensite. The microstructure clearly shows martensite needles, retained austenite, primary carbides, and a sublayer of high-carbon martensite (Fig. 1a, b, c). A similar picture is observed when considering the microstructures of coatings for specimens with a thickness of 0.7 and 1.0 mm. In these cases, primary carbides and martensite are observed on the surface itself [8].

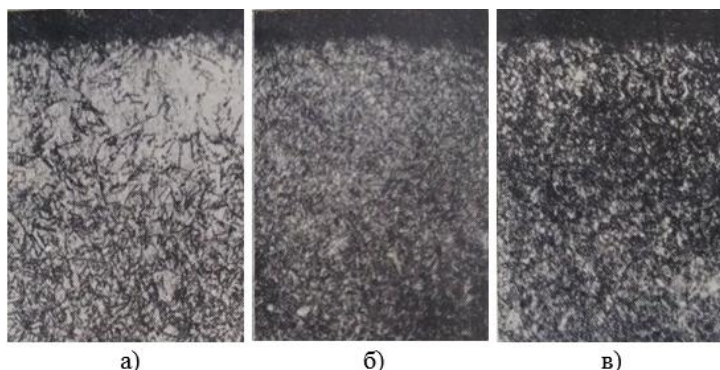


Fig.1. Microstructure of nitrocarburized surface layer of steel.

## RESEARCH RESULTS AND DISCUSSION

Scientific research was carried out on special samples and parts made of this steel, subjected to chemical-thermal hardening - nitrocarburizing according to various options. The microstructure of the nitrocarburized layer of the part made of the selected steel consisted of acicular martensite (see Figure 1) and residual austenite less than 20-25%. the structure of the core is of troostite-martensite. The hardness at the top of the surface of this part is HRC58-63, and the hardness of the core is HRC38-45. The hardness of the samples was determined on Brinell TB5-4 and Rockwell TK-2 devices, and the microhardness was measured on a IIIMT-3 device at a load of 0.5 N. The microhardness within the thickness of the hard-alloy coating varies within wide limits. The highest microhardness is for specimens with a layer thickness of 1.0 mm [9]. At the very surface, a hypereutectic structure is formed

with a large amount of primary chromium carbides with a hardness of  $HV100 = 15300$  MPa. At the same time, the microhardness of the pearlite component of the eutectic is 7300 MPa. At a depth of 0.6-0.9 mm from the surface, depending on the thickness, the structure of the base metal with a hardness of 2600 MPa is already observed. A tetrahedral diamond pyramid (with an apex angle of 136°) is pressed into the test material under a very light load of  $0.05 \div 5N$  ( $5 \div 500$  g). For loading, special weights in the form of washers with a cutout weighing 5,10,20,50,100,200 and 500 g are used. Application of the microhardness measurement method allows one to determine the hardness of a thin sheet and foil material, thin surface layers of metal coatings and individual structural components of materials. Also, the microhardness method can be used to find the hardness of individual grains or even very thin surface layers, thin protective coatings and small parts.

The obtained quenched specimens with a coating for tests of X-ray structural analysis had dimensions of 20x20 and 22x22 mm. The phase composition of the coating was determined by X-ray diffraction analysis (DRON-2.0), and the results of the phase X-ray diffraction analysis give a more complete picture of the composition of the obtained coatings. The width of the X-ray lines was determined at half-height of the maximum as an arithmetic mean value from four to five diffractograms or distribution curves of the intensity of X-ray radiation. Calculations of measurement errors showed that they are in the range of 5-10%, depending on the object of research. According to the research results, it was revealed that special carbides of the type  $Me_{23}C_6$ ,  $Me_7C_3$  and others are formed on the surface of samples with coatings [10].

## CONCLUSION

Thus, it can be concluded that an effective way to increase the abrasive wear resistance is the chemical-heat treatment of steel and the production of a surface coating on the working surfaces of the part by the nitrocarburizing method. It can be seen from the above data that nitrocarburizing, optimal hardening followed by tempering increases the abrasive wear resistance of finished needle sprockets of parts by two and three times [11, 12]. This new innovative technology has been introduced into the production of "Aggregate Plant" JSC with the best economic effect.

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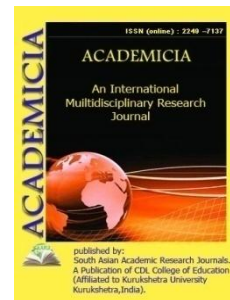
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## WORD BORROWING AND ASSIMILATION IN THE UZBEK LANGUAGE

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### ABSTRACT

*This article looks into the Uzbek language system and analyses loaned words from other languages. The theories are provided with current examples of loaned words and explanations of their meaning. Moreover, the thesis compares the usage of loaned words in the English and Uzbek languages.*

**KEYWORDS:** *Word Formation, Lexeme, Lexicon, Explanatory Dictionary, Thematic Group, Loan Words, Borrowed Words, Assimilation,*

### INTRODUCTION

It has long been known that 3 components play an important role in the formation of the Uzbek lexicon. These are: 1. All words derived from the oldest Turkic language and play an important role in the development of Uzbek lexicon, in addition, everyday words and phrases are reflected in the above elements.

2. Borrowed (assimilated) words. Such words come from other languages, such as: Arabic, Persian-Tajik, Russian, German, French, Spanish, English and others. The interesting thing about this word is that they are mainly formed from a combination of classical languages (Arabic, Turkish, Persian-Tajik).

3. Assimilated neologisms, words of this type are formed by adding suffixes, prefixes and suffixes to words that exist in the language.

In addition to the three components mentioned above, secondary elements also contribute to the development of vocabulary. These are: Onomatopoeia, the formation of one word from one word to another. The introduction of foreign words into our language and their use leads to the emergence of certain new words in our language, and this group of words is called assimilated



words. At the heart of assimilated words are words, whose formation did not change in their form and meaning, when entered to our language. For example bar, film, leader.

### Main part

Bilingualism have existed among Uzbek people for a long time. The population of Movorounnahr could speak in the Uzbek and Tajik languages in 6th century. Even now, in most parts of Uzbekistan people speak the two languages. In the period of Arab caliphate the Arab language became an academic language. Next period is the bilingualism of Uzbek-Russian languages. In the Uzbek language, there are considerable amount of borrowings from 20 languages which have had a significant impact on Uzbek vocabulary. We can find borrowed words from the languages which are inactive in forming Uzbek vocabulary as well. Because of the relationships of different languages : 1) New words are accepted; 2) some prefixes are assimilated; 3) identical sounds may appear in the language; 4) identical syntactic structures may appear; 5) hybrid calques are shaped; 6) the meaning of the words may change .

Some of the lexemes that were loaned during the pre-independence period are Russian and adapted to our language with Russian language features. For example, chempionat (championship), trenirovka (training). The elements such as –at, -ka are not characteristic for English words. Also, it is noticeable that «x» is replaced by a phoneme «h» in lexemes such as xaker (hacker), xuligan (hooligan) and xoll (hall).

Though most of the Uzbek lexicon consists of its native lexemes, Persian, Arabic and Russian borrowed lexemes are larger in size than other languages. Besides, currently we may found more English words that are already in common in everyday use.

Old version of «Eplanatory dictionary the Uzbek language» included almost about 80 English borrowed words, but in its new edition, more than 500 English words have been explained. Moreover, «The Explanatory dictionary of the English borrowings in the Uzbek language» and «English-Uzbek dictionary of IT and internet terminology» gives the definitions of about 1000 English words in Uzbek.

While the English borrowings are in synonymic, antonymic, and lexical-semantic relationships, they are grouped into thematic groups with members of a particular paradigm. Such thematic groups take their place in the language based on hierarchical relationships.

As vocabulary content evolves according to changes in society, borrowed words play a primary role in vocabulary enrichment. Immediately after independence, assimilation of loaning words, precisely, English words into our language increased. Many borrowings, especially those used in information technology, do not have the recommended Uzbek versions in Uzbek-English dictionaries. I suppose that if necessary, it is essential to translate them into our language according to the nature of the language.

Many of these words are now used in modern oral and written communication as modern-day words. English borrowings can be classified into the following thematic groups:

1. Lexicon on socio-political sphere;
2. Lexicon on economic sphere;
3. Lexicon on cultural and educational sphere;

#### 4. Lexicon in the field of sports.

Below we categorize the words of a thematic group on socio-political, economic, cultural, educational and sports spheres by internal divisions.

Name of the food: steyk(steaks), gamburger (hamburgers), yogurt, keks (cake), ketchup, jem (jam).

Drink names: kokteyl (cocktail), koka-kola (coke), viski (whiskey).

Clothes names: jemper(jumper), jinsi (jeans), kavboyka (cowboy), pijama (pajamas), sviter (sweater), trusi (trousers), reglan.

Household goods name: mikser (mixer), pleyer (player).

Cosmetics and household items: sheyping (shaping), shampun (shampoo), servis (service).

Place names: skver (square), kemping (camping), klub (club), kollej (college), kotej (cottage), matel (motel), bar (small restaurant, bar), tunel (tunnel), zopark (zoo), supermarket.

Name of vehicles: trolleybus, express, tramvay (tram), pikap (pickup), layner(liner), tanker, etc.

The English vocabulary lexemes have a special place in science and scientific terms. In particular, units of pedagogy, psychology, ethnography, physics, journalism, history, literature, music, linguistics, biology, botany, physiology, dietology, geography, chemistry, zoology, and drawing are also of scientific importance.

Generally, borrowings we have in our lexicon are the names of food, drink names, clothing names, household items, names of organizations, fabric names, vehicles, drugs. Names, names of fuel products, and technical names also fill the vacancies of some thematic groups in the Uzbek language.

In English, there are many common lexemes with -tion affixes. Such kind of words were borrowed into our language assimilating to the nature of the Russian language. For example, vulkanizatsiya-vulcanization, innovatsiya-innovation, press-konferensiya- press conference, registratsiya-registration.

Based on the process of mass computerization, a number of words have been mastered by experts and then among computer users: computer, file, printer, scanner, laptop, browser, site, and more.

As the borrowed words are mostly neologisms, they are often misspelt. Even «The explanatory dictionary of the Uzbek language» includes two written forms of these words: noutbuk/notbuk-laptop, yogurt/yo'g'urt-yoghourt.

#### CONCLUSION

Though the Uzbek language is rich in Arabian and Persian words, today English and other languages' influence is bigger on our lexicon. Most of the words recently assimilated to our language are taken from the English language or taken through it. Like other borrowed words, these words face different phonetic, morphological and semantic changes while they are assimilated. They have synonymous and antonymous relationships with Uzbek native words as well.

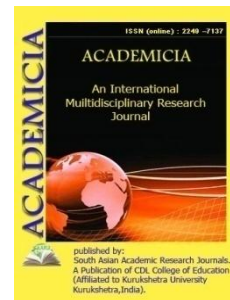
The vocabulary bank of the language shows changes in the language more widely than other aspects. Nowadays borrowing is continuing with technological advances.

### CONCLUSION

The real consideration is that there is not any language without new words or terms in the world. Because in the far development of history different countries, nations made interrelations causing new phrases and expressions appearing in the language.

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## LEADING FAMILIES AND MAIN FORMATIONS OF KATTAKUM MASSIVE'S FLORA

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### ABSTRACT

*In The kattakum massif, located on the territory of the Termez district of Surkhandarya region, scientific research is being conducted to study the species composition and life forms of common plants. Information about the leading families and categories of plants distributed on the territory is presented.*

**KEYWORDS:** Family, Species, Category, Flora, Endemic, Anthropogenic, Formation.

### INTRODUCTION

Today, the problem of biodiversity conservation in our country and in the world is becoming more acute. This is due to anthropogenic<sup>1</sup> impacts and natural disasters, which lead to significant environmental losses. This is primarily due to changes in the species composition of plants, the disappearance of rare plants.

**Main part:** The Kattakum massif (Kattakum desert) is located in the Termez district of the Surkhandarya region, bordered on the north by the Karakir ridge on the southeast of Khovdog. The total area of the Kattakum Desert was 250 km<sup>2</sup> in 1971 (according to Uzdavayrloyiha), 175 km<sup>2</sup> in the 2000s, and only 147 km<sup>2</sup> today. The saddest thing is the deterioration of its flora.

As a result of neglect in the Kattakum massif, plants such as saxaul (Haloxylon), cherkes (Salsola richteri karel), and kandym (Calligonum), which serve to reduce the environmental damage of fly sands, are being eradicated. Villages, roads, irrigated lands, and irrigation networks are left in the sand the upshot of the movement of sand dunes due to the wind, leaving the area without bushes and trees. If the situation keeps going in this way, the sands and the psammophilic<sup>2</sup> plants and creatures that live there may not be visible. In this regard, the Cabinet

of Ministers on June 11, 2019 approved the Strategy for Biodiversity Conservation in the Republic of Uzbekistan for 2019-2028.

To date, little has been done to study the vegetation of the Kattakum massif, but for some reason it has not been completed. One of the main reasons for choosing this topic is to study the life forms, medicinal properties, importance in the national economy, species listed in the “Red Book” (Qizil kitob) and protected species in the Kattakum massif.

The relevance of this topic is that the data collected through its study and the future results obtained can be used to study the flora<sup>3</sup> of a particular region of the country or the whole of Uzbekistan, as well as to protect endangered populations<sup>4</sup> can be used to develop targeted measures. In addition, no specific studies have been conducted on endemic<sup>5</sup> and rare species in the Kattakum massif. However, this study is important in terms of maintaining environmental sustainability.

As a result of preliminary research in the Kattakum massif, we observed that the area consists of 316 species belonging to 42 families and 101 genera. *Chenopodiaceae*, *Asteraceae*, *Poaceae*, *Fabaceae*, *Brassicaceae*, *Polygonaceae*, *Boraginaceae*, *Caryophyllaceae*, *Lamiaceae*, *Apiaceae* families play a leading role in the flora of the higher plants of the region. The leading categories include: *Haloxylon*, *Astragalus*, *Calligonum*, *Salsola*, *Artemisia*, *Cousinia*, *Climacoptera*, *Suaeda*, *Polygonum*, *Atriplex*, *Allium*, *Ferula*, *Halimolobos*, *Convolvulus*.

There are natural plant communities in small areas around the settlements.

#### Leading families of the flora of the Kattakum massif

TABLE 1

No	Families	Categories	Types
1.	<i>Chenopodiaceae</i>	8	28
2.	<i>Asteraceae</i>	5	24
3.	<i>Poaceae</i>	4	17
4.	<i>Fabaceae</i>	3	13
5.	<i>Brassicaceae</i>	3	13
6.	<i>Polygonaceae</i>	2	10
7.	<i>Boraginaceae</i>	2	8
8.	<i>Caryophyllaceae</i>	3	7
9.	<i>Lamiaceae</i>	2	6
10.	<i>Apiaceae</i>	2	5

#### Classification of vegetation cover of Kattakum massif

(According to P.Q. Zokirov, 1989)

Table 2

Types	Little type	Senotype	Formation	Association
Desert Plants - Eremiphyton (Eremion, Deserta)	Halophilous plants -Halophyta	Soup halophilous grass -Halopoia	Mixed salt Salsola scleranthae, Girgensohnia oppositiflora	1. Weeds - ephemeral- mixed saline 2. effervescent-mixed-saline 3. poa bulbasa -soup-mixed soup

				4. Mixed-grass-worm-mixed saline
	Argylophile (ephemeral plants) -Argillophyta	Ephemeral grasses (Ephemeropoia)	Poeta bulbosae - Poeta bulbosae	5. large grass-colored- Poeta bulbosae 6. Mixed grass-ephemeral- Poeta bulbosae 7. Howling Pixel - Poeta bulbosae 8. Shorali-ephemeral-cousina - Poeta bulbosae
	Psammofil– Psammophuta		Mixed juzg'un– Mixto- Calligoneta:	9. Singren mixed - one annual saline-ephemeroid-dwarf
			Selinzor – Aristideta pennatae:	10. In some places there is a sparse mixed olabutali-saline-selinzor

Thus, one of the most important factors in the development of animal husbandry in the Kattakum massif today is to increase in the productivity of desert plants and the planting of some nutritious plants. Early advances have been made in this area. For example, in the deserts of Turkmenistan and Uzbekistan, Howling Pixel, Kochia prostrata, Saxaul, Astragalus villosissimus, Calligonum, Ephedra, Cousinia, and Keyreuk (*Salsola rigiga*) are successfully grown. Attention is being paid to improve the condition of naturally growing plants such as sagebrush, sagebrush, sagebrush, carnation, selenium, teresken, wormwood, beetroot, sugarcane, izen, and in the end, systematic grazing is being established. [1]

Desert plants are important not only as fodder for livestock, but also for other sectors of the economy. They are used in food and spices, as dyes, essential oils, and for other purposes. Sand carrots (*Sehumannia karelinii*) and kovrak (*Ferula dshaudshamyr*) are the roots and seeds of sandalwood (*Sorisprum Ithmahnianum*, *C.apterum*), arnebia (*Arnebia orintalis*) and nomneya (*Nonnea picta*). possible. *Rheum turkestanicum* is derived from sugarcane, *Tamarix ramossissima*, and *Limonium* Mill. [2]

**CONCLUSION:** In short, every plant in nature is of special importance to the biosphere, and at the same time reflects biodiversity. Throughout human development, plants have been divided into medicinal, ornamental, and a number of other groups, and have been used as needed. Due to the increase in such needs and climate change in nature, some plants are in danger of extinction. Improving the condition of the desert in all respects and paying special attention to its use in various sectors of the economy is important in maintaining the natural balance. The use of nature depends on the ecological balance of any area, and in this process, of course, it is necessary to take its fragility into account and focus on the factors that ensure sustainability.

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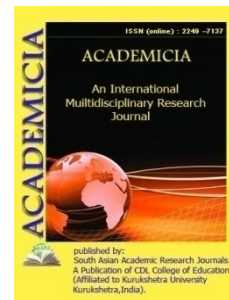
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## RAISING THE ATTITUDE OF PRIMARY SCHOOL STUDENTS TO EDUCATION AS A VALUE

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### ABSTRACT

*The article is devoted to one of the complex problems of modern education, especially primary education - the problem of upbringing the value attitude of primary schoolchildren to knowledge, educational and creative activity. The article contains a description of the diagnostic complex for studying the value attitude towards learning in accordance with its three-component structure, a description of the qualitative characteristics of various levels of formation of the value attitude towards learning in primary school children.*

**KEYWORDS:** *Experience, Value Attitude, Readiness For Self-Education, Attitude Towards Learning, Junior School child*

### INTRODUCTION

The changes taking place in the modern world: their speed, innovativeness and sometimes unpredictability are perceived as the need to form a readiness for self-education and self-development among the younger generation. It is shown in the standard that the development of cognitive interests, value attitudes towards education, experience of educational and cognitive and positive creative activity are important components of the implementation of the education standard. This view is consistent with theoretical ideas about the structure of the content of education based on a culturological approach (V.V. Kraevsky, I. Ya. Lerner, M.N. Skatkin).

The presence of the category of experience in the content of education emphasizes the importance of the child's own activity in mastering knowledge about the world, which defines education as the property of the child's personality and a condition for the transition to independent education in the future.

Learning activity is an activity for self-change (D. B. Elkonin). The inclusion of a child in educational activities presupposes not only an orientation towards developing the skills to carry

out the processes of cognition and learning, which can be considered in retrospect, but also as the acquisition of the ability to cognize, to learn here and now, to be ready in the process of cognition and learning to acquire new competencies. This requires teachers to create conditions for the simultaneous orientation of the child to the past, present and future when organizing the educational and cognitive activity of a younger student. The solution to such a complex problem is possible provided that the child has a positive value attitude towards learning.

The modern educational standard is based on an axiological approach, which dictates the value base of the content of education.

Purposeful work of the teacher to educate the value attitude of younger students to learning is possible on the basis of determining the characteristics and level of their development. Saturation, and, consequently, the study of value relationships is possible in the trinity of components that make up them: cognitive, realizing information-fixing and generalizing functions, emotional-evaluative - emotionally imperative, and motivational-behavioral - performing motivational-behavioral and prognostic functions.

There are several types of students' attitude to education (value, positive, indifferent, negative), but it is the value attitude, when the process of cognition itself is interesting and there is a need for it, that the most important role in the process of holistic education of the individual belongs.

The value attitude towards education is at the same time: 1) the basis of an active, conscious attitude towards education; 2) a qualitative indicator of the effectiveness of the entire educational process; 3) the most important element in the formation of personality. The more active a student is in his contacts with the educational process, the more productive the process of developing value relationships.

Signsoftheformationofstudents' valueattitudestowardseducationare:

- awareness by schoolchildren of the importance of education for personal growth (the ability of a student to explain what the value of education is for him personally) and for the public good (students' judgments about the importance of education);
- creative, conscious-activity attitude to cognitive activity, when the need for cognition becomes an integral part of students' consciousness (asks questions on the merits, performs tasks creatively and enthusiastically, makes meaningful comments or additions, performs tasks not provided for in the program);
- emotional response to the educational process (various emotional states - joy, irritation, indifference; unconscious movements - gestures, posture, glance, mimic activity; predominance of positive emotions over negative);
- manifestation of strong-willed qualities (always strives to bring the work begun to the end, to get to the essence of the issue; knows how to defend his position).

The mechanism of developing a value attitude towards education must be carried out in the process of personality-oriented education, which contains the possibilities for the effective formation of this attitude.

The need-motivational sphere of the student is the basis of the process of instilling a value attitude towards education among primary school students.

A negative attitude towards the teaching of a number of younger students is due to the lack of its significance for the child himself. The value-based attitude to education arises as a result of students' search for such meaning.

Effective upbringing of the value attitude of students to education is possible if the following conditions are met:

- Equal representation in the content of primary education of all its components;
- active development of values by students through a creative approach, independence, amateur performance, etc .;
- inclusion in the content of education of the student's personal experience as its specific component;
- involvement of primary school students in the process of joint goal-setting with the teacher;
- predominance in the teaching process of figurative forms over logical ones;
- correlation of students' value ideas with their immediate social environment;

Speaking about the values of education, it is necessary to consider its value for the individual and for society.

The value of education for society reflects the collective, group significance of this cultural phenomenon, and in the Soviet period of national education it was this value that came to the fore in many pedagogical concepts. Recently, priority has been given to the personal value of education, an individually motivated, biased attitude of a person to the level and quality of his education.

The personal value of education can be considered on the example of “culture of usefulness” and “culture of dignity,” concepts introduced by the famous psychologist A.G. Asmolov. A culture of utility or a culture focused on utility as the basic value of society has “the only goal ... is to reproduce itself without any changes ... education is assigned the role of a social orphan, who is tolerated insofar as one has to spend time on training, training person to perform useful official functions. ” In his opinion, the opposition to such a culture, to such a structure of society is a new type of culture focused on dignity. “In such a culture, the leading value is the value of a person’s personality, regardless of whether it is possible to get something from this person to perform a particular business or not” [1].

It is obvious that the culture of dignity requires a new foundation of education - education focused on fostering human dignity, a sense of freedom, professional and general educational (general cultural) competence. This requires a radical change in the content and organizational forms of the entire educational system, a change in the values of education as a social and cultural phenomenon.

Education (in addition to its own educational goals) performs the most important social functions in the modern information society (continuous education of the subject in the field of telecommunication technologies, communication between subjects and social institutions, technological development of the information society, etc.) and in this sense acts as a functional mechanism, which makes possible the further development of the information society. At the

same time, the goal of education is the development of a person who meets the requirements of the society in which he lives, which is reflected in the connection between education and culture.

A modern person should not only have a certain amount of knowledge, but also be able to learn: to seek and find the necessary information to solve certain problems, to use various sources of information to solve these problems, to constantly acquire additional knowledge.

Modern society needs people who know how to learn and independently work with information - only they can count on success in the information society. However, society needs young people and their cultural values, and the institution of adults must attract them with its attitudes and know its interests and goals. Basically, higher education among young people is associated with a high-paying job in the future. This point of view is understandable, since modern culture is based on entrepreneurship, business, and efficiency. Money and material well-being come to the fore. But do not forget about the spiritual aspect of this issue. After all, education should develop not only the mind, but also the culture of a person, since the learning process takes place at the stage of personality formation.

In modern conditions, education must meet the requirements that are imposed on it by society. Education acts as a socially adaptive mechanism capable of responding to social transformations, and in this sense it is necessary to develop a model of education in this way so that it (education) functions as a dynamic and flexible system capable of responding to social changes. As the experience of many countries shows, only the advanced development of the education sector forms the country's investment attractiveness and ensures a technological breakthrough.

The value potential of the category "education" is contained in its content. The value attitudes and orientations that are formed in the process of educational activity largely depend on its filling with the emotional-value component. In everyday practice, those means of pedagogical influence that are associated with the very content of education are still insufficiently used.

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## **NAXALISM AS AN INTERNAL SECURITY THREATS OF INDIAN STATES: AN APPRAISAL OF STATE RESPONSE**

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### **ABSTRACT**

*The Naxal insurgency has challenged the Indian State's internal security since the 1970s decades. It emerged from Naxalbari region of West Bengal as a peasant revolt against socio-economic injustice. It has gradually deviated from its original objectives which emerged as a violent resistance movement and posed the single biggest threat to internal security in India till 2006. The present study focuses on examining the history of Naxalism with tracing its origin, and causes. Another focused point of this paper is to examine the periodic responses of Indian state governments against the Naxal insurgency. To achieve these objectives, The data has been collected from secondary sources such as various government reports, scholarly views, periodical newspapers and news magazines etc. A major finding of this paper is that an integrated and comprehensive policy has been adopted as a joint effort by the Central and State Governments for the protection, development, rights of local communities, administration, and tackling threats of Naxal activities and Maoist ideology across the country. The Ministry of Home Affairs (GOI) has also taken various important initiatives in the context of Naxalite affected states that has led to tackle Naxal problems and to promote developmental approach in Naxal affected areas of the country.*

**KEYWORDS:** *Naxalism, Left Wing Extremist, Internal Security Threats, Causes And Developmental Policy, State Response,*

**INTRODUCTION:**

India became independent in the year 1947 but with a regional partition on the basis of religion. In this way, the country inherited problems such as socio, religion, and economic discrimination in the regional partition. Till after a few decades, the country was not only an economically weak nation, but social, religious, and economic disparities had remained a serious issue for the country. Due to this condition, regional social and economic inequality began to increase in the country. Whereas, many sections of the society started feeling deprived of the mainstream of the country and these disadvantaged sections tried to resist socio-economic injustice from time to time in the country. Many resistance movements were organized in the country in the name of social change like a peasant, tribal, women empowerment, demands for reservation, etc. Sometimes these movements were conducted peacefully, sometimes violently. The Naxalite movement is a type of resistance movement against government agencies, and zamindars (landlords), which started with dissatisfaction arising due to socio-economic injustice in favor of landless laborers and small peasants and it later became ideological and violent. The problem of Naxalism has been begun in the Naxalbari region of West Bengal as a peasant rebellion in 1967<sup>1</sup>.

The Naxalite movement is also linked to the history of communism in the country. Communism ideology based Left-wing extremist organizations are groups that are considered responsible for organizing the Naxalite movement in backward and economically weak areas of the country<sup>2</sup>. This organization came into existence as the CPI (Maoist) party in 2004 after the merger of the People's War active in Andhra Pradesh with the Maoist Communist Center of India in Bihar<sup>3</sup>. The leaders of the Communist Party of India (Marxist-Leninist) advocated the armed insurgency against landlords (Zamindar) especially guerilla war through the laborers, tribal, and peasant rebellion<sup>4</sup>. During the 1970s, this movement reached its peak and expanded in Bihar, Andhra Pradesh, and other parts of the country.

Indian Former Prime Minister Dr. Manmohan Singh admitted in 2006 that Naxalism is the single biggest internal security challenge in the country<sup>v</sup>. As per 2019 figures given by the Ministry of Home Affairs (MHA) of Government of India reports, almost 90 Districts of 11 states were affected by CPI (Maoist) led by Left Wing Extremists (LWE) across the country<sup>5</sup>. Among these major states, Chhattisgarh (14 districts), Bihar (16 districts), Jharkhand (19 districts), and Odisha (15 districts) are the states most affected by the LWE violence<sup>6</sup>. According to the data provided in Annual Report 2018-19 by MHA of the GOI, the number of incidents of LWE violence across India has slightly decreased during 2010-19. 2213 numbers of incidents happened by LWE organization across India in 2010, whereas 833 numbers of incidents in 2018, and 670 incidents in 2019 occurred across India Ministry of Home Affairs, GOI (2018-19)<sup>7</sup>. The impact of Naxalism was much greater in the southeastern states of the country's weak developed region. Naxalism was more effective in economically weaker states like Bihar, Bengal, Orissa, Andhra Pradesh, and Madhya Pradesh.

The Indian political system is a federal system in which the responsibility of maintaining law and order has been distributed by the Constitution of India to the state governments. Left-wing extremist organizations, through their violent incidents, seek to maintain instability, challenging law and order to prevent democratic processes in states. Due to which the Naxalite affected area is less developed and try to use violence to end the democratic process at the grassroots level.

They work to stop other development-related processes such as schools, road construction, public transport, and panchayats in less developed areas.

A number of important strategies have been devised by both the Central and State Governments as a state-response to stop the activities of left-wing extremist incidents, make these areas Naxal-free as well as restore the democratic system. This research paper presents a detailed study of the chronological journey of the Naxalite movement and to find out prominent reasons for its development. To achieve these objectives, the data has been collected from secondary sources such as various government reports, scholarly views, periodical newspapers and news magazines etc.

### **Origin of Naxalism:**

The Naxalbari uprising of 1967 is the root of the terms like Naxal, Naxalite, and Naxalism in India. This movement started in 1967 in the Naxalbari region of West Bengal as a peasant rebellion<sup>8</sup>. The Santhal tribal peasants of Naxalbari were mainly part of an arms insurgency against the oppression of landlords. In 1967, the borderline of the Naxalbari village of the Indian state was the Tri-junction connecting Nepal and West Pakistan (now Bangladesh). This movement is also linked to the history of communism in the country. There was a split of the Communist Party of India (Marxist) in 1969, leading to the emergence of the Communist Party of India (Marxist- Leninist) on 22nd April 1969. The leaders of the Communist Party of India (Marxist- Leninist) advocated the armed insurgency against landlords (Zamindar) especially guerilla war through the laborers, tribal and peasant rebellion. They proposed a direct armed insurgency against the "petty bourgeoisie" as the only way to change an unjust society on the lines of the Chinese and Russian revolutions.

The Naxalism movement started against the Zamindar (landowners), gombeen-men, Police officers, and in favor of landless laborers. CharuMazumdar, KanuSanyal, and Jungle Santhal were prominent leaders of this movement<sup>9</sup>. They were followers of Mao Tse Tung's ideology, that's why they are also known as Maoists. Under their leadership, the peasants of Naxalbari village launched a struggle against the landlords (Zamindars) of the village.

Maoist believed that the government and its policies are the reason for the plight of the laborers and peasants across India. According to them, the government has always given higher priority to the upper class, due to which the industrialists of the society have established their supremacy over the lands there to serve their interests. The main purpose of the movement was to bring an end to class enemies which eventually gave rise to peasant rebellion and guerilla war.

In the 1970s, Naxalism successfully spread over large parts of the country, particularly into noteworthy areas in Debra-Gopiballavpur (West Bengal), Mushahari (Bihar), and Palia (UP), Srikakulam (Andhra Pradesh).

During the 1970s, the Naxalite movement reached its peak. During this period more than 4000 Naxalite violence occurred in Andhra Pradesh, West Bengal, and Bihar. The Government of India in a joint operation ('Operation Steeplechase') started to actively man-hunt in Naxal-affected areas of Orissa, Bihar, and West Bengal Bihar and Orissa with the help of police and army from 1 July to 15 August 1971. Due to this military operation, the Naxalite organization in several districts of West Bengal, Jharkhand and Odisha was destroyed. Meanwhile, the Kolkata Police arrested CharuMazumdar. CharuMazumdar died within 14 days of his arrest. After the

death of CharuMazumdar, a round of Naxalite movement came to an end and the party was in a tizzy and shattered state<sup>10</sup>.

In the 1980s, re-emergence of the Naxalite movement occurred in the form of the People's War Group (PWD) party which was mainly led by KondapalliSeetharamaiah from Andhra Pradesh. KondapalliSeetharamaiah along with peasant and labor laborers of Andhra Pradesh started several programs keeping in mind the interests of tribals<sup>11</sup>. These programs included land redistribution, providing minimum wages to agricultural laborers, levying taxes and fines, managing and operating people's courts, damaging government properties, demolition of government officials, assault on policemen, etc.

During this period, Naxalite organizations in remote deprived areas got wide support from peasants and tribals. Naxalites in remote deprived areas came to be called Gorakala Dora (God hidden in bushes) in these areas.

In the year 1992, 6 Naxalite organizations dedicated to the PWD were banned by the Andhra Pradesh government. Subsequently, the Andhra Police, with the help of central paramilitary forces, conducted raids against Naxalite organizations. About 248 Naxalites were killed, 3434 Naxalites were arrested and around 8000 Naxalites surrendered. KondapalliSitaramaia and other PWD leaders were deeply hurt by this action<sup>12</sup>.

Naxalite violence was rampant in Andhra Pradesh as well as economically backward states like Bihar. Starting in Bhojpur in the state of Bihar in the 1970s, it has spread rapidly to about 30 districts. Vinod Mishra leads The Communist Party of India (M-L). This movement started in the name of social and economic justice. In Bihar, it expanded its territory by getting the support of the poor and oppressed classes against the upper castes. The outline of this movement started with a class struggle that metamorphosed into an ethnic struggle. In the 1990s, the Maoist Communist Center (MCC) in Bihar, while active, carried out several violent incidents against big landlords. During the years 1987 and 1992, several Rajputs (42), Muslims (5), Bhumihars (40), BJP Parliamentarian (1), and policemen (3) were killed in 8 major Naxalite violent incidents in Chatra, Gaya and Aurangabad districts. During this time, in response to the violence against Naxalite, big landlords also organized peasants and laborers on a caste basis and started their private army on an ethnic basis<sup>13</sup>. These forces mainly consisted of Bhumi Sena, RanveerSena, and KunwarSena, etc. The Bihar state government failed to maintain law and order. Due to administrative failure, there was a long bloody struggle between the Naxalite organizations and their private armies formed by the Zamindars<sup>14</sup>.

In 2000, the PWD formed the People's Guerrilla Army with the aim of expanding Naxalite organizations in Andhra Pradesh. The purpose of which was to thwart the efforts of the state by strengthening the power of the people<sup>15</sup>. There were two peace talks between the Government of Andhra Pradesh and the PWP during 2002 and 2004. However, both these peace talks have failed. In 2004, the PWP and Bihar's Maoist Communist Center (MCC) decided to reconcile<sup>16</sup>. On October 14, 2004, the Integrated Party Communist Party of India (Maoist) was formed. The action of which led to the formation of the Communist Party of India (Maoist) which established its roots in the Dandakaranya region<sup>1</sup>.

The CPI (Maoist) Party is a considerable Left Wing Extremist organization responsible for violence, deaths of civilians, and security forces. This party has been included in the Schedule of Terrorist Organization under the Unlawful Activities (Prevention) Act, 1967s along with all its

formations and front organizations<sup>17</sup>. Naxalites have severely affected the states of Jharkhand, Chhattisgarh, Bihar, Odisha, Telengana, Andhra Pradesh, due to the expansion of the Naxalite organization in Dandakaranya region. The threats of Naxalism still linger across the country.

### **Causes of the emergence of Naxalism in India**

The problem of Naxalism started with the discontent arising due to widespread socioeconomic disparities in the country. Indian society has traditionally been a society divided by caste and income. During British India, the deprived mainstream groups of Indian society, mainly tribal, Dalit and peasant and other sections, the economic situation had deteriorated day by day. Even after independence after 1947, there was no improvement in his condition. The main reasons for this were the then zamindari system; during which most of the land was owned by the upper caste people and they exploited the tribals, Dalit and peasants of the country, and other socially backward classes. The first radical revolt against the Zamindari system started in 1969 in Naxalbari village by the tribal peasants against the upper-class Zamindars. The peasant revolt that started in Naxalbari in 1969 soon spread out from Bengal and spread rapidly to other states of the country. By 1980, it had spread to Andhra Pradesh, Bihar, and other economically backward southern northeastern states of the country<sup>18</sup>. Starting with the name of socio-economic justice, this movement turned into ethnic violence as soon as Bihar came. Currently, Naxalite is affected in 90 districts of 11 states of the country. The rise of Naxalism in the country has varied with social and economic inequalities. The main reason for which is:

#### **1. Tribal Discontent**

The livelihood of the tribals of the country has been living very differently from other citizens. The tribal communities live their lives in forests, depending on the forest produce, from even cutting the bark. After the Forest (Conservation) Act passed in the year 1980, the tribals started being deprived of their rights extensively due to development projects, mining works, and other reasons, due to which there was the widespread displacement of the tribal population and widespread dissatisfaction in the tribal community. The Maoists benefited widely from this dissatisfaction among the tribals. Dislocated tribal communities, which have no source of living, were linked to Maoists with Naxalism. The Maoists had provided arms and ammunition and money to these people and motivated the Naxalite violence. Due to dissatisfaction, there was awidespread Naxalism in many states of the country.

**2. Comprehensive Socio-Economic Inequality** After independence, there were widespread social and economic disparities in the country. During that time, due to poverty, unemployment, illiteracy, low standard of living, and lack of adequate healthcare facilities emerged socio-economic inequality prevailing in the country. On the other hand, the stratification of society based on caste and income led to the spread of these inequalities in society. The revolt against the Zamindars by the peasants in Naxalbari, the bloody rebellion against the upper caste landlords in Bihar took the form of ethnic violence, the dissent of the tribals against the capitalists, the government and its agencies in states like Jharkhand and Chhattisgarh encouraged to the growth of Naxalism. The exploitation of lower-class people by the upper classes was the main cause of Naxalism. The disproportionate distribution of land led to the trend of exploitation and injustice, one which triggered the Naxalite movement. Significantly, the purpose of this violent movement that started against exploitation is no longer the reason for which it was started.



### **3. Economic Inequality**

Even after two decades of independence, inequalities in the economic system in many states of the country failed to stop the growth of Naxalism. The impact of Naxalism was much greater in the southeastern states of the country's weak economic system. Naxalism was more effective in economically weaker states like Bihar, Bengal, Orissa, Andhra Pradesh, and Madhya Pradesh.

Governments in many states face major problems in fighting Naxalism, including the absence of strong technical logistical capability to fight Naxalites, proper structural problems, a lack of proper communication networks in forest areas like Dandakaranya, failure of law and order, and ethnic violence like Bihar due to social and economic disparities against tribal and land acquisition violence by violent peasant.

Apart from these problems, the administrative failures of many Naxal-affected states in the country, including lack of essential goods and services near the people of those areas, not taking timely appropriate follow-up actions from the administration in states like Bihar, making Naxalism a social issue. There was confusion in dealing with the threat of security in the states because they believed that Naxalism was a matter of central government. Thus, due to the behavior of the states, the Naxalites got an opportunity to spread their boundaries.

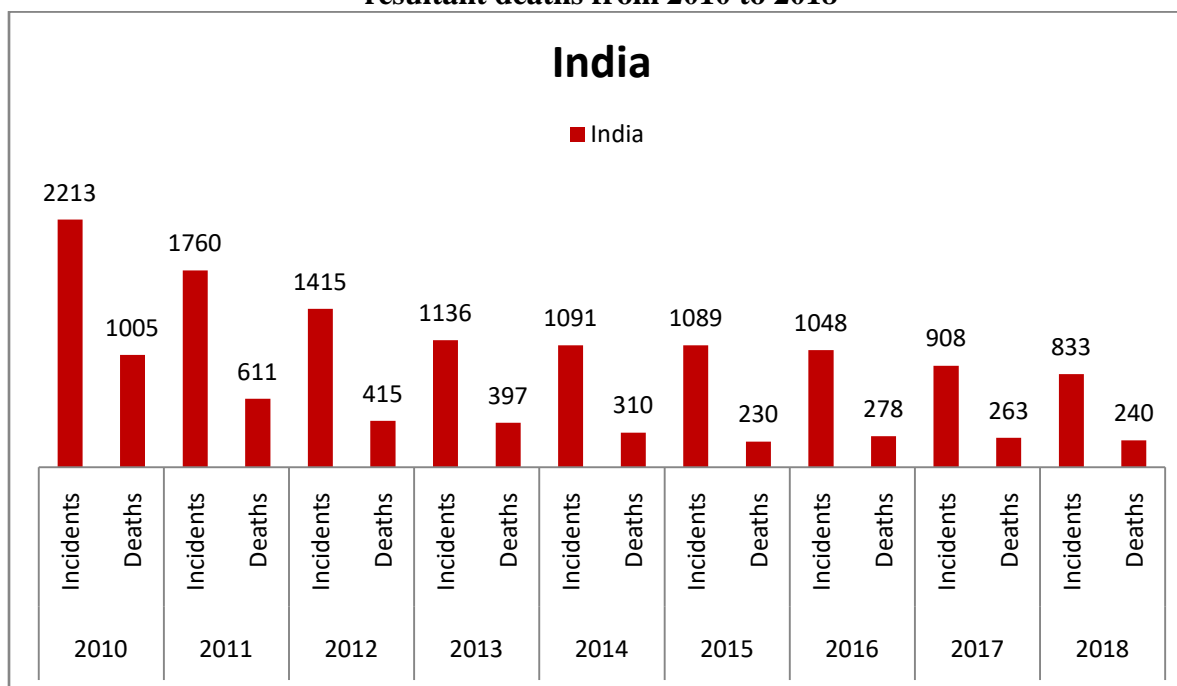
#### **Naxalism Movement in the present time**

As per 2019 figures given by the Ministry of Home Affairs reports, almost 90 Districts of 11 states were affected by CPI (Maoist) led by Left Wing Extremists. Andhra Pradesh (6), West Bengal (1), Chhattisgarh (14), Bihar (16), Jharkhand (19), Kerala (3), Madhya Pradesh (2), Odisha (15), and Maharashtra (3), Telangana (8), Uttar Pradesh (3) are the major LWE affected states<sup>19</sup> whereas, in 2014, 161 districts of 16 states and in 2010, 196 districts from 20 states were affected by Left Wing Extremism<sup>20</sup>. Therefore, it is clear from these figures that the number of states affected in current time by left-wing extremism has decreased in comparison to the years 2010 and 2014. Apart from the number of districts and states affected by Naxalviolence, it is noteworthy that the incidence of LWE violence and resulting deaths has also declined significantly during the last 8 years from 2010 to 2018<sup>21</sup>.

Year-wise details of the number of incidents and deaths in LWE violence across the country are as follows:



**Graph Number: 1- Year-wise details on the number of Incidents of LWE Violence and resultant deaths from 2010 to 2018**



**Source:** Annual Report of Ministry of Home Affairs, GOI 2018-19, accessed on 08-03-2020<sup>22</sup>.

Since 2005, Maoist turned left-wing extremism have been posing threats to the internal security of the country. At present, 90 districts in 11 states of the country are still affected, while in 2010, 196 districts from 20 states were affected. However, the number of violent incidents and deaths has decreased since 2010. The year-wise details of numbers of incidents of violence and resultant deaths from 2010 till 2018 have been mentioned in the graph above. According to the above-mentioned graph, the number of incidents of LWE violence across India has slightly decreased. 2213 numbers of incidents happened by LWE organization across India in 2010, whereas 833 numbers of incidents in 2018, and 670 incidents in 2019 occurred across India Ministry of Home Affairs, GOI (2018-19). 2019 figures have been taken from the report based on details from the State Minister of the Ministry of Home Affairs, G. Kishan Reddy in Rajya Sabha, 18 March 2020. Whereas, the number of deaths in violent incidents by LWE has decreased across the country.<sup>23</sup> As per the Ministry of Home Affairs, GOI report, 2018-19, the resulting deaths were 240 in 2018 against figures 1005 in 2010 across India<sup>24</sup>.

According to the data, there has been a drastic decrease of 35 percent of Naxal violence in the year 2017 as compared to the year 2013. Naxal incidents in only 57 districts in the year 2017 were also reported. In 2019, there was a decline of 38% in violent incidents caused by LWE in comparison to 2014<sup>25</sup>.

**TABLE NO.2: THE NUMBER OF INCIDENTS OF LWE VIOLENCE AND SECURITY FORCES (SFS) MARTYRED THERE, STATE-WISE, ARE AS FOLLOWS:**

Year	2016		2017		2018		2019 (up to 15.11.2019)	
	Incidents	SFs killed	Incidents	SFs killed	Incidents	SFs killed	Incidents	SFs killed
Andhra Pradesh	17	0	26	1	12	0	18	0
Bihar	129	12	99	0	59	2	53	1
Chhattisgarh	395	38	373	60	392	55	231	22
Jharkhand	323	9	251	3	205	9	160	8
M.P.	12	0	3	0	4	0	4	0
Maharashtra	73	3	69	3	75	0	59	16
Odisha	86	3	81	8	75	1	44	1
Telangana	7	0	5	0	11	0	7	0
Uttar Pradesh	0	0	0	0	0	0	0	0
West Bengal	0	0	0	0	0	0	0	0
Others	6	0	1	0	0	0	3	0
<b>Total</b>	<b>1048</b>	<b>65</b>	<b>908</b>	<b>75</b>	<b>833</b>	<b>67</b>	<b>579</b>	<b>48</b>

**Source:**Ministry of Home Affairs, GOI & Rajya Sabha, Unstarred Question No. 2606, Answered on the 11th December 2019<sup>26</sup>.

As per the above-mentioned figures in table number 2, we have been given details about the number of security forces deaths in incidents of LWE violence. These figures show that the number of security force deaths in incidents of LWE violence has decreased year-wise in Naxal Affected states. There are only two states (Chhattisgarh and Jharkhand), where the number of incidents of LWE violence in 2019 is higher than in other states. Of these incidents, Chhattisgarh is the only state with the highest incidence of LWE violence occurring in the last 4 years compared to other states. And this is the only state where the maximum number of security forces has been killed in these incidents. In 2019 itself, 22 security forces were killed in 231 incidents of LWE violence in Chhattisgarh. Apart from Chhattisgarh, during 2019, 16 security forces were killed in 59 incidents by LWE violence in the state of Maharashtra<sup>27</sup>.

### Naxalism in Chhattisgarh (Figure 1: Map of Chhattisgarh<sup>28</sup>)

Chhattisgarh, the 28th state of India, is also traditionally known as the bowl of rice state. This state is a tribal-dominated area with highly dense forest areas located in the eastern-central part

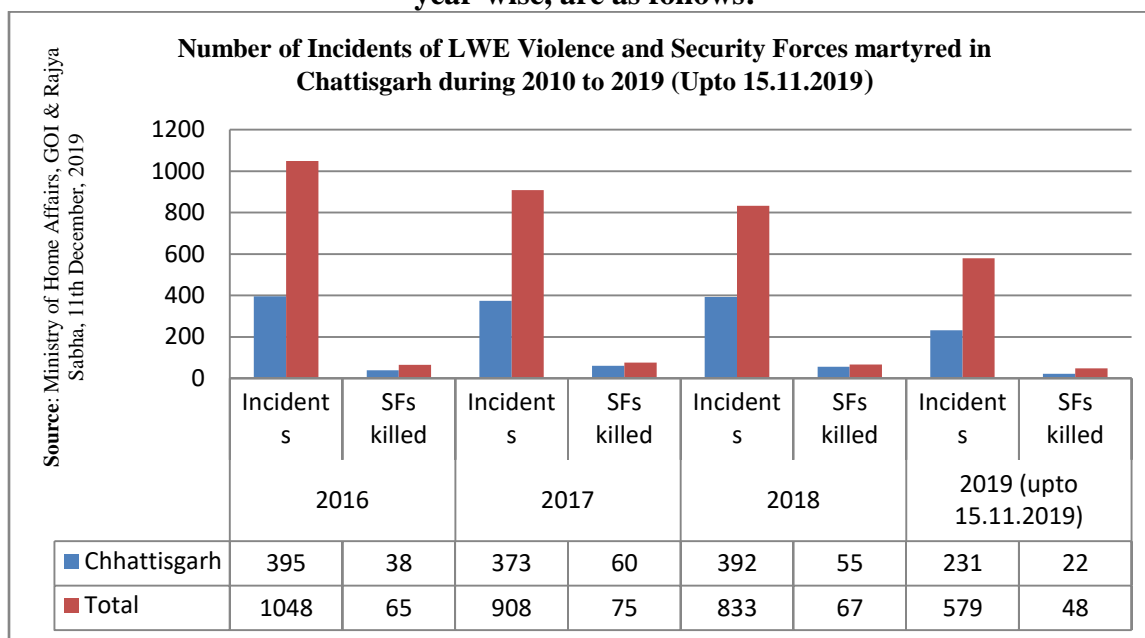


of the country. The state's boundaries are spread to 7 states of the country such as Uttar Pradesh, Jharkhand, Odisha, Maharashtra, Telangana, and Madhya Pradesh. The state has also been an important center of the country in the field of power and steel production. Chhattisgarh is recognized for better implementation of the public distribution system in the country. In Chhattisgarh, there has been various welfare public policies delivered by the State government especially for tribals and deprived sections of the society. A provision has been made for the peasant of Chhattisgarh to provide Rs 2500 per quintal for the Kharif crop of paddy for proper compensation of their cost by the state government. To strengthen the rural economy, the state government is running the SurjiGaon Yojana. According to Yojna, the state government has given the basic mantra. The basic mantra is about the protection of the four chin hairs of Chhattisgarh. Chinhari of

Chhattisgarh means, "Narva, Garua, Ghurua, Baadi". At present, a provision has also been made to merge this scheme with other various schemes like MNREGA by the state government<sup>29</sup>.

Despite this, it is unfortunate of Chhattisgarh that the boundaries of the state are connected to the border area of the Maoist insurgency Dandakaranya. The borderline of the Bastar district of Chhattisgarh state is connected to the border of Andhra Pradesh with the Dandakaranya region. This revolt was formed in the 1980s in the Bastar region of Dantewada, Bijapur, Narayanpur spread over 40,000 square kilometers of the region. Bastar and Kanker districts became an important center of Maoist operations and around 25,000 sq km of the Bastar region infamously became the Maoist zone of the so-called Red Corridor. The Dandakaranya region has been the epicenter of the Maoist insurgency since 2004-05. Maoist dedicated left-wing extremist organizations have been active in these areas. The Maoists launched a violent rebellion against the state government and industrialists over land acquisition in the state, giving primacy to tribal interests.

**Graph No.2: Number of incidents of LWE violence and resulting deaths in Chhattisgarh, year-wise, are as follows:**



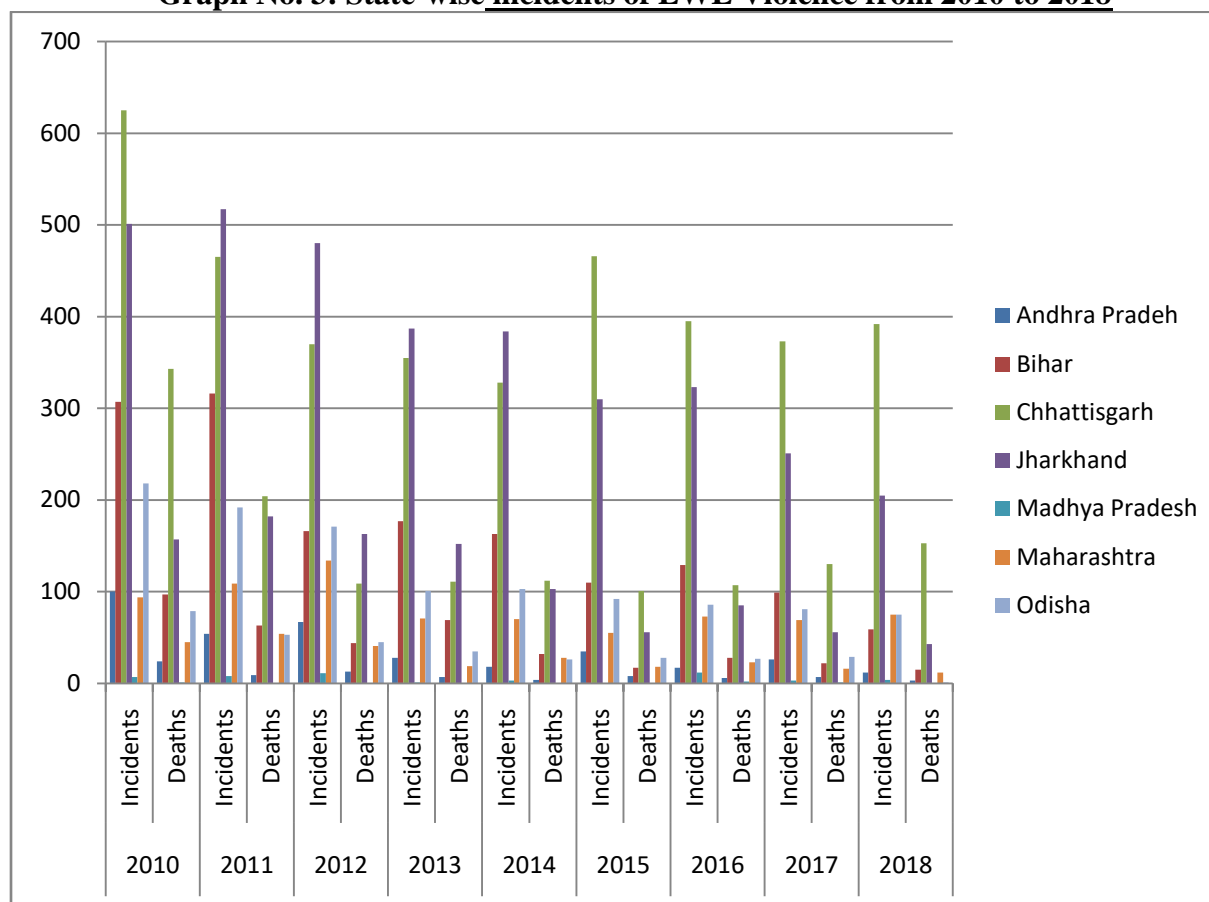
**Source:** Ministry of Home Affairs, GOI R Rajya Sabha, Unstarred Question No. 2606 accessed on 24-03-2020<sup>30</sup>.

The state of Chhattisgarh has most of the time become the center of Maoist activities in the country. At present, 14 districts of Chhattisgarh are affected by Left Wing Extremism<sup>31</sup>. In these districts, BalodBalampur, Bastar, Bijapur, Dantewada, Dhamtari, Gariyaband, Kanker, Kondagaon, Mahasamund, Narayanpur, Rajnandgaon, Sukma, Kabirdham, Bastar, Dantewada, and Sukma are Maoist left-wing extremism.

Above mentioned graph number:2 presents data on the number of incidents of LWE killings in Chhattisgarh and Security personnel martyred in these incidents from 2016 to 2019 up to 15.11.2019. According to this graph, 579 incidents of LWE violence occurred in 2019 across India. In the state of Chhattisgarh, 39 percent incidence of left-wing extremist violence occurred as compared to across the country. In Chhattisgarh, the number of incidents of LWE violence has been higher compared to other states of the country. But these incidents have also decreased in Chhattisgarh along with the country due to both central and state government efforts.

### **Both Central and State Governments' Responses against the Naxalite Movement**

In 2004, People's War Group actively worked in Andhra Pradesh and the Maoist Communist Center of India (MCCI) from Bihar and adjoining areas merged with the Communist Party of India (Maoist). The Communist Party of India (Maoist) remained active as the most dominant and violent group in its successor various militant organizations. State-wise figures of left-wing extremist violence led by the party are tabulated below (graph number 3).

**Graph No. 3: State-wise incidents of LWE Violence from 2010 to 2018**

**Source:** Annual Report of Ministry of Home Affairs, GOI 2018-19, accessed on 08-03-2020<sup>32</sup>.

The figures in the above graph showed the Maoist led LWE violence and it posed a challenge to the peace and security of the nation. And this eventually banned the organization and all its associate organizations. This was subsequently included in the schedule of terrorist organizations under the Unlawful Activities (Prevention) Act, 1967.

### Chhattisgarh Government's response over Naxalism

The SalwaJudum was launched in 2005 as an anti-Naxal counter-action by the Chhattisgarh state government. The erstwhile BJP government has also started deploying local tribal youths and appointing those Special Police Officers (SPOs) to lead the SalwaJudum. Congress tribal MLA launched SalwaJudum of the Bastar region Mahendra Karma by mobilizing local tribal groups under the anti-Naxal program. However, the then government-operated SalwaJudum as a counter-insurgency strategy of the state government against left-wing extremism in the state<sup>33</sup>. By this SalwaJudum, the left-wing extremist organizations in the state suffered a lot and the spread of Naxalism in the state was reduced to some extent. In 2013, a Naxalite attack happened in Jhiramghati. In this attack, several Congress leaders have been killed, including Congress leader Mahendra Karma, who initially led SalwaJudum<sup>34</sup>. However, in 2011, SalwaJudum for misleading the local youth and appointing them SPOs was declared illegal by the Supreme Court verdict<sup>35</sup>.

**Central Government responds over LWE violence**

Besides banning the LWE under the Unlawful Activities (Prevention) Act of 1967<sup>36</sup>, an integrated and comprehensive policy has been adopted as a joint effort by Governments for the protection, development, rights of local communities, administration, and tackling threats of Naxal activities and Maoist ideology across the country. Under the comprehensive policy, the Government of India has taken up development, good governance, and essential goods and services at the local level through a fully active and sustainable measure at the state level to tackle the problem of left-wing extremism led by Communist Party of India (Maoist)<sup>37</sup>.

Along with this comprehensive policy, the Central Government under the Ministry of Home Affairs has formed a Left-Wing Extreme division to deal with Left Wing Extremism to implement this overall. The main objective of the creation of this Division is to coordinate the implementation of various development schemes run by the central government in the Left Wing Extremism affected states<sup>38</sup>.

Central and state governments have organized multiple programs from time to time to root out the problem of Naxalism. In 2010, under the Government of Manmohan Singh, an Operation Green Hunt started in five states of Naxalite that affected states, especially the Red Corridor, during 2010. The central government has been massively deployed to central security forces in the Naxalite affected area during this operation. The operation has been highly damaging to Left Wing Extremists. In 2010, a total of 223 districts across the country were affected by Left Wing Extremists, which has been reduced to 90 districts in 11 states across the country over the past 10 years. The current central government is working on a plan to uproot Left Wing Extremists by the year 2022.

**CONCLUSION**

Naxalism has deepened roots in many districts of India. Chhattisgarh is one of those affected districts. The followers of Naxalism believe that people get their rights by power not by law. Naxalism originated from Naxalbari, a town in West Bengal. In this town (surrounded by the international border) in 1967, some youth raised their voice against the exploitation of laborers in tea gardens. When these young men who considered Mao-Tse-tung as their ideal had revolted then the people of the country paid attention to this. CharuMajumdar and KanuSanyal had started this revolutionary movement. According to Naxalites, they were fighting against the capitalist government's policies of markets and inequality, and in the interest of the poor.

The rise of Naxalism in the country has varied with social and economic inequalities. One of the main reasons for this is tribal discontent. The Forest (Conservation) Act passed in the year 1980, the tribals started being deprived of their rights extensively due to development projects, mining works, and other reasons, due to which there was the widespread displacement of the tribal population and widespread dissatisfaction in the tribal community. Another reason is comprehensive socio-economic inequality across the country.



After independence, there were widespread social and economic disparities in the country. During that time, due to poverty, unemployment, illiteracy, low standard of living, and lack of adequate healthcare facilities emerged socio-economic inequality prevailing in the country. On the other hand, the stratification of society based on caste and income led to the spread of a huge gap between privileged and unprivileged in society. The unequal distribution of land led to the trend of exploitation and injustice and eventual emergence of Naxalism to start and persist. Another reason is inequality in the economic system in the states of the country. Even after 2 decades of independence, inequalities in the economic system in many states of the country failed to stop the growth of Naxalism. In the 1990s, Naxalism strengthened its roots. Naxalism was more effective in economically weaker states like Bihar, Bengal, Andhra Pradesh, Madhya Pradesh, and Orissa.

As per the 2019 figures of the Ministry of Home Affairs reports, almost 90 Districts of 11 states were affected by CPI (Maoist) led by Left Wing Extremists. Apart from the number of districts and states affected by Naxalviolence, it is noteworthy that the incidence of LWE violence and resulting deaths has also declined significantly during the last 8 years from 2010 to 2018. The data has been mentioned in table no.-2. Under the Unlawful Activities (Prevention) Act of 1967, the LWE organization has been included in the schedule of terrorist organizations, including all its associate organizations, under the Unlawful Activities (Prevention) Act of 1967<sup>39</sup>. A major finding of this paper is that an integrated and comprehensive policy has been adopted as a joint effort by the Central and State Governments for the protection, development, rights of local communities, administration, and tackling threats of Naxal activities and Maoist ideology across the country. The Ministry of Home Affairs (GOI) has also taken various important initiatives in the context of Naxalite affected states that has led to tackle Naxal problems and to promote developmental approach in Naxal affected areas of the country.

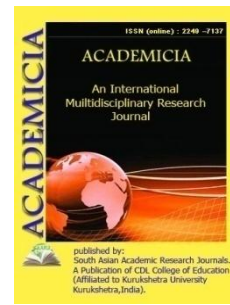
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## RESEARCH OF SORPTION AND TEXTURAL PROPERTIES OF SORBENTS OF THE CATALYTIC TRANSFORMATION OF METHANE

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### ABSTRACT

*The article examines the relationship of sorbents of the reaction of catalytic changes of methane with sorption and texture properties and size of adsorption between relative pressure and radii of shafts. To determine the comparative surface of the samples, the Branauer-Emmet-Teller (BET) method, the Barrett-Jouner-Halenda (BJH) method, were used to determine the size and distribution of the trunks by size. As a result of the study, the relationship between the relative pressure and the radii of the barrels with the adsorption volume was studied. The field of investigation of process parameters (temperature, heating rate, etc.) was experimentally determined.*

**KEYWORDS:** *Environmentally Safe Sorbents, Kaolin, Bentonite, Experiment, Temperature, Regression Equation, Adsorption Bound Water, Boiling Heat, Greening.*

### INTRODUCTION

High-silicon zeolites (HSZ) are widely used in industry as a retention agent (carrier) in various catalytic transformations [1-6]. In many reactions, the HSZ themselves have catalytic activity and are widely used as catalysts [7-9]. The use of sorbents allows several valuable compounds to be returned to production. The most important requirements for adsorbent materials are high specific surface area, selectivity and ease of regeneration [9-11]. It is also necessary that the adsorbent is cheap and harmless, has no corrosion properties, can maintain its adsorption properties for a long time and has high mechanical strength. One of the most common adsorbents is activated carbon, which is available in different grades. In recent years, natural and artificial zeolites have been widely used in hydrocarbon processing [12-15]. One of the most important modern directions is the creation of environmentally safe sorbents, preservatives and catalysts based on local raw materials [16,17].

## EXPERIMENTAL PART

To determine the chemical and physicochemical characteristics, 100 g of sample granules were placed into a glass flask with a volume of 250 cm<sup>3</sup> and poured over 150 cm<sup>3</sup> of distilled water. The flask was stirred on an ABY -6 device at 120 rpm for 24 h. After drying, the adsorbent was passed through a sieve of 0.5 and 0.25 mm, and the mechanical and physicochemical characteristics of the remaining samples were studied on a 0.25 mm sieve through a 0.5 mm sieve. Before acidizing the soil, grind it to a size of 0.08 mm. We added 40 g of heated H<sub>2</sub>SO<sub>4</sub> to 10 g of crushed soil and heated with stirring in a water bath. After treatment, the soil was filtered through a paper filter on a Buchner funnel and washed with distilled water in the range of pH=5,4-5,7. Then the soil was dried in a drying oven at 1200 °C for 5 h together with filter paper. The distribution of pores in terms of specific surface area and size was detected on an ASAB 2010 automatic absorptiometer by the method of low-temperature nitrogen desorption.

Sedimentation analysis was carried out in the water and a water-glycerol mixture according to the Auden method in various dispersion media. X-ray phase analysis (Co-K<sub>α</sub>-irradiation) was performed on a DRON-4 diffract meter with a cobalt X-ray tube. To analyze the diffraction patterns, the PDF-2 database of the International Center for Diffraction Data (JCPDS, 1999) was used. The parameters of the porous structure of the samples were determined by the method of low-temperature desorption of nitrogen on a Quanchrome NOVA analyzer (USA). Before measurement, each sample was degassed at 2500 °C under vacuum for 2 hours. The Branauer-Emmett-Taylor (BET) method was used to determine the specific surface area of solid samples. This method used the following BET equation:

$$\frac{1}{W \cdot \left( \frac{P_0}{P} - 1 \right)} = \frac{1}{W_m \cdot C} + \frac{C-1}{W_m \cdot C} \cdot \frac{P}{P_0}$$

Where  $W \cdot \frac{P}{P_0}$  is the mass of the gas adsorbed at relative pressure,  $W_m$  is the mass of the substance adsorbed on the coated surface to form a monolayer;

$C$  -adsorbents are BET constants indicating the magnitude of the adsorbate interaction, representing the dependence of the adsorption energy of the first adsorption layer. The Barrett-Jouner-Halenda (BJH) method was used to determine the size and distribution of pore sizes. When calculating the initial data, the regions of desorption and adsorption of the isotherm were used in the pressure range of 0.967-0.4  $P/P_0$ . To determine the density of the pile, the 500 g sorbent was removed and kept in an oven at 60 °C for 2 h. Weighed 400 g of the dried sample, placed in a 500 ml measuring cylinder, and measured its volume  $V_1$ . We then compacted the sorbent to a constant level by tapping (tapping) on the bottom of the cylinder, and again measured the volume  $V_2$ . The density of the sorbent cells was determined by the formula:

$$\gamma_1 = \frac{P}{V_1}; \gamma_2 = \frac{P}{V_2}; g / cm^3$$

where is the mass of the P-sorbent;  $\gamma_1$ ,  $\gamma_2$ -sorbent before condensation and subsequent density of the heap, g / cm<sup>3</sup>.



**RESULTS AND DISCUSSION**

Navbahor bentonite and Pakhtachi kaolin were taken as the object of research.

**TABLE 1. CHEMICAL COMPOSITION OF BENTONITE IN NAVBAHOR DISTRICT OF NAVOI REGION.**

Name	SiO <sub>2</sub>	TiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	SO <sub>3</sub>
Alkaline bentonite soil	57,91	0,35	13,69	5,10	1,84	0,48	1,53	1,75	0,43	0,75
Alkaline-earth soil	56,23	0,61	13,56	6,50	3,76	0,69	0,98	2,20	0,92	0,49

The sample was heated at 1500 °C for 30 min to remove water before acidic activation of bentonite or kaolin. After acid activation, mass%:

**SiO<sub>2</sub> – 70,17, Al<sub>2</sub>O<sub>3</sub>-9,49, Fe<sub>2</sub>O<sub>3</sub>-1,39, MgO-0,64, Na<sub>2</sub>O-0,17, K<sub>2</sub>O-1,27, CaO-0,20, TiO<sub>2</sub>-1,63, MnO-0,01.**

**TABLE 2. DEPENDENCE OF PHYSICAL AND CHEMICAL PROPERTIES OF SOILS ON THE MODE OF ACTIVATION.**

Properties of soils	Activation time, seconds								
	0	10	20	40	60	80	100	120	180
Navbahor bentonite									
Absorption, mg/g	15	18	19,6	22	24	26	27	28	25
Colloidness, %	49	51,6	55	62,2	67,7	70,2	74,7	80	70,9
Water absorption,	2,5	2,46	2,42	2,38	2,36	2,34	2,32	2,3	2,45
Kaolin of Pakhtachy									
Absorption, mg/g	25	28	29,6	30	33	36	38	42	44
Colloidness, %	89	90	92	94	96	96	99	100	100
Water absorption,	10	12	14	16	18	20	22	28	30

**TABLE 3. PHYSICAL CHARACTERISTICS OF NATURAL SOILS.**

Name	Kaolin of Pakhtachy	Navbahor bentonite
Comparable Surface-Surface, m <sup>2</sup> /g	250-300	125-200
density, kg/m <sup>3</sup>	600-700	570-650
The volume of the pore, cm <sup>3</sup> /g	0,028-0,041	0,048
Porosity size, nm	2,6-2,8	3,4-4,3

Equilibrium adsorption tests make it possible to determine the maximum amount of adsorbed substance and calculate the thermodynamic parameters of adsorption in the low-temperature range. It is customary to determine the adsorption equilibrium using the experimental construction of adsorption isotherms. In the literature, adsorption is usually expressed using the Langmuir and Freundlich models:

$$\frac{a}{a_{\infty}} = \frac{K_L \cdot C^0}{1 + K_L \cdot C^0}; a = K_F \cdot C^{on}; \frac{a}{a_{\infty}} = \frac{K_L \cdot C^{0n}}{1 + K_L \cdot C^{0n}}; \frac{C / C^0}{a \left(1 - \frac{C}{C^0}\right)} = \frac{1}{a_{\infty} \cdot C} + \frac{k-1}{a_{\infty} k C^0}$$

Where  $k = e^{\frac{Q-\lambda}{RT}}$ ,  $Q$ - $\lambda$ - adsorption heat

$$\frac{a}{a_{\infty}} = \frac{K_R \cdot C^0}{1 + a \cdot C^{0\beta}}$$

Parameters of  $\alpha, \beta$  -Redmix - Peterson equation; There is the following relationship between the coefficient of equilibrium of adsorption and changes in enthalpy and entropy of adsorption:

$$K_{adc} = e^{\frac{\Delta S_{adc}}{R}} \cdot e^{\frac{\Delta H_{adc}}{RT}}$$

The rate of the adsorption process can be expressed in units of time by changing the amount of adsorbed substance per unit mass of the adsorbent as follows:

$$r_{adc} = \frac{da}{d\tau} \left( \frac{m\tau}{c} / c \right)$$

In this case, the mass of the substance adsorbed on  $a$ -1 g of adsorbent,  $t$ -time.

For a dynamic mode in an open system, for example, a process rate in a flow adsorber, the following expression would be appropriate:

$$V = \frac{W}{S} \frac{dC}{dL} = \frac{W \cdot dC}{dV_{adc}}$$

In this case,  $V$  is the rate of the adsorption process,  $W$  is the volumetric rate of flow;  $S$ -reactor cross-sectional surface, the height of 1-adsorbent layer; Volume of  $V_{adc}$ -adsorbent. Studies have shown that the adsorption process obeys the 2-order reaction equation:

$$\frac{da}{d\tau} = \frac{k_2 \cdot (a_{\infty} - a_{\tau})^2}{1 + k_2 \cdot (a_{\infty} - a_{\tau})} \approx k_2 \cdot (a_{\infty} - a_{\tau})^2$$

Or an integrated view of it would look like this:

$$\frac{\tau}{a_{\infty}} = \frac{1}{k_2 \cdot a_{\infty}^2} + \frac{\tau}{a_{\tau}}$$

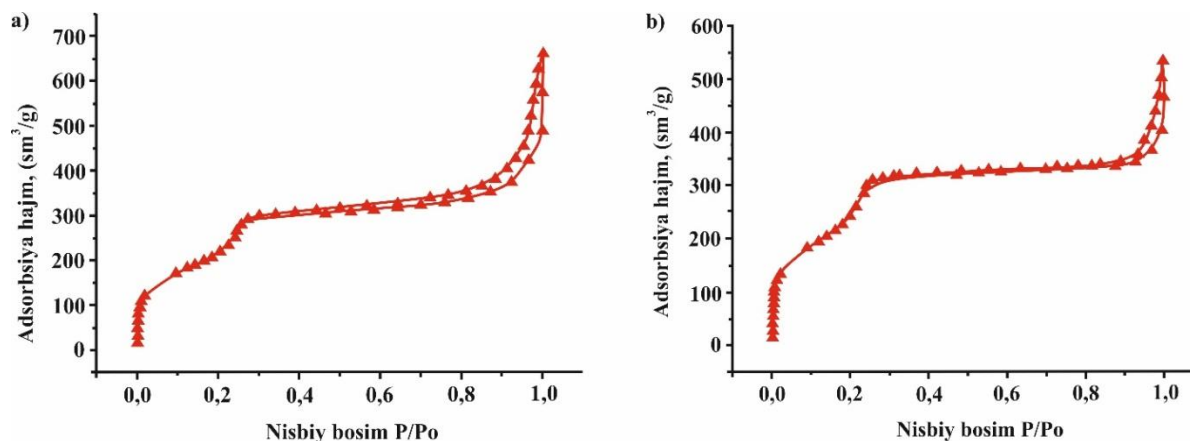
A diffusion model for adsorption process rate

$$a_{\tau} = k_{\text{diff}} \cdot \tau^{1/2} + C$$

The diffusion constant of  $k_{\text{diff}}$ -adsorption rate has the appearance of  $C$ -constant number. The dynamic capacity of the adsorbent is determined by the following formula:

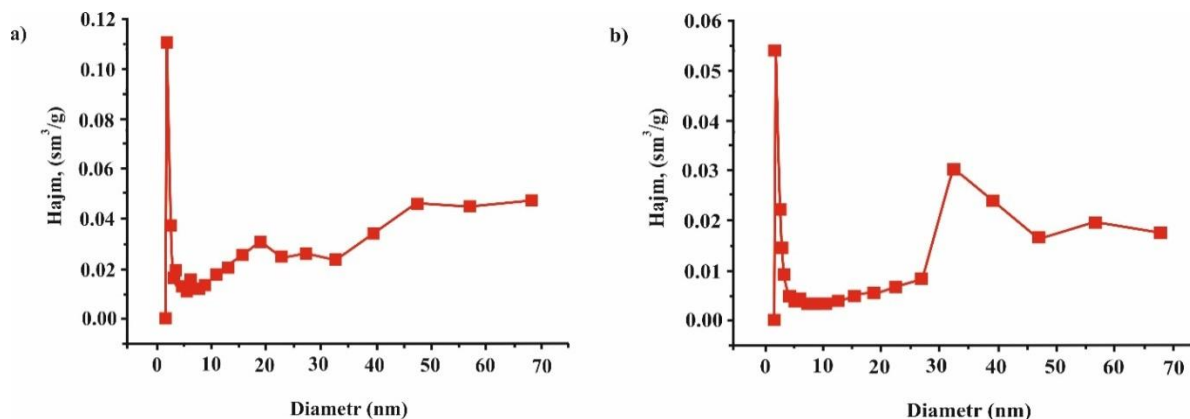
$$a_o = \frac{P_m \cdot V \cdot [S]}{m_{adc}}$$

The specific surface area and volume of micropores were calculated by the BET method for mesoporous sorbents and by the Dubinin method for mesoporous sorbents. To confirm the structure of sorbents, we present the curves of nitrogen adsorption-desorption for mesocellular sorbents:



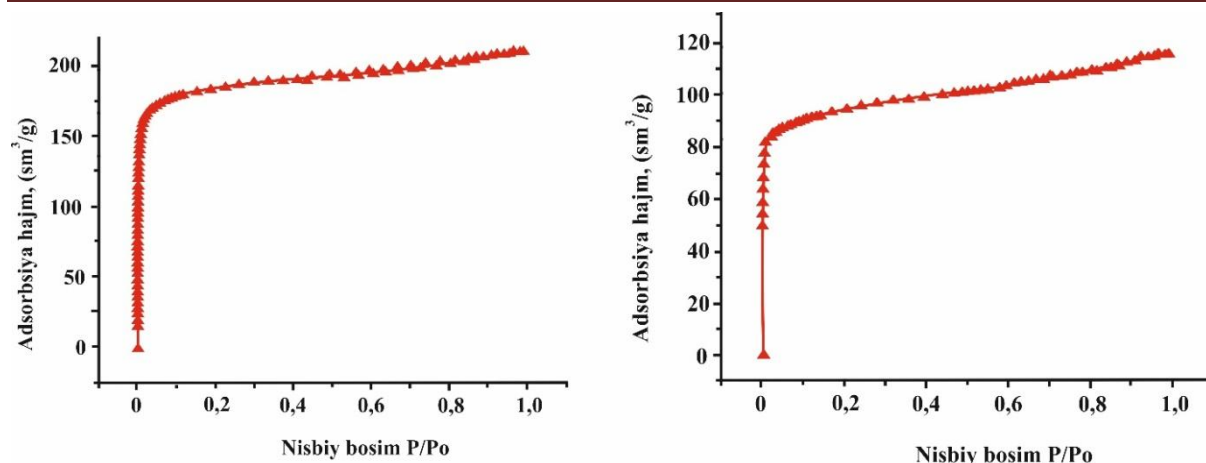
**Figure 1. Adsorption-desorption isotherms of nitrogen in mesoporous synthesized sorbents.**

As can be seen in Figure 1, the shown adsorption-desorption isotherms are typical for type IV isotherms. For the synthesized mesoporous sorbents, consider the pore volume distribution depending on the diameter (calculated by the BJH method).



**Figure 2. Distribution of porosity volumes in mesoporous sorbents depending on their diameter.**

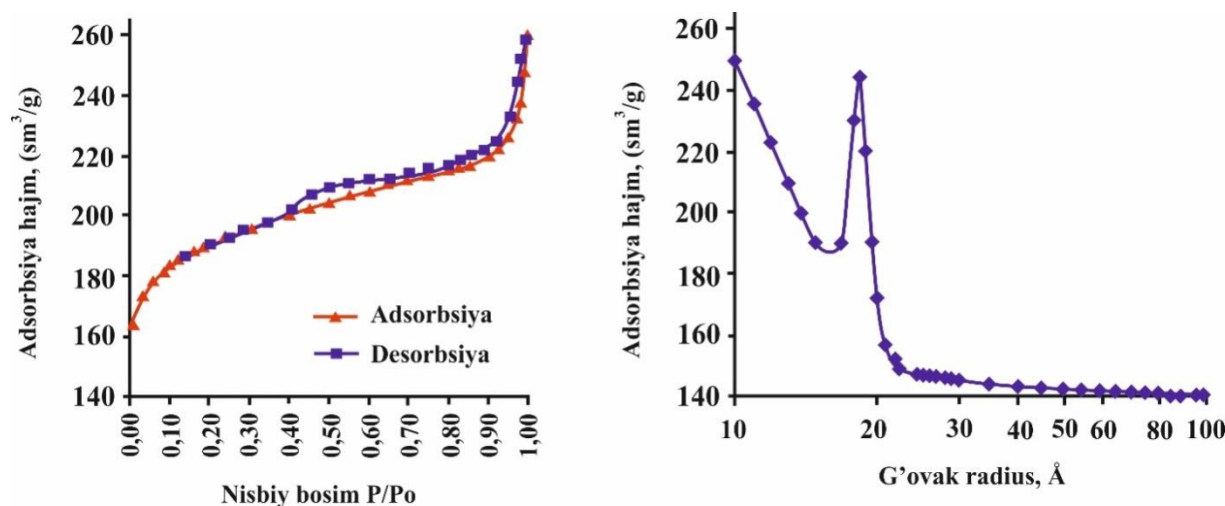
As can be seen from Figure 2, the synthesized mesoporous sorbents consisted mainly of pores around 2 nm. Microporous sorbents provide characteristic isotherms of nitrogen adsorption-desorption.



**Figure 3. Adsorption-desorption isotherms of nitrogen in micro-pores of microporous sorbents.**

As can be seen from Figure 3, the shown isotherms refer to type 1 isotherms (the presence of horizontal planes).

In fig. 4 shows the differential curves of the pore distribution over the adsorption-desorption isotherms and the radii of the synthesized HSZ. Adsorption isotherms are characteristic of type IV according to de Boer classification and characterize the adsorption of meso-cellular substances. On the isotherm in the range  $P/P_0 = 0-0,05$ , there is monomolecular adsorption in mesopores and volumetric filling of adsorption-micropores in micropores.  $P/P_0 = 0,05$ , mono- and polymolecular adsorption is observed in meso-cytes. The field  $P / P_0 = 0.05-0.4$  represents the polymolecular adsorption that is used in the BET equation to determine the specific surface area ( $S_{sol}$ ). It characterizes the occurrence of capillary condensation in interstitial Meso-therms on the adsorption isotherm  $P/P_0 = 0,4-1,0$



**Figure 4. Adsorption-desorption of isotherms of synthesized sorbents and differential curves of muscle distribution over radii.**

## CONCLUSION

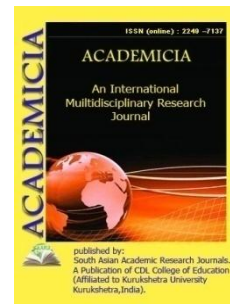
- 1) The sorption, textural and physicochemical characteristics of bentonite and kaolin were studied.
- 2) The Branauer-Emmett-Teller (BET) method was used to determine the specific surface area of the samples, and the Barrett-Jouner-Halenda (BJH) method was used to determine the size and distribution of pores.
- 3) The study investigated the relationship between adsorption volume and relative pressure and pore radii.
- 4) Monomolecular adsorption in Meso-cytes in the range  $P/P_0 = 0 - 0,05$ , mono- and polymolecular adsorption in Meso-cytes at  $P/P_0 = 0 - 0,05$ , polymolecular adsorption in the range  $P/P_0 = 0,05-0,4$ .

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## PROPERTIES OF NATURAL AND CHEMICAL MIXTURE YARNS

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### ABSTRACT

*The article presents the results of experiments to determine the quality indicators of yarn produced from natural and chemical fibres on a ring spinning machine. All types of natural and chemical fibres have unique properties that can be mixed in certain proportions to obtain high-quality finished products with new consumer properties. Yarns used for different purposes can be made from different mixtures. It is advisable to mix cotton fibre with various natural chemical fibres. The influence of individual components is very important in the production of yarn, each of which gives the yarn its characteristics. Also, the hydrophobicity or roughness of the products (or rather the added fibres) causes several shortcomings if the mixing percentages and compositions of chemical and natural fibres are not selected correctly: the sanitary and hygienic properties and dyeing of linen products deteriorate, the hairs on the surface of the fabric become rounded and its quality deteriorates. An important way to expand the range of products is to make yarn from a mixture of natural and chemical fibres, from which the production of fabrics, knitted fabrics and knitted finished products. For this purpose, mixed yarns containing 50/50, 70/30 fibres of cotton and polyester, as well as 100% polyester yarn were studied as the object of scientific research. Semi-finished products were obtained during the production process, and experimental yarn samples were taken on the Zinser-350 spinning machine in the laboratory of the Department of Spinning Technology.*

**KEYWORDS:** *Textile Fibres, Cotton, Geometrical Properties, Spinning, Spinning System, The Process Of Opening, The Process Of Mixing, The Process Of Cleaning, The Carding Process, The Process Of Combing, The Drawing Process.*

## INTRODUCTION

The increase in imports of finished products in recent years in the Republic of Uzbekistan increases the consumption of natural fibres, their rational use, processing of natural fibres mixed with chemical fibres, production of mixed assortments of yarns of different linear densities, the interdependence of their physical and mechanical properties [1]. In particular, the resolution of the President of the Republic of Uzbekistan dated September 16, 2019 "On measures to further develop the light industry and stimulate the production of finished products" is of great importance. The resolution aims to ensure the rapid and sustainable development of light industry, expand the production of competitive textiles, garments and knitwear in foreign markets, primarily through deep processing of local raw materials [2]. To ensure the efficiency and competitiveness of local industrial enterprises, special attention should be paid to the production of high quality, convenient and cost-effective products. This issue is being addressed most rapidly in the textile industry, as it produces textile materials and products with different properties and is designed to meet the different requirements of consumers. To fulfil this task, it is necessary to produce a high-quality product that is competitive and can find its place in the international market. It is known that the stable dominance of textile semi-finished products in production and export, insufficient production of high value-added finished textile products and the formation of national brands capable of competing in world markets do not increase the income of textile enterprises [3,4]. Today, the rapid growth of synthetic fibre production in the overall balance of textile raw materials requires the deepening of their processing processes in textile enterprises. With the introduction of high-speed processing processes for such fibres, especially lavsan and Nitron fibres from synthetic fibres, great difficulties arise as a result of the increase in static electrification in the fibre [5,6]. At the same time, the demand for chemical fibre and mixed fibre yarn products in the textile industry is growing. Several sources have reported that the electrification of chemical fibres during spinning has a negative effect on the quality of the yarn [7,8]. To date, to overcome this problem, it has been studied experimentally that it is expedient if different mixed fibres are close to each other in terms of their properties. In this study, mathematical-statistical methods were used, as well as mathematical planning methods of research. Experimental work was carried out in the laboratory of the CENTEX.UZ Certification Center of the Tashkent Institute of Textile and Light Industry to test the quality of experimental yarn samples from semi-finished products made in the spinning plan of JV "Osborn Textile". Along with the study of changes in the performance of mixed yarn produced in the ring-spinning system in technological processes, the optimal parameters of spinning processes were determined by studying the factors affecting the physical and mechanical properties of the yarn.

### **The degree to which the problem has been studied**

An analysis of the work devoted to the production of composite fibres and yarns has shown that they are mainly and often intended for use in combination with natural and chemical fibres [9].

The purpose of mixing fibres with different fibre content is to improve the quality of the final product by improving the negative properties of the adapted fibres and yarns. In these processes, the addition and mixing of the fibres together take place as follows [10]. Bonding is the process of combining fibres of the same type but different grades (for example, adding 2 types of cotton fibre of type 5 to 2 types of cotton fibre of type 4). Mixing of fibres is the process of mixing

different fibres in a certain percentage (in equal amounts or equally divided amounts). For example, mixing lavsan fibre into the cotton fibre.

Not only the length of each component to be mixed but also the specific gravity and thickness of the fibres will vary [11]. Products made of mixed fibre yarns have several positive advantages: increased mechanical strength improved abrasion resistance and repeated bending, elasticity, resistance to chemical reagents (acids, alkalis), increased shape stability in wet and dry conditions. Also, the hydrophobicity or roughness of products (or rather added fibres) can lead to several shortcomings if the mixing percentages and composition of chemical and natural fibres are not selected correctly: rounding impairs its quality [12]. An important way to expand the range of products is the production of yarn from a mixture of natural and chemical fibres, from which the production of fabrics, knitted fabrics and knitted finished products [13].

**Assignment.** It is important to study the physical and mechanical properties of yarns obtained by mixing natural fibres in the Republic of Uzbekistan with chemical fibres, to improve the quality of yarn and expand the range of yarns, as well as to obtain yarn for shirt products that meet the general needs of consumers.

**Problem-solving methodology.** Production and use of polyester fibres are widespread in various industries, including the textile industry, due to its high physical and mechanical properties, the ability to replace other types of fibres, low cost, the ability to use in combination with natural raw materials. The quality of a textile product largely depends on the properties of the yarn spun [14]. The object of scientific research is mixed yarns containing 50/50, 70/30 fibres of cotton and polyester, as well as 100% polyester yarn. Semi-finished products made based on the spinning plan of the foreign enterprise "OSBORN TEXTILE" are obtained and are shown in Table 1. Experimental yarn samples were spun on a Zinser-350 spinning machine in the laboratory of the department "Spinning Technology".

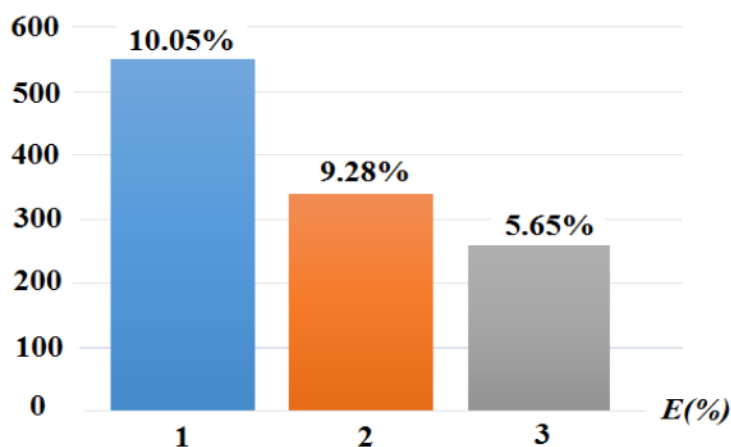
**TABLE 1 LLC "OSBORN TEXTILE" FOREIGN COMPANY 20% 100% POLYESTER, SHORT SPINNING PLAN OF COTTON-POLYESTER (50/50, 70/30%) MIXED YARN. PLAN**

№	Name and brand of machines	The linear density of the resulting product, text	Number of inserts, d	Amount of elongation, F	Twist of quantity		Output organ speed		UTC	Theoretical productivity kg/hour
					$\alpha_t$	K twist/m	V m/min	n min <sup>-1</sup>		
1	Shaving machine C 60	5363	1				185		0.90	60
2	Drawing I SB-D 45	5000	8	8			500		0.85	150
3	Drawing II RSB-D 35	5000	8	8			500		0.85	150
4	Roving F-15	663	1	7.54	11.6	42.5		1250	0.90	0,9
TITLI "spinning technology" training laboratory of the department										

5	Spinning Zinser-350	20	1	45.4	41.8	937		17000	0.90	0.022
	Spinning Zinser-350	20	1	45.4	32.4	730		17000	0.90	0.022
	Spinning Zinser-350	20	1	45.4	37.9	850		17000	0.90	0.022

**Analysis of results.** In the training laboratory of the Department of "Spinning Technology," TTESI in the preparation of yarn samples on the Zinser 350 loop spinning machine, the technological parameters of the machine were reworked and 100% polyester fibre spun yarn made based on the above spinning plank = 937 *twis/m*, 50/50% cotton/polyester blended yarn twistk = 730 *twis/m* and a twist of yarn spun from 70/30% cotton/polyester blend fibresk = 850 *twis/m*, while 20-text yarn samples were taken from a mixture of three different fibres. Here, in the laboratory "CENTEX.UZ" obtained the values of elongation at break of the yarn on the test equipment Statimat-C in the laboratory "CENTEX.UZ".

$F(sN)$



**Picture 1. Longitudinal elongation histogram of polyester and composite yarn samples**

**1-100% Polyester yarn, 2-50 / 50 cotton/polyester blend yarn,**

**3-70 / 30 cotton / polyester blend strip.**

As can be seen in the histogram in Figure 1, the elongation at break of the yarn decreases as the rate of addition of cotton fibre to the polystyrene fibre increases. V.N.Vanchikov's formula was used in the study of the spinning of polyester yarn by the method of ring spinning [15]. That is, if there is a yarn obtained from a mixture of cotton and chemical fibres, then the relative strength of the obtained yarn is determined using the formula V.N.Vanchikov.

$$R_{yarn}^h = R_{mix} * K_{mix} \quad (1)$$

Here;  $R_{un}^h$  —relative strength of yarn made of cotton and chemical fibres, sN/teks

$R_{mix}$  —the average relative hardness of the fibres in the mixture, sN/teks

$K_{mix}$  —the coefficient of the toughness of the fibres in the mixture.

On this basis, only the relative strength of cotton/polyester mixed yarn in the ratio of 70/30% was determined using the formula V.N.Vanchikov, the spinning property was given as an example. That is: the mixture obtained based on the values of the fibres determined the relative tensile strength of the fibre, and then found the relative strength of the mixed yarn from the formula V.N.Vanchikov. It was calculated as follows:

$$K_{mix} = K_1 - a\beta_2 + b\beta_2^2 \quad (2)$$

$$a = \left[ 1 - \sqrt{\frac{\varepsilon_1}{\varepsilon_2}} \right] \quad (3) \quad b = \left[ \left( 1 - \sqrt{\frac{\varepsilon_1}{\varepsilon_2}} \right) \sqrt{\frac{T_{m1}}{T_{m2}}} \eta \right] \quad (4)$$

3 and 4 formulas calculate to formula 2

$$K_{mix} = K_1 - \left[ 1 - \sqrt{\frac{\varepsilon_1}{\varepsilon_2}} \right] \beta_2 + \left[ \left( 1 - \sqrt{\frac{\varepsilon_1}{\varepsilon_2}} \right) \sqrt{\frac{T_{m1}}{T_{m2}}} \eta \right] \beta_2^2$$

$$K_1 = 0.48 \quad \varepsilon_1 = 8 \quad \varepsilon_2 = 40; \quad T_{m1} = 140 \text{ mteks} = 0,14 \text{ teks};$$

$$T_{m2} = 120 \text{ mteks} = 0,12 \text{ teks};$$

$$\beta_2 = 30 \% = 0.3; \quad \eta = 1$$

$$a = \left[ 1 - \sqrt{\frac{\varepsilon_1}{\varepsilon_2}} \right] = \left[ 1 - \sqrt{\frac{8}{40}} \right] = 0.55$$

$$b = \left[ \left( 1 - \sqrt{\frac{\varepsilon_1}{\varepsilon_2}} \right) \sqrt{\frac{T_{m1}}{T_{m2}}} \eta \right] = \left[ \left( 1 - \sqrt{\frac{8}{40}} \right) * \sqrt{\frac{0,14}{0,12}} * 1 \right] = 0,59$$

$$K_{ap} = K_1 - a\beta_2 + b\beta_2^2 = 0.48 - 0.55 * 0.3 + 0.59 * (0.3^2) = 0,48$$

The formula for finding the relative tensile strength of a composite fibre:

$$R_{mix} = (\overline{\alpha_1} * \overline{P_1} + \overline{\alpha_2} * \overline{P_2}) * \frac{\alpha_1 * \overline{l_1} + \alpha_2 * \overline{l_2}}{\alpha_1 * \overline{l_1} * T_{r1} + \alpha_2 * \overline{l_2} * T_{r2}} \quad (5)$$

$$\alpha_1 = 70 \% = 0.7; \quad \alpha_2 = 30 \% = 0.3$$

$$P_1 = 4,3 \text{ sN}; \quad P_2 = R * T = 32 * 0.12 = 3.84 \text{ sN};$$

$$T_{m1} = 0,14 \text{ teks}; \quad T_{m2} = 0,12 \text{ teks}$$

$$l_1 = 32 \text{ mm} = 32 * 10^{-6} \text{ km}; \quad l_2 = 40 \text{ mm} = 40 * 10^{-6} \text{ km}$$

$$R_{mix} = (0,7 * 4,3 + 0,3 * 3,84) ** \frac{0,7 * 32 * 10^{-6} + 0,3 * 40 * 10^{-6}}{0,7 * 32 * 10^{-6} * 0,14 + 0,3 * 40 * 10^{-6} * 0,12}$$

$$= 31,3 \text{ sN/teks}$$

$$R_{yarn}^h = R_{ap} * K_{ap} = 31,3 * 0,48 = 15,32 \text{ sN/teks}$$

$R_{yarn}^h = 15,32 \text{ sN/teks}$  we get a result.

Based on the above results, the relative tensile strength of 100% Polyester yarn, 50/50 and 70/30 cotton/polyester blend yarns, the coefficients of variation in relative tensile strength were determined and given in the table below.

**TABLE 2 100% POLYESTER YARN, 50/50 AND 70/30 COTTON/POLYESTER BLEND YARN QUALITY INDICATORS**

Name of the indicators	100% polyester		50/50 cotton/polyester		70/30 cotton /polyester	
	Average -X-	Coefficient of variation -CV-	Average -X-	Coefficient of variation -CV-	Average -X-	Coefficient of variation -CV-
Elongation	10,05%	6,24	9,28 %	10,26	5,65 %	5,61
Plucking force	547,92 cH	10,22	330,14 cH	5,84	253,17 cH	1,17
Comparative plucking force	28,24 cH/text	10,22	20,62 cH/text	5,84	15,32 cH/text	1,17

As can be seen from Table 2 above, the elongation at break in yarn spun from 100% polyester fibre is 10.05% greater than the elongation at break in other 50/50, 70/30 cotton/polyester yarns 9.28%, 5.65%, but the tensile strength is 50 /. In 50, 70/30 cotton/polyester yarns with 330.14 sN, 253.17 sN, we see that 100% polyester yarn has a good hardness of 547.92 sN. The specific tensile strength of yarn spun from 100% polyester fibres is higher than that of other yarns. In addition to the above-mentioned important indicators of yarns in spinning mills, the coefficient of variation in the tensile strength of spun yarn CV also plays a very important role. The less, the better. This allows for less breakage of the yarns during the weaving process. The less the threads are cut, the more quality fabric is made. We can increase or decrease the percentage of chemical fibre depending on the product we produce. The quality and cost of our required product can be controlled by the percentage of chemical fibres in the yarns produced.

**TABLE 3. INDICATORS OF SPECIFIC BREAKING STRENGTH GIVEN IN THE USTER STATISTIC-2018 STANDARD**

100 % polyester	Average, -X- , cH/text			Coefficient of variation -CV-		
	5%	50%	95%	5%	50%	95%
	39.3	33.1	28.6	7.7	9.6	12.0
50/50 cotton/polyester	Average, -X- , cH/text			Coefficient of variation -CV-		
	5%	50%	95%	5%	50%	95%
	22.4	19.5	16.8	7.6	9.2	11.0
70/30 cotton/polyester	Average, -X- , cH/text			Coefficient of variation -CV-		
	5%	50%	95%	5%	50%	95%
	19.9	17.0	14.2	7.4	8.8	10.3



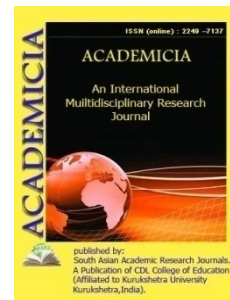
## CONCLUSION

Thus, according to the results of the experiments, the specific tensile strength of 100% polyester, 50/50 cotton/polyester, 70/30 cotton/polyester blend yarns was compared with the Uster Statistic-2018 standard. Based on this, the specific tensile strength of 100% polyester yarn was lower than the standard Uster Statistic-2018, but when we mixed it with natural fibre cotton, these figures met the requirements of the standard Uster Statistic – 2018 [16]. That is, the specific tensile strength of 50/50 cotton/polyester blend yarn less than 5% class is greater than 50% class and the specific tensile strength of 70/30 cotton/polyester blend yarn is more than 95% class 50% class is less than 50% class. The CV variability coefficient of mixed yarns is lower than the Uster Statistic- 2018 standard. This indicates that the unevenness in terms of tensile strength is good. By mixing cotton fibre with polyester chemical fibres and spinning mixed yarn, the quality of yarn has been improved and the range of yarns has been expanded, as well as yarn for garment products that meet the general requirements of consumers.

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## FORMATION OF FINANCIAL LITERACY OF STUDENTS IN THE PROCESS OF TEACHING MATHEMATICS - TIME REQUIREMENT

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### ABSTRACT

*In this article outlines some methodological features of the formation of financial literacy of students in the process of teaching mathematics. Recommendations are given on their implementation in mathematics lessons of secondary schools and examples of solving problems in financial mathematics are given.*

**KEYWORDS:** *Financial Literacy, Tasks With Economic Content, Cluster, Stages, Income, Expense, Family Budget, Business, Stock, Credit, Bank, Simple And Complex Presents, Depreciation Plan.*

### INTRODUCTION

In the resolution of Sh.Mirziyoyev of President of the Republic Of Uzbekistan № PP-4708 on May 7, 2020 “On measures to improve the quality of education in the field of mathematics and the development of research”, it is defined as one of the priority following directions: improving the quality of teaching mathematics in general secondary and secondary special educational institutions, improving the quality of education in the field of mathematics, developing scientific researches, putting scientific gains into practice. Therefore, giving instructions and qualifications about putting researches into practice to learners and forming their financial literacy are considered actual tasks. Financial literacy is a set of knowledge, skills, skills and guidelines in the field of financial activities that lead to the improvement of the well-being of life and the improvement of its quality. The level of understanding of basic financial concepts, the ability to manage personal funds with the help of short-term decisions, reliability, long-term financial planning taking into account changes in life events and economic conditions are also considered financial literacy [1].

Anyway, today or tomorrow, any person has to answer the following questions: how to treat with financial funds, what to do to improve their abundance. It means that any person consciously wants to improve their financial literacy. We understand that financial literacy is realizing basic financial terms, using the information to decide to improve people's lifestyle [2], [3]. They consist of correctly spending their money and funding it, planning their own personal budget, how to collect their money to achieve future goals [4],[5].

Therefore, the matter of using funds efficiently is one of the biggest problems of any person nowadays, but not all the graduates of generally specialized education are not capable of feeling the threat (risk) and assessing them altogether.

According to O.V.Krivosos and A. N. Kolomeichuk [6], financial literacy of students can be formulated on the basis of the entire subject area that is studied not only in the study of Economics in the course of Secondary School sociological studies but also in the period of study at school. Of course, the role of mathematics in the economic education of the student is great because the solution of financial issues-oriented to practice allows the school to adapt the theoretical foundations of mathematics course and the issues that are not a practical application to the life situations that the students are facing. For example, often both children and adults ask the teacher when performing various mathematical tasks, "Why are all of them necessary? Where do these mathematical concepts come to our hand?" they ask questions such as, because mathematical formulas, the study of laws are not always strengthened by their application in life situations.

Mathematic knowledge may seem that it is not necessary for life conditions, but learning them requires a lot of effort. Solving economic matters, discussing the conditions, using business games for the family economy, enterprise and the whole country play the most significant role. The options offered to the circle of interests of each person can include those that are combined with the problem of choosing the best from the price.

## **MATERIALS AND METHODS**

Solving problems is one of the components of economic education, without mathematical calculations it is impossible to implement a financial and business plan, without understanding the graphs, financial forecasts will not make sense. Commercial accounts help the student to see the practical direction of Mathematics from a young age and not to be afraid of Real numbers in life. The simplest issues characterize economic concepts and models, allow to effectively master economic situations. But when solving these issues, questions arise about the terms in children and the economic situations that arise in them.

In order to increase the financial literacy of the population, it is necessary to develop a road map to increase the level of financial literacy. The basis of this road map should constitute the tasks of increasing financial literacy of students of secondary special educational institutions, pupils of general education schools. To do this, the lessons of mathematics require the creation of an organizational pedagogical model that allows the formation of the necessary knowledge, skills and skills for financial literacy.

In order to establish a pedagogical model in the lessons of mathematics, it is necessary to use the issues of practical content in finance and economics. Such issues should consist of three clusters and are based on situations that correspond to the objectives of the model and are more likely to

occur in the future vital activity of the educator. The most necessary clusters can consist of the following: economy in marriage, banking culture and the basics of entrepreneurship.

It is desirable for the first cluster to be devoted to the daily use of financial literacy, to take into account the income and expenses for it, to plan purchases, to maintain a personal and family budget and its balance, to collect a security fund, to include the main types of taxes.

It is desirable to introduce into the cluster of banking culture issues that allow understanding the principles of banking business, banking documents. It is necessary to teach the students what is the difference between one loan and the other, to show the methods of accumulation of financial resources and to establish a rational investment business, including to give concepts from the basics of pension.

After the study of the above two clusters, it will be required to familiarize yourself with the basics of entrepreneurship. It is required that the educator himself disclose information, familiarize himself with it, which allows him to set up an entrepreneurial business. At the same time, knowledge is also required for all possible risks and obstacles.

It is necessary to present the issues of each cluster divided into types. The first types of issues include issues related to mastering the basic concepts. Through this, it is made possible for educators to strengthen by remembering the basic terms. In order to understand the social-economic activity, the parable of the application of the mathematical apparatus should form the second type of issues. The third type of issue is the issue of choosing the best optimal solution. They teach to compare, analyze and choose the optimal option for himself.

After mastering these types of issues, the main attention should be focused not on calculating the result, but on analyzing the data, relying on the knowledge learned before, and choosing the optimal solution, relying on the specific situation. Here, the so-called "open" issues occupy an important place, in which there is no one-value solution, and the result can be reached in several ways. This will enable the student to see what concepts and competences have been formed, how to apply them and what correction is necessary.

At the last stage, it is necessary to focus on maximum practical importance and solve issues related to the application to Real life. Such issues include "keys-issues" and issues related to the modelling of concrete socio-economic situations (role-playing). They allow the educator to apply the knowledge and skills acquired in practice [7].

1-the stage (5– 6-th classes).The theme of the "concept of fault". The main types of issues at this stage are: finding the number, finding the number according to the given, finding the ratio of the number to the Foy nisb, narrowing the increase (decrease) of the number to the given.

2-th Stage (6 – 7-th classes).Solving practice-oriented financial issues. At this stage, students will learn to address issues in the financial context. They learn how to plan a budget, calculate taxes, compare profits in different ways of depositing money.

1 st matter. The Ma'mur will collect 4000soums per month to get a PlayStation device that will cost 46500 soums. Compare the amount of money that the administrator deposited when he saved the money or deposited with the bank by 11%. Which is more profitable for him: to keep their money in himself or put them on a foyer's deposit?

2 nd matter. Ilkhom Komilov is written 2 000 000 as a salary. 12 % of income tax is taken for a physical person. IlkhomKomilov is going to repair his home, for this case he is going to get credit 9 000 000 credit which consists of 16 % annual payment.

The following things are required to count: a) IlkhomKomilov's amount of money after paying the tax; b) the amount of my monthly payment by credit; v) if IlkhomKomilov's monthly expenses (including public utilities and daily costs) consists of 520 000 soums, then make a conclusion by given conditions, if he can or cannot repair his house.

3 rd matter. Vali planned to take a loan of 40 000 000 rubles to buy a car from the bank. Vali wants to close the loan with the same amount of payments per month. If Vali takes the loan for 2 years, then the total amount is 48 200 000 soums; if to 3 years, then the total amount will be 52 400 000 soums, if to 4 years, then 56 900 000 soums. It is required to calculate the following:

- a) For what period should Vali take a loan so that the monthly fee does not exceed 1 500 000 rubles?
- b) For what period of time would you have received a loan under the conditions provided for? Is it better to pay less every month, but longer, or is it better to pay a large monthly fee, but in the short term?

4 the matter. Entrepreneur AzimSobirovich bought 10 shares of the company "Uzneftgaz", each of which has a price of 2 000 000 soums. Since the stock price began to fall, the entrepreneur sold 6 shares without risk, when the stock price fell by 10%, the remaining 4 shares were sold at an increase of 5% from the previous price. How many sums did AzimSobirovich suffer because of these actions?

5 the matter. Utkir received a loan of 120 000 000 soums from the bank for the development of his business. Utkir will cover the loan with a payment equal to the month after the per cent is calculated. The foyer rate in this bank is 10% per annum. How can he get a loan for the year in the minimum box, so that the annual fee of Utkir does not exceed 30 000 000 rubles?

3-th stage.(7-9-th classes). "Issues related to price increases and decreases".

6-for instance.Commodity prices initially decreased by 20%, then increased by 20%. Does the initial price change, how many coins have changed if it changes?

7 th matter. Washing machine prices are reduced to the same fault as the previous price per year. If it was put up for sale with 2 000 000 soums, and after 2 years 1 584 200 soums were sold, how many coins did the washing machine cost per year?

Stage 4 (10-11 classes).The theme of "simple and complex faults".

8 th matter. Aziz has 1 000 000 soums. He chooses one of two options for putting his money in the bank for 1 year. The first is with an ordinary fault and 12 faults per year, and the second with a complex fault (calculation in each quartet) and 10 faults per year. Which method of putting money is more profitable?

Now we will dwell on some exemplary issues that will be discussed in the lessons of mathematics in the formation of financial literacy and methods of their solution.



1. Ergashev puts in the savings bank 50 000 rubles at the end of each quarter. At the end of each year, the bank writes to its account 4% of the complex stock. How much money will be on the account of Ergashev after 5 years? Solution. According to the simple general annuity formula:  $S = 50000 \cdot ((1+0,04)^{5-1} - 1) / ((1+0,04)^{1/4} - 1) = 50000 \cdot 0,2167 : 0,00985 = 11000000$  soums.

2. If the bank writes 3% per quarter, then how much money should be on the client's account in order to ensure an eternal profit in the amount of 150 000 soums per month. Solution. Eternal renta is an annuity that lasts for an unlimited period of time, its equivalent fault rate:  $j = (1+i)^{m/p} - 1 = (1+0,03)^{4/12} - 1 = 1,0108 - 1 = 0,0108$  herem=4- the amount of flats; p =12- the amount of months. The amount of money to provide a- Everlasting rent without it, R- eternal rent payable monthly, j-equivalent fault rate. According to the formula

$A = R / j = 150\,000 : 0,0108 = 13\,888\,888\,888$  soums.

3. Is it profitable for the depositor to receive 2 000 000 sums today or is it profitable to receive 3 500 000 sums after 3 years if the rate of the deposit is equal to 17%?

Solution. We calculate the annual value of 2 000 000 soums after 3 years 17% :

According to the formula  $FV = PV (1 + r)^n$ , where PV is the initial amount of money deposited in the bank, FV is the final amount of money deposited in the Bank, r is the annual fault rate, N is the number of years, from this

$FV = 2\,000\,000 \cdot (1 + 0,17)^3 = 3\,203\,200$  sum.

Answer. After 3 years, the withdrawal of money 3500 000 soums is more profitable at the given value of the foyer rate.

4. 100 000 soums put in the bank, if the rate is 14% per year, how many years will it turn into 2 000 soums?

Solution.  $FV = PV (1 + r)^n$  we write the formula as follows:

$(1 + r)$  we put the values  $n = FV / PV$  and  $r = 0,14$ ,  $FV = 2\,000\,000$ ,  $PV = 100\,000$ :

$1,14^n = 2\,000\,000 / 100\,000 = 20$ , if we logarifm both sides of it on the basis of 1,14,

it turns out that  $n = \log$  is  $1,14^{20} = 22,86$  years.

Answer. At an annual rate of 14%, 100 000 soums will grow in 2 000 000 soums to 22,86 years.

5. What should be the rate of failure in the SSU for the growth of 1 000 000 sums to 3 000 000 sums within 5 years?

Solution.  $FV = PV (1 + r)^n$  r from the formula - if we find the annual fault rate:

$r = (FV / PV)^{1/n} - 1$  and is given to it under the condition of the matter,

$FV = 3\,000\,000$ ,  $PV = 1\,000\,000$ ,  $n = 5$  we put the values; without it

simple text adventures interpreter  $= (3\,000\,000 : 1\,000\,000)^{1/5} - 1$ ; it turns out that  $r = 0,24573$  or 24,573%.

Answer. At the rate of 24,573% ssuda fault, 1000 000 soums will grow to 3 000 soums for 5 years.

6. 4 000 units of money (p.the b.) the amount of capital was put on 80% per annum for 5 days. How much will be its final amount?

Solution.1-method. According to the formula for finding the final amount of capital ( $K=4000$ ,  $p=5\%$ ,  $d=80$  days).

$$I = \frac{Kpd}{360 \cdot 100} = \frac{4000 \cdot 5 \cdot 80}{36000} = 44$$

$$K' = K + I = 4000 + 44 = 4044,$$

here  $K$ -capital or bonds, for the use of which the client pays a certain fee,

$I$ -the payment fault or income that the creditor receives for using the money ssud,

$P$  -100 is the fault rate, denoted by  $d$  – Days, which indicates how many units of money the client must pay for using the unit of capital in a certain period of time (year), 360 is the number of days in a year.

2-method. We find the time expressed in years  $t = D/360 = 80/360 = 2/9$ .  $K' = K + K \cdot i \cdot T = K(L = K + L = K) = 4000(1 + 0,05 \cdot 2/9) = 4044$  (the p.the b.), where  $i$  – the percentage rate expressed in unit shares, the time expressed in  $t$  –years.

7. How many years is it necessary to put the capital so that the fee for putting it in the bank with 9% is equal to its doubling?

Solution. According to the condition of the issue, the final amount of capital  $K$  is equal to its two times, hence  $2 = L$ .  $2 = K + K \cdot i \cdot T$ ,  $g = 100/g = 2$   $g = 100/9 = 22,22$  years, where the  $g$ -the number of years in which capital is invested.

8. The amount of consumer credit is 6 000 p.b, the foyer rate – 10% per year, the closing period- 6 months. Find out the value of the monthly payment (the loan is paid in equal shares).

**TABLE 1.TABLE-LOAN REPAYMENT PLAN (AMORTIZATION PLAN).**

Month	Loan	Payment of per cent	Paying the loan	Monthly payment
	6000	10%		
1	5000	50	1000	1050
2	4000	42		1042
3	3000	33		1033
4	2000	25		1025
5	1000	17		1017
6	—	8		1008
		175	6000	6175

Comments to the table. Monthly payment of the main debt:  $K / m = 6000/6 = 1000$ .

The monthly fee consists of the principal debt fee and the sum of the per cent fee for this month.

Payments of per cent are calculated by this formula:  $I_1 = \frac{K \cdot p}{1200} = K \frac{10}{1200}$ , here  $I_1$  – the amount of the first month's fault fee,  $p$ -the annual fault rate. The total amount of payments for using a given loan:

$$I = \frac{Kp}{2400}(m+1) = \frac{6000 \cdot 10}{2400}(6+1) = 175.$$

The amount for monthly payments:

$$b = \frac{K + I}{m} = \frac{6000 + 175}{6} = 1029.$$

3. At what annual compound foyer rate, money doubles after 12 years?

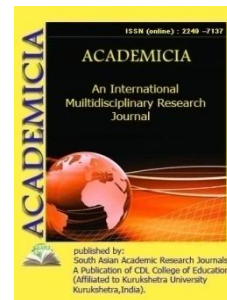
Solution.  $S_n = P(1+i)^n$  according to the formula of the complex per cent. According to the condition of the issue  $2 = 1 (1+i)^{12}$  or  $(1+i)^{12} = 2$  equality must be fulfilled. We get a decimal logorifm from both sides of the resulting expression. Without it  $12 \lg (1+i) = \lg 2$ . since  $\lg 2$  is equal to  $= 0,3$ , we get  $12 \lg (1+i) = 0,3$  equality. From this we get  $\lg (1+i) = 0,0025$ ; using the values in the logarifm Tables  $(1+i) = 1, 06$ , which means that  $i = 0,06$  (6%).

## CONCLUSION

In conclusion, the formation of financial literacy in the lessons of mathematics should take into account the level of students ' preparation and their interest in the subject, be carried out equally both in the lessons and in extracurricular activities, acquire practical direction and allow the educators to describe the information in the form of lectures, and end with the discussion as a team.

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## POLITICAL SCIENCE AND PROBLEMS OF FALSIFICATION OF POLITICAL HISTORY

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### ABSTRACT

*The idea that politics and lies are almost synonymous and that politicians are forced to lie and multiply the lies day by day of their predecessors in order to achieve their political goals, which do not always meet the interests of their peoples, has taken root in the modern public consciousness. Society regards politics as one of the most falsified spheres of professional activity and there are some reasons. The presence or absence of lies becomes one of the main criteria in assessing the quality of the activities of the political elite in the conditions of the coming post-industrial world. This article tells the necessity of application of this criterion for an estimation of elite.*

**KEYWORDS:** *Elite, Falsification, Plagiarism, Scandal, Political Science, Political History, Morality, Politics.*

### INTRODUCTION

Political science tries to give an objective assessment of the activities of the ruling political elite and its leaders. But it does not always succeed in doing this because of the resistance of the elites themselves, who do not want to open up to elite studies. Society requires the elite to be honest. But in practice, we rarely see this quality in the them. More often it remains nothing more than a good wish, the ideal to which the elites will have to strive forever. Cataphatic elite studies investigate the elite along the ascending hierarchical ladder as the triumph and rooting of all the best in the elite. The reverse method (apophatic) excludes from the definition of the elite everything that is superfluous, unnecessary and false, which prevents us from knowing exactly its essence. Thus, the methods of addition and exclusion allow us to accurately establish the ratio of the form (elite) and content (elite) of this phenomenon. At the same time, from our point

of view, the issues of elite education in modern society are largely determined by the level of development of both political science in general and political science education in particular.

**Problematic areas of modern political science.** The main problem today in teaching political science at a university is simply a dramatic reduction in hours of general political science in non-profile specialties and the number of applicants entering the profile itself. But in the near future, political science may face a number of even more serious troubles, for which the community of political science teachers is not ready at all. We are talking about new technologies that are associated with the onset of the post-industrial era, the unsatisfactory material content of discipline and the global challenges of the modern era.

Political science is completely unprepared for the appearance and dissemination of the achievements of nanoscience in society. How the world (including the political one) will change as a result of the introduction of nanotechnology into everyday life, none of the politicians and political scientists yet knows. But we will all have to face this problem in the very near future, just as we will have to form an adequate response to this challenge of modern times. And for the answer to be truly adequate, today it is necessary to study the possibilities and consequences of this newest scientific revolution.

Another global problem of modern political science is the verification of political information. The Wikileaks story clearly demonstrated to everyone what information bombs can do. And here we should take more seriously the problem of the development of new methods of verifying information, and in particular to such a method as political hermeneutics. Recently, Russia has been developing on this problem, and we have the right to expect serious scientific breakthroughs in this area in the near future.

The problem of the relationship between public and shadow politics (“political behind the scenes”) also remains promising. In this issue, a significant place is given to political elitology, which must learn to look behind the scenes of big politics and timely warn civil society about threats from political elites associated with their abnormal activities.

The undoubted threat to political science is the penetration into the ranks of its scientists - representatives of the political bureaucracy and business. For a politician, an academic degree is just another winning touch to his image. It is justified and welcomed when a scientist goes into politics, but when a politician comes into science pursuing selfish political goals and not scientific truth, things start to take on a scandalous turn.

“The political elite is using the science that is useful for probing public opinion, creating political images and preparing electoral campaigns; the business elite is a science that helps to select personnel, conduct marketing research and process customers ”[13, p. 87]. There is a tendency for elitology to turn into a servant of politics, when politicians try to dictate to elitologists how to write and evaluate the elite itself. A deplorable example of going into politics O.V.Kryshtanovskaya testifies to the fact that no one expects smart and principled scientists in the government and that they are not needed by anyone there, and even more, they are dangerous for the government.

The main problem of modern political elite is not so much to give an adequate description of the essence of the political elite, but to become a reliable means of exposing its negative secret practices directed against democracy and civil society. Thus, elitology should move from

descriptive practice to predominantly analytical and educational-critical, since criticism of one (“old”) elite should learn and grow its replacement - another (“young”) elite.

**The general scientific nature of falsification.** Political falsification is mandatory for the self-affirmation of elites in history, especially when they lack their own resources to implement a self-identification project. Most often, the initiator of political-historical falsification is a certain political ideology or behind-the-scenes interests of specific ruling elite groups. Falsification causes significant harm to the social sciences, placing them in the position of the servants of political ideology. At the present time, there has been a process of mass falsification of history, because modern Russia is devoid of clear ideological norms that would hinder the creation of a new political mythology. Until the ruling elite has developed a new corpus of ideological dogmas, scientists have time to verify the moments of history falsified by the previous ideology and return history to a scientific form.

Another problem of scientific falsification is the issue of “utilization of scientific theories”. What to do with outdated scientific theories, the previous data of which began to contradict the modern reality? It was noticed, for example, that some provisions of the classical theories of the elites of the early twentieth century for some reason they refuse to work at the beginning of the XXI century. Not because they turned out to be wrong, but because reality has changed so much, changing the elites themselves, that they have ceased to identify with the classical theories of the elites. The elites just changed. But those researchers who continue to follow the proven methods of these theories unwittingly mislead themselves and everyone, because their data and conclusions do not correspond to reality. Such authors can become unwitting falsifiers. In our opinion, there is a need for revision (revision and clarification) of the political science classics. Otherwise, dogmatization and stagnation await us, and then - an inevitable revival of scholasticism. In the current circumstances, it is necessary for the dialectical principle “concrete analysis of a specific situation” to really work. The development of political science should go through its constant renewal, and not preservation at all costs of the classics, even if it has finally passed into the category of the history of political studies and has ceased to be a reliable method for studying modern realities. In such cases, we should really talk about the transition of existing theories into the category of the history of political doctrines. This section of political science can and should become a kind of pension (“well-deserved rest”) for former theories (which does not exclude their subsequent “triumphant return” in the event of a change in political reality). The ratio of traditional and innovative is one of the most important problems in the development of modern scientific knowledge. This problem is faced not only by political science, but also by science in general.

**At the end of the twentieth century.** Russian science has gone through a transitional stage, moving away from the Soviet past. Disciplines such as History of the CPSU and Scientific Communism were declared antiscientific, thoroughly permeated with ideological dogmas and political falsifications. The falsification of political history is the norm for authoritarian political elites who control the means of communication and govern the social sciences through their ideological dogmas.

The first victims of political falsification are always philosophy, history and, of course, political science itself, which is replaced and disfigured beyond recognition by the official ideology



prevailing in the state. This is especially evident in the example of the political history of authoritarianism and totalitarianism of the 20th century.

**Falsification and political history.** According to the "head of the Marxist historical school in the USSR" Professor M. N. Pokrovsky (1868–1932), "History is politics overturned into the past" (report "Social sciences in the USSR for 10 years", March 22, 1928). But this dictum of his is a paraphrase of the famous maxim of the British historian Edward Freeman (1823-1892): "History is the politics of the past, and politics is the history of the present" ("Methods of Studying History", 1886) [12, p. 34]. In both cases, it is not just about the close connection between history and politics, but also about the fact that politics constantly revises the results of historical science, trying to control it in its basic conclusions. It is the political elites who have always been interested in rewriting history for themselves and their interests.

The leveling of historical education leads to distortions of political consciousness. Thus, the low level of historical knowledge of Russian youth in the early 2010s manifests itself in the fact that they no longer remember who B.N. Yeltsin. Some argue that this is the last communist, an ally of Gorbachev and Stalin (and at the same time!), Others - that he was the leader of the Urals during the Great Patriotic War, others consider him a funny old man and a drinker, and some are sure that he husband of Raisa Gorbacheva and father of Vladimir Putin [9]. It's funny. But how many tears can this unpleasant laugh deliver?! Simple illiteracy can become a significant threat to national security, since it creates an irresponsible attitude towards their society among citizens. With such a disgusting baggage of knowledge, high school graduates come to universities. The secondary school has actually relieved itself of any responsibility for the quality of the education it provides, but everyone is demanding "high-quality" graduates from universities. Nonsense. Absurd. But those who form the educational policy of Russia today firmly believe in him.

It is the leveling of historical and political education that opens up a wide gap for penetration into the public consciousness of quasi and pseudoscientific knowledge. Many things are simply falsified for the sake of momentary political interests. Falsification is a multi factorial phenomenon, which is a mixture of the malicious intent of a lie and an involuntary delusion, which together distort the credibility in favor of someone's secret or obvious interests. Falsification is the construction of a political history in the spirit of positive patriotism (a selective approach, demonization of some and praise of others, silence and numerous reservations and comments that nullify the statement, etc.). Moreover, this design is not natural, but artificial. This is a synthetic story, devoid of the truth of the spirit of its time.

The logic of the development of science suggests that within the framework of political science, a special section should be created to supervise the verification and falsification of scientific theories arising within the framework of this discipline. This section should summarize the accumulated rich experience of social and humanitarian disciplines on the reliability of scientific knowledge and offer its own special set of verification measures, certifying the adequacy of the theses put forward by its representatives. We are not talking about the creation of an "internal investigation department" within political science, or, moreover, an inquisition. It is about self-checking and self-checking. Every political scientist should know and be able to trust the validity of the provisions he himself formulated in order to avoid accusations of schematization, scholasticism, dogmatism.

But falsification concerns not only scientific theories, but also political practices themselves. By falsification, the elite are trying to prolong their life in politics. With it they hide their shortcomings in their professional activities and publicly justify their unpopular actions in the eyes of the public.

Everybody in Russia today is talking about falsifications in the elections: the opposition - what they were, the authorities - what they were not. But at the same time, the most important falsification of politics: falsification by the elite that it is a real elite. In other words, the elite falsifies its elite status: there is a form (rank, position), but there is no corresponding content (professionalism). The false elite is the main political lie of our time. The country's leaders have repeatedly stated that they have a limited talent pool, that there is no intellectual resource, that the elite ignores their initiatives and sabotages the implementation of important decisions, etc. All these facts are blatant evidence of the low professional level of the so-called "Elite". Officials have actually replaced themselves with politicians. Officials can only play politicians, but their rank (administrative position) prevents them from being them. This produces not only a substitution of concepts, but also a distortion of the very essence of politics as a profession. By resorting to falsification as a means of enhancing their elite, politicians thereby falsify the political history of their time.

A direct continuation of the topic of falsification is the problem of plagiarism. According to a proposal put forward in 2012 by the Agency for Strategic Initiatives (ASI), universities will be obliged to publish in the future on the Internet doctoral and master's theses. With the introduction of this bill, a serious blow to plagiarism will be dealt, the scale of bribery in the field of writing and selling works will decrease, and at the same time, the requirements for the quality of the educational process will sharply increase, and the trust of employers in the diploma of higher education will increase significantly -nii. At present, "students more often than not pretend that they are learning, teachers — that they are learning" [11].

**Political Science and Plagiarism.** If falsification (in the form of disinformation) is the norm of high politics, then for those politicians who, in addition to their own political profession, are also employed (by calling) in the scientific field of activity, often plagiarism is a common form of activity. ... 2012 was especially rich in exposing political plagiarism. It can be called a record year for the harvested "harvest" of fakes. The wave of disclosures began back in 2011 with a scandal in the highest circles of Germany, which is prosperous in terms of political honesty.

The so-called "plagiarism scandal" spoiled the then almost flawless and fast-paced career of the German Defense Minister (2009–2011) Karl-Theodor zu Guttenberg. Zu Gutenberg himself at first "preferred to talk not about plagiarism, but about annoying citation errors. However, he soon admitted his mistakes, in particular, voluntarily - even before the end of the proceedings - by renouncing his scientific degree" [14]. It was from him that the fashion for Internet examination of nomenclature dissertations began in the EU. Already in the following year 2012, political Europe was swept by a wave of scandalous revelations. Several European VIPs were caught for scientific plagiarism.

In the spring of 2012, the Hungarian parliament accepted the resignation of the country's president, Pal Schmitt. The head of state decided to leave his post after a scandal and accusations of plagiarism when he wrote a scientific dissertation back in 1992. By decision of the University of Budapest on March 29, 2012, he was deprived of his degree. A specially

created commission (of four professors and a lawyer) concluded that 180 out of 215 pages of Schmitt's dissertation were a "direct translation" or "partial borrowing" of someone else's work [8].

In the summer of 2012, a group of Romanian academics found Prime Minister Victor Ponta guilty of plagiarism. Ponta defended his dissertation on the International Criminal Court at the University of Bucharest in 2003. In mid-June 2012, the British journal *Nature* reported that about half of the 432-page work in Romanian was copied from other people's work without proper source citation. Ponta, who had previously promised to leave his post if he was found guilty, called the academics' findings "politically motivated" and "illegal" and refused to resign. The Prime Minister accused the commission of acting in the interests of his rival, President Traian Basescu. Ponta promised to appear before the ethics commission and reiterate that he is not guilty of plagiarism. [1] Romanian Education Minister Liviu Pop dismissed a commission examining the prime minister's dissertation on charges of ineffectiveness [10].

In autumn 2012, the University of Dusseldorf accused the Minister of Education of the Federal Republic of Germany Annette Schavan of cheating. It was about her Ph.D. thesis, which she defended back in 1980. The experts found signs of plagiarism on 60 pages of the work [6]. It all started with the fact that in May 2012 a German blogger (Robert Schmidt) published about a hundred excerpts from the minister's work, in which, in his opinion, citation rules were violated. "Crime against scientific truth" has no statute of limitations. In the Western community of political elites, such accusations are a good enough reason to "stir up the past, since they hit the foundation of the system built on the commandment" do not write off" [3].

In Russia, no one from the academic community has yet checked the dissertations of Russian VIP politicians for plagiarism. However, the statements made in 2012 by the Russian Prime Minister that the scientific community should strengthen anti-plagiarism checks and toughen copyright laws [2], suggests that local politicians should not be particularly worried about their academic degrees. In the long term, the Russian authorities are planning to create "in Russia a publicly accessible 'knowledge bank' where any scientist will place his work - such a digital portfolio, starting from the student's bench, should accompany every scientist" [ibid.]. YES. Medvedev expressed his thought very harshly: "In any case, it is time for lovers of an easy life to learn to think and work independently. During my studies, I and the vast majority of my friends were engaged in writing scientific papers on their own" [ibid.]. It remains unclear whether these punitive measures will apply to political scientists or just scientists? But already in the summer of 2012, the first victim of these purges was the rector of SibGUTI S.G. Sitnikov. His doctoral dissertation turned out to be "a talentless compilation, 85% of the volume of which is represented by direct borrowings from the works of other authors. Copy-paste (copying + pasting) - there is no other name for the "dissertation" - has undergone deep research. It is reported that the fact of non-originality of the study and extremely low uniqueness has been proven irrefutably" [4]. The new rector of SibSUTI ordered to withdraw from the library of the university and turn over to waste paper the "work" of S.G. Sitnikov with the motivation: "the revealed fact of plagiarism contradicts both the legislation of the Russian Federation on the protection of copyrights and the traditions of the Russian higher school". Also, the former rector was offered to return, on a voluntary basis, 140 thousand rubles to the university cashier, "which were spent in due time on the publication of his" works" [ibid.]. If higher education has already begun the process of getting rid of pseudo scientists, then higher politics is still modestly silent.

The media indicate that the world is growing and gaining strength in the trend of evaluating politics as legalized lies. Plagiarism examples are just part of the iceberg. But if in the West the accusation of plagiarism means political suicide, in Russia, in the opinion of Foreign Policy, this is just a minor nuisance. For example, in May 2012, the Russian president “appointed the rather controversial historian Vladimir Medinsky as minister of culture, when even the pro-Kremlin RIA Novosti reported numerous accusations of plagiarism against the dissertation” of this scholarly official [7]. In March 2012, the scientific community accused the then-future Minister of Culture of the Russian Federation of “cave methodology” and “clumsy logic”, and his doctoral dissertation was called an imitation of scientific work [5]. Moreover, even V.V. himself is accused of plagiarism. Putin. Back in 2006, economist Clifford Gaddy of the Brookings Institution suggested that “the Russian president's dissertation, written in 1997, was largely copied from the work of professors at the University of Pittsburgh. Gaddy suggested that Putin, who then held the post of deputy mayor of St. Petersburg, simply paid a third party to write this scientific work, which was very common in Russian universities ”[7]. But the charges of plagiarism were never dropped from these politicians and continued hang over them like a sword of Damocles. But it is precisely by the way politics itself fights with lies that have crept into it that one can judge the nature and quality of the political culture itself and the ruling elite (if in the elite lies prevail over truth, then such an elite is inherently false).

## CONCLUSION

While the Western elites have found the strength to admit the incompatibility of scientific plagiarism with political professional activity, the Russian elite demonstrates an incomprehensible loyalty and criminal tolerance towards being liars in its ranks. Such a tolerance for lies does not honor the Russian elite and takes it beyond the framework of civilized elite communities. Thus, the presence or absence of lies becomes one of the main criteria in assessing the quality of the political elite. At present, political elitology does not at all take into account such an important criterion for assessing the quality of the power elite as morality, which takes the subject of the elite beyond the framework of universal human values, making him either some kind of “alien creature” or “blond beast”, which can do everything. It is no secret that politicians and businessmen defend dissertations for scientific degrees to strengthen their own image, and not for the sake of developing science. Their dissertations are most often more or less successful imitation of scientific activity, damaging the entire science as a whole.

How to deal with this described phenomenon? Half measures are not enough here. It is necessary to suppress the speculative actions of politicians in relation to science at the root, that is, to prohibit politicians and businessmen to engage in not their business - science. Only in this way will we be able to save science itself from the temptation to help politicians. Another important point is the prevention of this kind of crime. Expertise is needed before a politician is elected to a high post, and not after his appointment. The entrance to politics should be completely closed for such liars. It is precisely the strengthening of the moral criterion in the selection of the elite that should become an important means of barring false subjects of politics from entering the political class, and make it a more professional and responsible managerial link, in all its parameters approaching the ideals of democratic meritocracy.

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## **PORTFOLIO STRUCTURE & PERFORMANCE A STUDY ON SELECTED FINANCIAL ORGANIZATION IN SRI LANKA**

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### **ABSTRACT**

*The main objective of the study is to identify the impact of Portfolio structure on Performance, In the present study, Portfolio structure [i.e., Income from Deposit, Income from pawning, Income from loan as independent variable and Performance (i.e., Net Profit, Return on Capital Employed (ROCE) and Return on Equity (ROE)] as the dependent variable are considered. In order to select the sample, convenience sampling techniques method is used. The study suitably used both secondary data. Operational hypotheses are formulated, results revealed that Portfolio system has a positive association with Performance. Further, Portfolio structure is enhanced by Income from Deposit, Income from pawning, Income from loan in the selected financial institutions where the beneficial impacts are observed on Performance. Therefore, they have to pay more attention for tuning Portfolio structure techniques. This study would hopefully benefit the academicians, researchers, policy-makers and practitioners of Sri Lanka and other similar countries through exploring the impact of Portfolio structure on profitability, and pursuing policy to improve the current status of it.*

**KEYWORDS:** *Portfolio structure, Performance, Financial Organization*

### **INTRODUCTION**

#### **1. Background and Significance**

The banking sector has become extremely competitive powerful industry in the world today. There are so many different banks are functional for their business. Such as commercial banks, saving banks, development banks etc.. The Commercial banks which are large sub sector in the financial market. These banks are providing various services to the people, and to economic



development. In order to provide various service to economic development, bank should concern its financial system, loan system, information system so and so, In which that the portfolio system is very important aspects to the bank to perform their business efficiently, and also to compete with competitors in the world. “The portfolio system defines capital arrangements” Any banking institution care operated their business process for aim of profit. So the profitability of every banking institution is dependent on its total advances portfolio. Power evaluation of this portfolio has made banks vulnerable to rise in non performing advances which is turn has led to liquidity problem effecting profitability.

The survival of a firms depends very much on its ability to generate returns from its investments (Mustapha & Mooi, 2001). Capital expenditures required in investment normally involve large sums of money and the benefits of the expenditures may extend over the future. Utilizing a systematic capital budgeting process would enhance capital expenditures decisions (Mustapha & Mooi, 2001).

Now a day investments of Financial Institutions are considered as a very important aspects of the development of any country. It is and investment only the main profit of such banks depends. In conformity to this principal analysis on port folio management of Financial Institutions is launched. The main motive behind this survey is to analysis the organized and arranged methodology adapted to the achieve development, profit and reduce the risk and manage the risk.

After the ending of the 30 years continuous domestic war Sri Lankan companies are entering into a new era, especially in the North East part of Sri Lanka is needed to develop infrastructural facilities. For the long term financial management development Portfolio analysis will be life blood of the development of the companies. Therefore this study is very needed for the Financial Intuitions

## 2. Statement of the Problem

According to financial theory, the objective of the firm is to maximize the wealth of its shareholders. The optimal investment decision is hence the one that maximizes the present value of shareholders' wealth (Copeland ,Thoman & Weston, 1992). Sophisticated Portfolio procedures can under the assumption of economic rationality all be regarded as means, which a firm uses in order to fulfill its objective, i.e., to maximize shareholders' wealth. This fact indicates that firms can increase or even maximize its shareholder wealth by using sophisticated Portfolio system analysis

RQ<sub>1</sub>. Why there is disproportion of the portfolio structure of bank continuously for the recent fast?

## 3. LITERATURE REVIEW

A review of the risk management literature indicates that both the definition of risk and also our understanding of the term risk management have evolved over time. Spira and Page (2003) chart in some detail the evolution of risk definitions from the pre-seventeenth century onwards. In pre-rationalism times risk was seen as a consequence of natural causes that could not be anticipated or managed, but with more modern, scientific based thinking there emerged a view that risk was both quantifiable and manageable via the judicious use of avoidance and protection strategies. Risk management became institutionalized with the application of science (Beck, 1998) and in the process the public were led to expect risks to be managed. As a

consequence, risk management led to some diffusion of responsibility for the adverse effects of risk whilst the notion of accountability required some demonstration of risk management effort (Spira and Page, 2003) Roland Robinson's (1962) insightful analysis is an excellent example of the traditional banking approach. Robinson sought "to describe methods of achieving the most profitable employment of commercial bank funds consistent with safety". For him, there methods essentially consist of setting and following a hierarchy of priorities in the employment of bank funds. The priorities in descending order are legally required reserves, secondary reserves, customer credit demands and open market investment for income.

Bank Performance and Credit risk management (Takang Felix Achou, Ntui Claudine Tengu, 2008). The axle of this study is to have a clearer picture of how banks manage their credit risk. This leads to conclude that banks with good credit risk management policies have a lower loan default rate and relatively higher interest income. This thesis takes a fast look on Banking and Credit risk management and further probes into bank risk exposure, assessment, management and control. An attempt will be made to unfold the use of some risk management, evaluation and assessment tools, models, and techniques.

Bank Portfolio Model and Monetary Policy in Indonesia (Doddy Zulverdi, Iman Gunadi, and Bambang Pramono, August 2006) This paper analyzes the bank's behavior in selecting its portfolio composition and its impact on the effectiveness of monetary policy transmission process in Indonesia. they employ an analytical model of the banking portfolio behavior based on microeconomic theory to understand how banks' portfolio behavior in maximizing its profit links to the efficacy of monetary policy. This study finds that micro banking condition and prudential regulation affects the effectiveness of monetary policy. This study also finds structural changes in banks and borrowers have altered the smoothness and effectiveness of monetary policy to encourage the economic growth and hindered the process of economic recovery. As perception on risk has large impact in supporting the effectiveness of the monetary policy, effort to reduce risk through the formation as credit bureau, credit guarantee scheme, and rating agencies is critical as it will improve transparency and availability of debtor information.

Banks' Loan Portfolio diversification (Csongor David, Curtis Dionne, University of Gothenburg, 2005) This paper is a qualitative study about how large bank in Sweden manage their loan portfolios. And found that the majority of large banks in to a certain degree intuitively diversify their loan portfolio. On the other hand, they found that due to the practical complexities the banks do not manage using loan portfolio diversification. Due to the size of these large banks it is assumed that loan portfolio diversification will happen naturally. Measuring and handling risk -how different financial institutions face the same problem( Sarah Rörden & Kristofer Wille, Mälardalen University, 2010) The objective of this research paper is to understand how different financial institutions handle and attempt to reduce risk in order to optimize portfolio returns for their clients, as well as highlight contrasts. This analysis has highlighted that each company uses different theories in different ways, because the level of trust in the models explaining risk varies among the institutions. In other words, which models are used and why depends on the philosophy of the firm. Since financial models are built on the idea that investors act rationally, many of the models do not hold in times of crisis when humans act irrationally. Modern Banking and Strategic Portfolio Management (Reza G. Hamzaee, Missouri, Western State University & Walden University Bob Hughs, Missouri Western State University) Hodgman's (1963) view banks are concerned not only with the composition of their asset portfolio but also with the

relationship between deposits and loan over time. Hodgman's work is useful for understanding such aspects of contemporary banking as prime rate conventions and compensating balance requirements. Chambers and Charnes (1961) improved upon this informal traditional analysis by suggesting a linear programming frame work. By introducing interest rate in an objective function and by viewing the hierarchy of traditional decision rules as constraints they produced a model of bank behavior that consistent with both traditional theory and maximization of bank profits. The important of random deposit variations for the determination of bank's optimum portfolio was first suggested by Edgeworth(1988). Porter applied an inventory model to describe bank portfolio behavior under uncertainty. Porter's model suggest that a bank maximizes expected profits will generally hold a diversified portfolio in an uncertain world. He also demonstrate that if bank profits are random variable, that is, determined by the joint probability distribution describing deposits flows and assets yield, then profit maximization, liquidity and capital certainty are insight ful constructs for modelking bank behavior (Bank Management and Portfolio Behaviour-Donald D.Hester, James L. Pierce, New Haven and London, Yale University Press, )

### 3. Objectives of the Study

The study is considered the following objectives.

- To identify the portfolio system of Financial Institutions of Sri Lanka
- To manage the various risk securing the market share of Financial Institutions
- To identify its risk and return preference of Financial Institutions
- To compare its desired relationship among the portfolio structure

It is summarize the objectives of this study is find out the impact of Portfolio system on firm's performance and attempts to provide information on the current portfolio system utilized by Sri Lankan Financial firms

### 4. Data collection

The secondary data were used to the study. The data required for the study means gathered from the annual report of the respective company through the website and journals books, etc

### 5. Sampling Design

The study will use data of listed financial companies in the CSE, Sri Lanka, as the sample. In order to select the sample, stratified random sampling method is used. Companies with missing data are will be excluded from the study. The study also will exclude the financial and securities sector companies, as their financial characteristics and use of leverage will substantially different from other companies. After eliminating outliers, the sample size is 10 companies are selecting for this study

(1)Citizen Developments Bank, (2) Sampath Bank, (3) Central Finance, (4) Nation Trust Bank, (5) Seylan Bank, (6) National Development Bank, (7) DFCC, (8) LB Finance, (9) Hatton National Bank, (10) Commercial Bank of Ceylon

### 6. Hypotheses

A large and a well developed literature were interested to the survey of the gains and costs of the Diversification strategy (Comment and Jarrel (1995), Denis and al (1997), Rajan and al (1998),

Rajan and Zingales (2000), Bhagat and al (1999), Campa and al (2002). Despite a general agreement that seems to be observed concerning the negative impact of the diversification strategy on the performance of the firm (Lang and Stulz (1994), Berger and Ofek (1995) does not allow us to decide on the nature of this relationship and therefore justifies new tests

H1: Portfolio analysis are significantly correlated with firm's performance

## 7. Methodology

Five years data representing the period of 2006- 2010 were used to measure the portfolio and performance of selected finance Companies in Sri Lanka. In a way the following measures were used to measure the portfolio and performance.

### 8.1 Correlation Analysis

Correlation is concern describing the strength of relationship between two variables. In this study the correlation co-efficient analysis is under taken to find out the relationship between Portfolio System and performance. It shows the amount of relationship exist between Portfolio System and performance

**TABLE 01: MULTIPLE CORRELATION MATRIX**

	ID	IL	IP	NP	ROI	ROCE
Income from Deposit (ID)	1					
Income from Loan (IL)	0.160	1				
Income from Pawning (IP)	0.291**	0.321	1			
Net profit (NP)	0.124**	0.184*	0.264	1		
Return on Investment (ROI)	0.413**	0.529**	0.485*	0.315	1	
Return on Capital Employed	0.264	0.654*	0.111**	0.614**	0.241**	1

Table 01 shows the relationship between the variables. Accordingly Income from Deposit is correlated with NP, ROI and ROCE with the r-values of 0.124, 0.413 and 0.264 which are significant at 0.01 levels. Similarly the correlation value between Income from Loan (IL) and NP, ROI and ROCE is 0.184, 0.529, 0.654 which is significant at 0.01 levels. These indicate that Income from Deposit (ID) and Income from Loan (IL) are associated with determinants of firm's performance.

### 8.6 Regression Analysis

Regression analysis is used to test the impact of performance on Portfolio of the listed financial companies traded in Colombo stock exchange

**TABLE V**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.360a	0.129	0.098	0.32306

The above table shows the weak positive correlation between the portfolio and net profit.

**Table VI**

Model	Un standardized Coefficients		Standardized Coefficients	t	sig
	B	Std.Error	Beta		
1(constant)	0.187	0.073		2.556	0.016
portfolio	0.047	0.023	0.360	2.039	0.051

The above table indicates the coefficient of correlation between the portfolio and net profit. Multiple  $r^2$  is 0.1296. only 1.29% of variance of net profit is accurate by the portfolio. But, remaining 98.21% of variance with net profit is attributed to other factors.

### 8.7 Portfolio and ROI

**TABLE VII**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-0.101	0.038	-0.023	0.36514

The above table shows the weak negative correlation between the portfolio and ROI.

**TABLE VIII**

Model	Un standardized Coefficients		Standardized Coefficients	t	sig
	B	Std. Error	Beta		
1(constant)	0.124	0.083		1.498	0.145
portfolio	-0.015	0.026	-0.110	-0.584	0.564

The above table indicates the coefficient of correlation between the portfolio and ROI. Multiple  $r^2$  is 0.010. Only 1.0% of variance of net profit is accurate by the portfolio. But, remaining 99 % of variance with ROI is attributed to other factors

### 8.7 Portfolio and ROCE

**TABLE IX**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-0.196	0.038	-0.025	115.19484

The above table shows the weak native correlation between the Portfolio and ROCE.

**TABLE XI**

Model	Un standardized Coefficients		Standardized Coefficients	t	sig
	B	Std. Error	Beta		
1(constant)	31.283	26.050		1.201	0.240
portfolio	-4.563	8.250	-0.104	-0.553	0.585

The above table indicates the coefficient of correlation between the portfolio and ROCE. Multiple  $r^2$  is 0.038. Only 3.8% of variance of ROCE is accurate by the portfolio. But, remaining 96.2% of variance with ROCE is attributed to other factors

## 9. FINDING

The overall result of efficiency and effectiveness performance of portfolio system has high view in the portfolio structure. According to the system the efficiency and effectiveness performance rate is 60% as high level.

The research of portfolio management of commercial bank, the researcher finds out the following according to the secondary data.

The researcher can observe that there is down in the (ROCE) return on capital employed of Finance Companies in 2010. That is to say that it had been observed that the ROCE which was at 18% in 2005, had grown up to the level 23% in 2006 and in the 2007 it was 26% There after it had increased by 2% in 2008. In other words that ROCE had grown up to the 28% in 2008. Even though, little increased was in 2009 as 29%. Therefore it could be observed that the income derived from the assets of Finance Companies is increasing.

When return on Investment (ROI) of Finance Companies is observed, the researcher could see a slight increase was in the 2005-2006 but in the 2007 it decrease to 12.7% after that in the 2008 it increased rapidly to 17%. But in the 2009 & 2010 small decrease was taking. That is ROI appeared at 15% in 2010 and Analyzing these data it could be observed that there was high fluctuation in the earning capacity of the Finance Companies during the last five years.

More over during the past five years the ROCE/ROI of the Finance Companies never reach the ranges between 70% to 100% for the past five years period. Since 2006 to 2010 over 100% is seen. But if that establishment had reached its ROCE/ROI between ranges of the 70% to 100% it would have efficiency of capitalization. However, during the past five years as the ratio of ROCE/ROI of Finance Companies did not reached a range between 70% and 100%. It could be determined that its capital has not used efficiency and also during the past five years the EPS ratio indicates slight decreases.

Then, when a Finance Companies reaches its capital adequacy ratio, it could invest its capital on risk or risk free investments. At present in year 2009 the capital base is recognized as 10% requirement. It is observed that the Finance Companies has sufficiency in capital base during the past five years. Its goal must be Tier I over 7% and Tier II over 10%. However it seems that the capital base of Finance Companies reaches its target during the past 5 years. This emphasizes that the Finance Companies has acquired its capital requirements.

## Recommendations

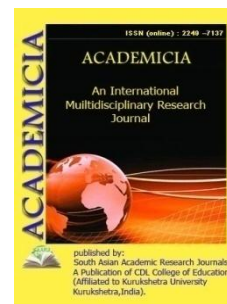
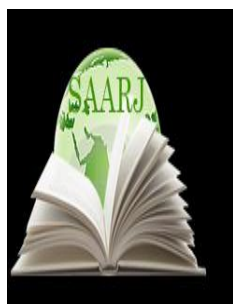
Recommendations are the main objective of any research. If there is a problem, there will be some recommendation to reduce it.

The following recommendations are given by the researcher about the portfolio management of Companies.



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- ◆ The Finance Companies can help by way of granting high amounts of loans to its customers for what it must receive proper security to reducing the amount of risk associated with the loan. It can lend and invest some other means full resources could increase its income.
- ◆ The Finance Companies wish to earn high profit and less risk by way of reducing the amount of high risk loans which are given by the Finance Companies, it helps to reduce the total amount of bad debts. That may be utilized to risk less loans or any other safety investment. By this way it could increase its profit and reduce the level of risk..
- ◆ By introducing different varieties of new fixed deposits to its customers it can increase its own long term fund and also by investing these funds to long term investments it could arrange the portfolio structure in an efficient way that will help to make more profit.
- ◆ It should obtain more liquidity assets from the alternative investment opportunities and also it should correct the deviation between the liquidity and profitability it helps to the management to maintain the portfolio structure effectively.
- ◆ Based on the new technical revolution. The finance companies should introduce a balance score card to measure the efficiency and effectiveness performance of Commercial bank and also it helps the executive committee to carry out every financial activity in an efficient and effective way.



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## THE ETYMOLOGICAL GRADUAL DEVELOPMENT OF EUPHEMISMS

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### ABSTRACT

*In this article the author gives her ideas about the etymological gradual development of Euphemisms. Euphemisms have different meanings and characteristics. They also have different values depending on the purpose of use. There are factors that influence the emergence of euphemisms and their use in speech. Among such factors are the socio-stylistic differentiation of the Uzbek and English language and the emotional-expressive color of words.*

**KEYWORDS:** *Euphemisms, Greek Language, Taboos, Aristocracy, Temporary Euphemisms, Emotionally Neutral, Permanent Euphemisms, Pregnant, "In The Family Way", Stable Euphemisms.*

### INTRODUCTION

Mankind has emerged as a divine miracle that gives it a special charm. Through a language, man communicates, interacts, and seeks his place in society. Language and society are inextricably linked. "Language is only a social weapon that exists among people in a society. The fate of a language, the development of its survival, depends only on the society that speaks that language. As language emerges with society, it dies with society."<sup>1</sup>

Different views on the problem of language and society E.Sepir, B.Warf, G.O.Vinokur, B.A.Larin, N.Ya.Marr, E.D.Polivanov, L.V.Shcherba, L.P.Yakubinsky also occurs in research. As society develops, so does language. As a proof of our opinion, we cite one of the antinomies (contradictions) of the nature of language put forward by V. von Humboldt, the founder of general linguistics: "The second antinomy: language is an ever-evolving dynamic phenomenon. On the one hand, language is an activity, and on the other hand, it is a product of activity."<sup>2</sup>

In carrying out this activity, a person follows moral norms. The use of other words and phrases instead of words that are morally and culturally forbidden or inconvenient to speak is called “euphemisms”.

The emergence of euphemisms is inextricably linked with human thinking and moral values. In its place, euphemism is reflected not only as a linguistic phenomenon, but also as a linguistic tool that transforms a person’s speech process in a positive way. So what is a euphemism and when did the history of its study begin?

### **The Main Findings and Results**

As with other linguistic units in linguistics, there are different scientific views on the concept of “euphemism” in different sources.

The term euphemism is derived from the Greek word eu — well, phemi —I speak, which, according to most authors, is considered to be the substitution of an inappropriate unit for a proper unit. A.A Reformat sky defines “euphemisms as words that are allowed to be used instead of forbidden (taboo) words”.<sup>3</sup> The Linguistic Encyclopedic Dictionary states that "Euphemisms are emotionally neutral words and expressions that are used in place of words and expressions that are rude and inconvenient to the speaker."

Volume 5 of the Annotated Dictionary of the Uzbek Language defines euphemism as follows: “Euphemism- [greek. Euphemism’s<eu - well,phemi- I speak] <sup>4</sup>The use of another softer word or phrase instead of a rude, rude word, phrase, which for some reason is forbidden or inconvenient to use. For example, the word "scorpion" is replaced by "donkey", "horseless" and so on.

A. Khodzhiev's "Explanatory Dictionary of Linguistic Terms", republished in 2002, explains euphemism as follows: the use of a rude, obscene word, phrase, or taboo instead of a rude, obscene word, phrase. <sup>5</sup>For example, use the words heavy-legged instead of pregnant”

Euphemistic expressions have been of interest to scholars since ancient times. The book “Ancient theories of linguistics and style “, edited by O.M Freudenberg, states that the concept of "euphemism" was also mentioned by Democritus, Plato and Aristotle. So, this language unit was known, used and still used in ancient times. “Euphemisms first appeared in English in the twelfth and fifteenth centuries. In the fourteenth century, French culture became a tradition, which was reflected in the language.<sup>5</sup>

If we look at English history, the high point in the evolution of language was the euphemistic words and phrases even in the Anglo-Saxon period. used in the expression of sexuality, and many of them survived until the 14th century. While studying the history of the English language, R. Birch field, on the example of euphemistic units of Chooser’s poetry, admits that euphemism is a very convenient methodological tool of poetry. R. Birch field notes that Chooser was the first to give an euphemistic form of intimacy in his work. By the 16th century, however, Shakespeare had broken this line, using euphemisms only as a means of enhancing stylistic color, expressing his images with emotional units. For example, the euphemisms used by the protagonists in the dramas "Henry 4" and "King Lear" in the swearing-in scene stemmed from their social lifestyle. Since the 17th century, euphemisms have flourished among the English middle class. At this time, the attempt to elevate the speech culture in the society was intensifying, and the nobles, God, man’s intimal places, and anything connected with it, were

trying not to use the name of events. By the 19th century, the aristocracy of the Victorian era had led to the further development of the euphemistic tradition in England and America.<sup>6</sup>

In the later stages of the development of society, rude, the use of softer, smoother words instead of awkward ones is another euphemism. For example, words or phrases are used instead of the word "died", "died", "passed away", "passed away", "died", "closed his eyes". Euphemisms play an important role in literature as a stylistic tool. Some social groups, such as thieves, thugs, and gamblers, use words in different ways to hide their bad intentions from others. Such words are called slangs. For example, they use the words "eat" instead of "steal" and "bring a turban" instead of "kill".

Taboo emerged as the oldest unwritten law of mankind through prohibitions. The term was first used by the English captain J. Cook in 1777. Polynesian literally means "tapu", ta: (to point, mark) and pu: (distracting, distracting). Taboo refers to an environment that occurs at different stages of a society's development. Depending on the circumstances, such prohibitions may also be based on language. The origins of taboos, as opposed to religious or moral taboos, have long been hidden in the pages of history.<sup>7</sup>

By the twentieth century, euphemisms had emerged in a wide range of social life. Such changes in the speech process can be observed not only in the language of one nation, but in every language of the world. There are several semantic groups of euphemisms in both languages taken as the subject of our article:

- Profession euphemisms
- Euphemisms about the disease
- Euphemisms for death
- Euphemisms used for crime
- Euphemisms used for politics and so on

According to English history, the historical evolution of euphemism is divided into the following stages:

1. Euphemisms of the middle Ages
2. Victorian euphemisms
3. Euphemisms of the twentieth century
4. Modern euphemisms

It can be seen that euphemisms can be divided into temporary and permanent euphemisms, depending on the state of application. but some have emerged in the distant past and have been reworked by humans and are still used in conversation. We call such euphemisms stable euphemisms. According to Roson, euphemisms are a powerful linguistic tool and are "so deeply ingrained in our language that some people, even those who are proud to speak clearly, use them throughout the day"<sup>8</sup>

Language is a dynamic phenomenon that changes regularly: when a new one emerges, the old one goes out of consumption. Euphemism is no exception. Given that the phenomenon of

language dynamics is the same for all languages, below we consider the forms of the euphemism "Pregnant" in English and Uzbek in different periods of time:

### In the Uzbek language:

**1. Ота салобидан она ботинига боғланмоқ.** Андин кейин Тегина бегим амир Тўрағай Баҳодирга аҳд қилдилар. Ўшал нутфаи пок соати зуҳалда ота салобидан она ботинига боғланди. ( “ Темурнома”, 89-бет)

(From the father's salutation to the mother's womb. And then they made a pact with TeginabegimamirTuragayBahodir. That pure sperm was attached to the mother's womb from the father's salutation in the morning.)

**2. Оғирбўй.** Пайғамбаримизнинг оналари Омина оҳирбўй хотинлардек курсок оғрини сезмади.....( Соғуний)

(Heavy. Omina, the mother of the Prophet, did not feel the pain of the abdomen like a fat woman ..... (Soguniy))

**3. Натижа ҳосил бўлмоқ.** ...ва бундан натажа ҳам ҳосил бўлган( Боқирғоний, “ Боҳоуддин Бологардон”, 29-бет)

(To form a result. ... and the result was the same (Bagirgani, BohouddinBologardon, p. 29).

**4. Вужуд.** Ўн кундан сўнг 25 ёшда тул қолган келинчак кўкси остида қимиллаган вужудни ғис этди. ( “ Саодат”, 1989, № 10 31-бет)

(Existence. Ten days later, the 25-year-old widow felt a moving body under her breasts. (Saodat, 1989, № 10 p. 31)

**5. Дужон.** Келинимга уй-рўзғор ишларида қарашаман. Чунки ҳозир у дужон-да, айланай ( “ Саодат”, 1990, № 7 24-бет)

(Dujon. I look after my daughter-in-law in the household. Because now he is a dujon, let's go around ("Saodat", 1990, № 7 p. 24)

**6. Бўйида бўлмоқ.** Ҳозир яна унинг бўйидабўлган, уч ойдан кейин фарзанд туғилиши керак ( П.Қод., “ Авлодлар доवони”, 177-бет)

(To be in the family way. She is now in the family way again, and a child is to be born in three months (P. Qad., “Passage of Generations,” p. 177)

**7. Ҳомиладор.** Кўзлари ола-кула, симобдек ўйнаган ҳомиладаор бир аёл кўча ўртасига чиқиб ўтириб олди... ( М., “ Умид”, 333-бет)9

(Pregnancy. A pregnant woman with smiling eyes and playing like mercury sat down in the middle of the street ... (M., “Umid”, p. 333)

### In the English language:

There are many ways of saying ‘She is pregnant’. For example, it has many different euphemistic expressions in different eras.

- (1) She has canceled all her social engagements. (1856)
- (2) She is in an interesting condition. (1880)
- (3) She is in a delicate condition. (1895)
- (4) She is knitting little booties. (1910)
- (5) She is in a family way. (1920)
- (6) She is expecting. (1935)
- (7) She is pregnant. (1956)

The sentences in which these euphemistic phrases in both languages are involved can be a clear proof that language is a dynamic phenomenon.

Also, based on the above examples, it can be said that sometimes euphemisms lose their euphemistic features and become a simple colloquial word. The last words in both languages - "pregnant" and "pregnant" - are now used in public as ordinary colloquialisms. Be that as it may, after 1960s, euphemisms of pregnant grow gradually in light of the fact that in current occasions, individuals are not all that verifiable. They generally notice things legitimately. Furthermore, presently, the wonder of pregnancy is a sprightly thing and individuals won't be timid while referencing it.

## CONCLUSION

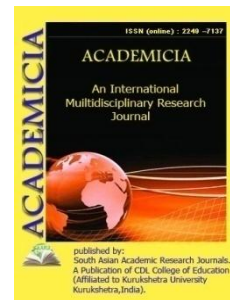
In conclusion, euphemism is an important area of linguistics as a unit of speech that tends to change the speech situation that softens human relationships in society. The need for euphemism in society is social and emotional, as it allows topics of prohibition to be discussed while maintaining a polite look. Some euphemistic words can be used for a long time due to their meaning and usage of aim. These euphemisms carry out tender aura in the conversation. In the Uzbek and English languages we can see how euphemisms bring politeness of the words' meaning.

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## IMPROVEMENT OF CLUSTER TRAINING SYSTEM

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### ABSTRACT

*This article describes in detail the methods of improving the system of training future teachers in the cluster, educational institutions and their leadership style, culture, qualities and prestige, pedagogical and psychological aspects of management.*

**KEYWORDS:** *Cluster, Pedagogical, Psychological, Bachelor, Master, Master Class, Integrative, Management, Engineering, Technology, Didactic, Investment, Method, Flagship, Modernization, Certification, Accelerator, Specialist.*

### INTRODUCTION

President of the Republic of Uzbekistan for the year 2019 is the most important complaint at the Parliament about the priorities of educational institutions and universities internal management system and its culture, management style, quality and prestige, reflected in the management of educational and psychological aspects.

Today, educational institutions, the recommendations of the attributes of management functions Integration features; adapting management to internal and external changes; mastering and applying management principles; effective use of management methods; indicates the establishment of normative documents based on the development and improvement of management activities.

Modernization of the education system in our country involves raising the potential of teachers to the level of modern requirements, changing and updating educational programs, taking into account the modern achievements of education, science, engineering and technology in the world economy and culture. Young people's skills and capabilities in accordance with the introduction

of a differentiated approach to teaching and learning of modern educational technologies, the creation of the modern teaching facilities, teaching and educational process, didactic aspects of distance learning management system to ensure the improvement of substance.

### **Main Part**

The management of the higher education system should be based on the following (two) doctrines; first, the doctrine of the aims and objectives of national education; secondly, to pay attention to the issues of relying on the doctrine of the idea of national independence in the management of the higher education system of Uzbekistan, we will have solved some problems of this training system.

To achieve this goal, the following tasks are envisaged; ensuring consistent development as a production complex; modernization of the education and training system in the society, adaptation to the processes of building a developed democratic state governed by the rule of law; provision of institutions of the training system with highly qualified specialists, raising the prestige and social status of pedagogical activity; Reconstruction of the system and content of training based on the prospects of social and economic development of the country, the needs of society, modern achievements in science, culture, engineering and technology; development of effective forms and methods of spiritual and moral education and enlightenment of students; introduction of an objective system of quality assessment of attestation and accreditation of educational institutions; Ensuring the effective integration of education, science, production, development of state requirements, mechanisms for the quantity and quality of personnel.

The resolution on measures for further development of the higher education system, based on the priorities of radical improvement of the education system, creates the necessary conditions for a radical restructuring of the content of training, training of specialists with higher education in accordance with international standards. This is for all higher education institutions in close cooperation with the world's leading scientific and educational institutions, installation, training programs and educational materials, extensive remodeling, training and educational activities, conducting master classes, graduate students, young teachers and scientific employees volunteer, it is necessary to organize retraining and advanced training of professors and teachers.

Wide introduction of new pedagogical technologies and teaching methods in the educational process, curricula and programs of higher education, creation of a new generation of textbooks and their widespread introduction into the educational process of higher education institutions, provision of modern teaching, teaching and scientific literature, professional development of teachers to continuously improve the quality and level of skills, to increase the spiritual and moral content of higher education, to carry out enlightenment and educational work to strengthen the immunity of students to the ideas of independence, their ideology and critical thinking.

The educational institution can pay for the work of teachers and specialists, organize activities on a contract basis, which can be the basis for the effective conduct of educational and upbringing activities.

In accordance with the requirements of the concept of development of the higher education system, the gradual transition of the educational process to the credit-module system, the flagship of the institution, the gradual transition from education to the formation of practical skills in the curriculum, raising the content of education to a qualitatively new level.

Establishment of a system of training highly qualified personnel who can find a place in the market, attracting foreign investment, expanding the range of paid services and other extra-budgetary sources, the establishment of techno-parks, foresight, technology transfer, startups, accelerators in higher education institutions it is necessary to bring the industry and regions to the level of forecasting scientific and practical institutions.

We know that in order to train highly qualified personnel, it is necessary to provide educational institutions with highly qualified specialists. To do this, it is necessary to acquire the following knowledge, skills and abilities in the process of teaching students in higher education institutions:

- monitoring the current state of the educational process, analyzing, planning and monitoring problems;
- provide educational and methodological and regulatory documents and determine the need for them;
- observation of the contingent of teachers, students and other staff;
- Automation of educational and methodological and scientific and technical literature;
- Observation and analysis of research results.

Another important task of these systems is to create an appropriate database for each management area. The following conditions must be created for the proper conduct of educational work:

- education system and modern requirements for its management;
- education of the younger generation in the spirit of the ideology of national independence, the creation of textbooks, teaching aids based on the traditions of national education;
- Modernization of the education system, raising the capacity of teachers working in it to the level of modern requirements;
- provides for the modification and updating of educational programs, taking into account the modern achievements of education, science, engineering and technology in the world economy and culture;
- introduction of a differentiated approach to education in accordance with the abilities and capabilities of young people and the creation of advanced pedagogical technologies of education, modern teaching materials;
- Didactic remote provision of the educational process can be the basis for improving the system of education management.

In accordance with the law of the Republic of Uzbekistan, the reform of the education system, the formation of a competitive environment in the field of state and non-state educational institutions and training provides for the solution of the following tasks to achieve the goal of a single educational system:

- ensuring consistent development as a production complex;

- Adaptation of the education and training system to the ongoing processes of modernization of society, the development of a developed democratic state governed by the rule of law;
- Providing training institutions with highly qualified specialists, raising the prestige and social status of pedagogical activity;
- Reconstruction of the system and content of training based on the prospects of social and economic development of the country, the needs of society, modern achievements in science, culture, engineering and technology;
- Development of effective forms and methods of spiritual and moral education and enlightenment of students;
- introduction of an objective system of quality assessment of certification and accreditation of educational institutions; -introduction of an objective system of quality assessment of education and training, certification and accreditation of educational institutions;
- creation of a normative, material, technical and information base that ensures the priority of the required level and quality of education in the new socio-economic conditions;
- Ensuring the effective integration of education, science, production, development of state requirements and mechanisms for the quantity and quality of personnel.
- Development and implementation of real mechanisms of extra-budgetary funds for the system of continuing education and training;
- Development of mutually beneficial international cooperation in the field of training.

To organize the training of teachers and other pedagogical staff at the level of developed countries:

1. Dissemination of pedagogical knowledge among parents, employees of public organizations engaged in the upbringing of children.
2. To provide knowledge on the humanization of the educational process, psychology, pedagogy in the training of professionals who interact with people in practical activities.
3. To equip pedagogical staff and specialists working in all sectors of the economy with pedagogical knowledge and skills in the process of professional development.

Fulfillment of the above tasks requires further improvement of the teacher training system. To do this:

- Strengthening the educational and material base of the state through the efforts of the public, parents, increasing the funds allocated for pedagogical schools and pedagogical universities;
- Enhancing the status of teachers in society by ensuring that their salaries are higher than the average salary in the country, improving their working and living conditions;
- Improving the mechanism of admission to pedagogical schools, admission of talented, interested, knowledgeable people to pedagogical activities;
- Transition to a system of targeted training on a contractual basis, along with the training of teachers;

- It is necessary to organize training for future teachers, pedagogical staff, junior specialists, bachelor's and master's degrees.

In these cases, the manager's management methods are important, they are a set of ways and means of influence used in the management process to organize and coordinate the activities of employees. The basis of management methods is a set of methods of influence, ie the mechanism of influence. However, it should be noted that the method is a completely objective, independent concept that depends on the leader.

Management methods are mainly divided into **4 groups**:

1. Economic methods
2. Organizational-administrative methods
3. Socio-psychological methods
4. Methods of data collection.

The internal work style plan implemented by managers may include the following issues:

1. Implementation of the plan for all indicators of educational institutions.
2. The state of educational work.
3. Educational work carried out outside the institution and study.
4. Work with public and paternal organizations in the institution.
5. The issue of working with teachers in institutions.
6. Status of office records.
7. The work of student youth organizations.
8. Financial and economic affairs of the institution.
9. Institutional, family and community partnerships.
10. The work of group leaders, etc. issues.

At present, the solution of an important historical task in the system of educational institutions - the supply of highly qualified and knowledgeable specialists in the public education system of the country - is being addressed. requires:

1. Excellent knowledge of their subject.
2. To love one's profession wholeheartedly.
3. To arouse students' love for science.
4. Organization of practical work on the basis of modern requirements and in-depth knowledge.

It is clear from it that the goal is to further improve the quality of professionals, to educate them as creative thinkers and enterprising professionals. This, in turn, requires a radical improvement in the education of students and their education at the level of modern requirements.

Students of educational institutions in their chosen fields of science to put up with the secrets of patience and perseverance acquire.



This means that the full mastery of subjects in high school, vocational schools and universities remains a requirement of the times.

To do this, it is necessary to organize all the work on a scientific basis, setting the style of management in the institutions.

As mentioned above, if you see no one who is the same as another person, a similar leadership also has different characteristics. In particular, leaders differ from each other in terms of methodology. Every teacher is an educator. He nurtures the pedagogical team in every way.

The work of educational institutions plays a key role in the management of human values and ethics. Heads of educational institutions must fully comply with these two criteria. In their leadership work, they rely on criteria such as law and ethics, humanism, gentleness, mutual assistance.

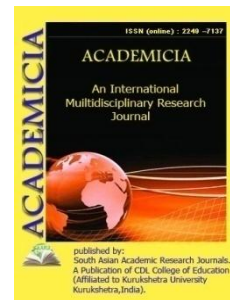
## CONCLUSIONS

The issue of providing highly qualified and knowledgeable specialists to the public education system of the country, which is an important historical task in the modern system of educational institutions, is being addressed.

1. Higher personality - to meet this condition, each specialist must have a comprehensive knowledge; that is, they must have ideological-political and secular, professional, methodological and pedagogical-psychological knowledge.
2. Must have high skills - that is, have a good mastery of professional competence.
3. To love their profession and instill in students a love for science.
4. Carrying out practical work on the basis of the requirements of the time and gaining in-depth methodological and technological knowledge.

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## INTERPRETATION OF PHILOSOPHICAL TERMS AND CONCEPTS AS AN ESSENTIAL SUBJECT FOR LINGUISTIC RESEARCHES OF XIX-XX CENTURIES, HELD IN RUSSIA AND EUROPE

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### ABSTRACT

*The given article aims to study and analyze lingua-philosophical essence of terms, particularly of religious and scientific fields throughout the last two centuries. The relevance and novelty of the study is determined by the need to identify the semantic features of the philosophical term of the period under study, which will create a scientific basis for the linguistic description of the philosophical terminological system of the Russian philosophical text. This article for the first time formulates a theoretically substantiated definition of the author's philosophical term and proposes a classification of structural-semantic types of author's terms of Russian and European philosophies of the late 19th and early 20th centuries.*

**KEYWORDS:** *Term, Text, Concept, Philosophical Terminology, Philosophical Term Formation, Author's Philosophical Term, Author's Term System, Religious Philosophy, Correlation Of Terms, Semantic Method.*

## INTRODUCTION

European and Russian religious philosophies of the late XIX - early XX centuries occupies an important place in the history of the domestic humanitarian, political and philological culture. The terminology of texts of the given religious philosophy is an urgent scientific problem both in theoretical and in historical-linguistic aspects. Of particular interest is the study of the author's terminology created by each thinker within the framework of his own philosophical system. The purpose of this article is to identify and characterize the content of the concept of "author's philosophical term". It develops and concretizes the provisions put forward earlier in Russian linguistics on the author's term system and author's term in relation to the Russian philosophical text of the period under study. The main features of the philosophical term are briefly described: definability by the whole text, possible presence of several generic identifiers, high probability of distinguishing the subjective component of the meaning, uniqueness within a specific term system. The correlation of the concepts "subjective component of meaning" and "author's neologism" is analyzed. The classification of term-creating techniques and related structural-semantic types of author's terms of Russian philosophy of the studied period allowed the author of this work to conclude that the concept of "author's term" combines lexemes that are heterogeneous in the way of formation, the author's beginning of which can appear at the level of content and at level of content and form. For the first time, a theoretically substantiated definition of the author's philosophical term of the late XIX - early XX centuries is formulated: it is a verbalizing philosophical concept and formed in a morphological, syntactic or semantic way special lexeme, the meaning of which can be determined only as part of the philosophical term system of a particular author. The study contributes to the theory of lexicology, expanding the categorical apparatus of the lexicology of the Russian language in the section of theoretical and applied terminology. The results of the analysis can be used in studies on the history of the Russian literary language, on lexicology, lexical semantics, terminology, stylistics, as well as in cultural studies, philosophy and other areas of humanitarian knowledge.

**The purpose of this article** is to determine the content of the concept of "author's philosophical term" in Russian philosophy of the late XIX - early XX century. The author makes an attempt to develop the thesis of B.N. Golovin about personal term systems and concretized put forward N.M. Azarova and V.D. Tabanakova provisions on the author's term as applied to the Russian philosophical terminology of the designated period. In addition, the author refines and develops his own conclusions about the object of study formulated in earlier publications [1-3].

**The relevance and novelty of the study** is determined by the need to identify the semantic features of the philosophical term of the period under study, which will create a scientific basis for the linguistic description of the philosophical terminological system of the Russian philosophical text. This article for the first time formulates a theoretically substantiated definition of the author's philosophical term and proposes a classification of structural-semantic types of author's terms of Russian philosophy of the late 19th and early 20th centuries.

Despite the significant achievements of modern terminology, in a linguistic study of philosophical terms in general and the philosophical terms of the period described, in particular, there are many unresolved and not even put forward for discussion issues: the specificity of the

author's philosophical term is not revealed, the philosophical term formation of the end is not characterized XIX - beginning of the XX century, the methods of lexicographic description of philosophical terminological systems of Russian and European philosophers were not developed.

Until recently, Russian terminology only sporadically addressed questions about the functions of a philosophical term and the features of its semantics. Philosophical terms in general of the period under study are characterized by the presence of a number of specific features. The complexity of the semantic structure of meaning in some cases determines the presence of several generic identifiers: this phenomenon especially characteristic of terms included in the core of the terminology system of a particular author. The given theory is also discussed by one of this article's authors – Sadullaev D. in one of his earlier articles [16, p. 627-631].

The specificity of the terminology of the Russian religious text also lies in its definability in the whole text: the term, as a rule, is not given a strict and concise author's definition; The “growth of terminology” of a philosophical term is similar to the process of incrementing meaning in a literary text according to Shodiev Sh. [15, p. 367-372].

### **Main part**

A characteristic phenomenon of the Russian and European philosophical terminological systems as an integral phenomenon is the semantic ambiguity of drill elements, due to different interpretations of philosophical concepts by different thinkers and different philosophical schools. The semantic content of the philosophical term is determined and specified in the process of its actual functioning. The question of the semantic polysemy of a philosophical term is removed within the framework of a specific philosophical term system: a term can be ambiguous in composition. The “large” terminological system of philosophy, however, the term belongs to a certain philosophical course and philosophical terminological system of one particular thinker determines its relative uniqueness, which is uniqueness within the term system [14, p. 1545-1548]. The correlation of terms with the worldview of a particular thinker allows one to speak about author's philosophical terminological systems, the study and lexicographic description of which constitute an important task of modern terminology.

Author terminological systems formed on the basis of theories created by their authors include, for example, terminological systems: N.F. Fedorova, S.N. Bulgakova, N.A. Berdyaeva, P.A. Florensky. For the first time, B.N. wrote about the importance of studying such terminological systems back in 1981. Golovin, indicating the existence of “Personal term systems” M.V. Lomonosov and L.T. Elmslev (see: [4, p. 6]). The unit of the author terminology system is the author term.

Before proceeding to the characterization of the author's philosophical term, we turn to the history of the issue. V.D. Tabanakova preceded her attempt to characterize the author's term with the following statement: “The expression “author's term” has no entrenched special meaning <...> in any linguistic dictionary we will not find a definition of the special concept of “author's term”” [5, p. 141].

Famous researcher of the Russian philosophical text N.M. Azarova called the author's terms “originally appearing in the texts of one philosopher and currently updating the connection with the text of this philosopher” [6, p. 62]. However, the fact that the term appears in the texts of a

certain author is not always well known and in some cases may require additional research of a textual and historical-linguistic nature.

V.D. Tabanakova introduced a new interpretation of the concept: the author's term is a discursive function of the term. "The term "author's term" extends to an author's concept, author's prediction, author's interpretation of a special concept in the text and discourse<...>. The author will become a central special concept that carries the main idea, concept, semantic load in the text. This is always a new perspective, a new aspect ... He builds his logical-conceptual system "[5, p. 6].

Obviously, the positions of these authors do not contradict each other, but are complementary: without even having the facts about the connection of the term with a certain set of texts of one author, we can intuitively assign the term copyright status in cases where it means one of central or simply significant concepts of philosophical worldview.

So, historians of philosophy recognize the term "Byzantism" by the author's term K.N. Leont'ev (this fact was recorded, for example, in the encyclopedia "Russian Philosophy" 1), but it cannot be called "originally appeared in the texts of one philosopher", because he was also well-known to K.N. Leontiev: the data of the National Corps of the Russian Language indicate that earlier the lexeme "Byzantism" is found in A.I. Herzen (1859).

However, it was K.N. Leont'ev filled the term with a new meaning, which led to the semantic variation of the word and the appearance of new paradigmatic, syntagmatic and associative connections. As a result of this, the term "Byzantism" as a conceptual sign, as a designation of a special type of relationship between church and state, was recognized by the author's term K.N. Leontiev.

V.D. Tabanakova connects the author's term with the author's intention, bearing in mind the semantic plan of the latter, and limits the concept of "author's term" to the result of contextual semantic analysis of language forms in a special text [5, p. 144].

We can assume that the author's philosophical term is characterized by the presence of the subjective component of the lexical meaning, which in the work of Z. Ya. Iker is designated and defined as "a subjective moment in the use and interpretation of generally accepted terms in various philosophical directions and schools" [7, p. 14]. A typical example confirming the phenomenon of the subjective (author's) principle of a philosophical term is the topic of the article by N.O. Lossky [8]. In the annotated index L. M. Granovsky and M.A. Aliev, the content of the article is revealed as follows: "... the term specificity in its interpretation by A.S. Khomyakov, N.V. Kireevsky, Vl. Soloviev, S.N. Bulgakov, L.P. Karsavin, S.L. Frank, D. Chizhevsky and others. " [9, p. twenty]. This example contains confirmation of the thesis about the relative unambiguity of the philosophical term, which is reflected in the term-fixing (annotated index) and terminology (article by N. N. Lossky) texts. Similar to many measures can be cited. Note that we are not necessarily talking about generally accepted terms: the author's principle can also appear in rare, little-known terms. In addition, it remains unclear how the concepts of "subjective component of meaning" and "author's neologism" relate: can the whole meaning of the newly created philosophical term be considered subjective? To clarify the definition of the term "author's term" we list the methods of formation of these units.



Analysis of existing concepts (both articulated quite clearly in different versions of the ontological philosophy of history, and often implicit, implied in the sciences about culture and serving as the basis of scientific works on history) allows us to distinguish such general and gradually established in modern culture signs, criteria of historicity, such as humanity (correlation with a person, a person is a central element, an atom of history; the world of history is the world of man ), sociality (history does not study a lonely person, but the diverse phenomena of people's life together, their connections and relationships), spirituality (certainty, constitutionality by consciousness, reason, ideas; immateriality of a number of components of this real notion), variability (processuality, formation, development), temporality, concreteness, individuality and belonging to the past [12]. Analysis of the vocabulary extracted from the annotated index L.M. Granovsky and M.A. Alieva, from the encyclopedia "Russian Philosophy" and philosophical primary sources, allows one to classify the philosophical terms of the period under study according to the methods of term formation: terms formed by morphological, syntactic and semantic methods. Taking into account the specifics of philosophical terminological vocabulary, it is advisable to separate author terms formed by varieties of the semantic method into a separate object of research: terminization and trans-terminology. In addition, the mismatch of the conceptual content of philosophical terms in different terminological systems gives rise to the need for a special analysis of the rethinking of philosophical concepts by different thinkers. Consequently, the concept "Author's philosophical term" combines the terms of different nature and different ways of education [13,128-136].

1. Terms formed by morphological (being fearfulness, God-givenness, Super-Being, fallen, meaninglessness, pneumatic sphere, transrationality, omnipotence, primary symbol) and syntactic (blooming complexity, specific metaphysics, end of history, production freedom) methods. Hyphenic complexes of various degrees of terminologicality also belong to this type: being-in-itself, being-in-God, being-cosmos, without-view, anarchy, Life-through-Death, multiformity, self-being, all is unity.
2. Terms formed in a semantic way (terminization of a common linguistic token): incomprehensible, doubt, can, groundlessness, peace, creativity.
3. Rethinking terms of other sciences and theology terms (transterminologization, a kind of semantic terminology): nation, socialism, materialism, pauperism, cruising, liturgy, Easter and Easter, trinity, Trinity, sin, Baptism, fifty .
4. Philosophical lexemes and special philosophical terms of a multidimensional nature, originally interpreted by a particular philosopher (terms in a discursive function, a kind of semantic term-formation): freedom, being, truth, death, ontology, good, super-good, evil, person.

## RESULTS AND DISCUSSIONS

The classification of term-creating techniques allows us to conclude that the concept of "author's term" combines lexemes of a heterogeneous origin, the author's beginning of which can be manifested at the level of content and at the level of content and form.

Firstly, the author's terms of Russian philosophy of the late XIX - early XX centuries refer to the author's neoplasms proper, where the author's beginning is most clearly expressed: both the form and the content are copyright (content, self, etosity, organ creation) , full-body, prey freedom, composition of mental life, religious "generally"). These are terms with a "personal



beginning”; terms in the formation of which the philosophical worldview of their creators finds active expression. Unlike a literary text, where occasional words and occasional syntagmatics are a way of “updating stable semantic connections” [10, p. 175], in the philosophical text, the word creation serves primarily to objectivize new knowledge.

Secondly, terms formed on the basis of terminology are of an author’s character and trans-terminologization, i.e., using all varieties of the semantic method. In the terminization of a common word, a regrouping and clarification of its seminal composition takes place: the new, special, meaning of the lexeme is special in relation to the vocabulary. Wed at N.F. Fedorov: a museum as a memory of deceased fathers; assembly as a remembrance of the living; fathers like all the dead who must be resurrected; adulthood as gaining the highest meaning of existence, etc.

These dictionaries allow us to speak about the terminologization of words in a common language with a complex semantic structure, for example: colorlessness, simplicity, complexity (flowering complexity), extinction, simplification (mixing simplification) (KN Leontyev); infinite, infinity, discontinuity, word (P.A. Florensky); land, mother, landlord, household (S.N. Bulgakov); safety, groundlessness, truth, everyday life, soil (LI Shestov); unbelief, soul, concreteness, incomprehensible, reality (S.L. Frank).

In trans-terminologization, the term implements a new discursive function, which V.D. Tabanakova: “... the author’s term differs in terms of content by its conceptual load, ambiguity and predictivity” [5, p. 195].

As a result of the transfer of terms from other areas of knowledge into a philosophical terminological system, interbranch homonyms are formed on the basis of rethinking, compare: arrhythmology (mat.) - arrhythmology by P. A. Florensky (phil.), Regulation (biol.) - regulation by N.F. Fedorova (Philos.). Such a phenomenon in its pure form is relatively rare in philosophical terminology: as a rule, the process of transterminologization is complemented by syntactic terminology.

The most characteristic for the philosophy of the late XIX - early XX century is the rethinking of philosophical terms, which in the text of a particular philosopher appear in a special discursive function, denoting a new "quantum" of philosophical knowledge. In this case, philosophers give the term their subjective definition and use this linguistic sign in a purely individual meaning. In relation to such words, the distinguished V.D. The ambiguous sign of the ambiguity of the author's term seems indisputable, unconditional, since the ambiguity inherent in philosophical terms, due to the dialectical nature of philosophical knowledge and the historical development of the content of philosophical concepts, is removed within the framework of a specific philosophical terminological system. The fact that the author’s term belongs to the author’s term system of one philosopher determines its relative uniqueness, or uniqueness within the terminological system: the truth of L. I. Shestov, the truth of P. A. Florensky, truth N.A. Berdyaev, etc. The following example is indicative: in the meaning of the philosophical term “nothing”, one can distinguish the invariant part (“absence, nonexistence of a concrete existing or even being” 2). In the New Philosophical Dictionary, the polysemy (polyinterpretability) of the term is presented as the main characteristic of its semantic content: “In the history of philosophy, starting from antiquity, two alternative approaches to Nothing can be traced” [5, p. 195]. In the term system of Russian religious philosophy, Nothing is an ontological principle considered in its relation to God (such an interpretation of the term is characteristic of the

philosophical concepts of V.S. Soloviev, N.A. Berdyaev, S.N. Bulgakov, S.L. Frank, L.P. Karsavina): “Usually, the concept of “Divine Nothing” appears here, the initial incomprehensible identity of nothing and God, which then unfolds in ontological discourse” [5, p. 195].

A different interpretation of this term by different thinkers led to the appearance in its meaning of a subjective component, which is implemented in specific terminology systems. So, in the worldviews of V.S. Solovieva and S.L. Frank Nothing was supposed to be driven by various principles: En-Sof (Kabbalah) and incomprehensible.

The most vividly subjective component of meaning is represented in the terminology of S.N. Bulgakova, for whom nothing is a principle independent of God, which is the key to solving the apories of evil and freedom of creation. Moreover, the problem of correlating the author’s philosophical meaning with the implied terms is additionally discussed in S.N. Ostonova’s recent scientific article: “Spirituality and humanism of humanity in the era of Revival” [11].

## CONCLUSIONS

The data obtained allow us to highlight the main characteristics of the author's philosophical term of the studied period. This is a lexical unit of the language for special purposes:

- associated with the texts of a certain author (the idea of updating the connection “term - text” belongs to NM Azarova, see: [6]);
- implements a philosophical concept (the author’s idea, the “quantum” of the philosophical worldview of a particular author) and therefore includes the subjective component of meaning;
- formed in a morphological, syntactic, or semantic way;
- included in the author's philosophical term system.

Thus, the author’s philosophical term of the period under study can be defined as a verbalizing philosophical concept and a special lexeme formed in a morphological, syntactic or semantic way, the meaning of which is determined only as part of the philosophical term system of a particular author, or an author term system. The concept “Author’s philosophical term” unites quite diverse phenomena: author’s new formations that have overcome “occasionality” and are included in the author’s philosophical terminology; terminological common tokens; rethought philosophical terms with a pronounced subjective component of meaning, realized only within the framework of a specific term system.

Concluding our reflections on copyright philosophical terms, we note that we have only outlined the problem of their description and require further scientific development and concretization. The obtained data form the scientific and methodological basis for further analysis of the specifics of the author’s philosophical terminological systems, as well as the development of the principles of the lexicographic description of the author’s philosophical terminology.

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## AREALS OF DISTRIBUTION OF SPECIES OF SUCKING PESTS ON MILLONS, FEATURES OF BIOLOGICAL DEVELOPMENT AND HARMFUL IN THE CONDITIONS OF THE REPUBLIC OF KARAKALPAKSTAN

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### ABSTRACT

*We have found that among the sucking pests on melons and gourds, the most common are: tobacco thrips (Thrips tabaci Lind.), Melon aphids (Aphis gossypii Glov.), Apricot-reed aphids (Hyalopterus pruni geoffr.), Acacia aphids (Aphis craccivora Koch.), field bugs (Lygus pratensis L.), spider mites (Tetranychus urticae Koch.) and whitefly (cotton - Bemisia tabaci Genn. and greenhouse - Thrips vaporariorum Westw.). Entomophages: ladybug (Coccinella septempunctata L.), lacewing (Chrysopa cornea Steph.), Sirphid flies (Scaeva pyrastris L.), stethorus beetle (Stethorus punctillum Ws.), Gall midfly (Aphimidza Randoletes aphid.) and others.*

**KEYWORDS:** *Melons, Watermelons, Melon Aphids, Apricot-Reed Aphids, Acacia Aphids, Tobacco Thrips, Spider Mites, Tobacco Thrips, Melon Aphids, Spider Mites, Whitefly, Herbivorous Bugs, Development, Productivity, Nutrition, Damage, Mass Development;*

## INTRODUCTION

The cultivation of melons and gourds in Uzbekistan and the use of their products in the human diet is one of the areas of agriculture, and in order for a person to be healthy, it is necessary to consume on average about 20 kg of melons per year. For the full provision of the Republic of Karakalpakstan, as well as the export of products abroad, it is necessary to increase the gross yield of melons and gourds several times by increasing their productivity.

**Objective.** Was the definition of the species composition of sucking pests causing damage to melons and gourds in the conditions of Karakalpakstan.

**Materials methods;** When determining the species of arthropod insects widespread on melons and gourds, the methodological instructions of B.P. Adashkevich, Sh.T. Khodzhaev, V.B. Golub and others were used. Against sucking pests were carried out according to the recommendations of H. Mirzalieva, H. K. Kimsanbaev, .T.Khojaev and E.Sh. Torenliyazov;

The main research results show that melon crops in the fields of farms are located on areas from 1-2 hectares to 18-23 hectares, and in these areas melon varieties make up 68.1%, watermelon 19.5% and pumpkin 12.4%.

At the beginning of the research, there was a predominance of melon crops, but over the last three years of observations, it was found that the area under watermelon varieties has increased. On the household plots of the regions where the research was carried out, the area under melon crops was 0.1-0.4 hectares, and it was noted that melon was cultivated on 70.5% of the areas, watermelons by 28.6% and 1.9% - pumpkin. (Yusupov R.O., Eshmuratov E.Y., Torenliyazov T.E. 2016).

The number of melon aphids on one affected leaf of melon plants increased on average from 0.1-0.2 pieces to 46.2-51.3 pieces. The appearance of apricot-reed aphid - 12.1-30.6 pieces, acacia aphid - 5.4-13.7 pieces, tobacco thrips - 14.0-26.2 pieces, spider mite - 8.1-17.6 pieces and bugs - 2.6-3.4 pieces. Due to the more active growth and development of pumpkin, there was an increase in the number of melon aphids to 42.4-96.8 pieces per plant, apricot-reed aphids to 21.5-30.3 pieces, acacia aphids to 8.8-16.1 pieces, spider mites up to 18.3-36.3 pieces, tobacco thrips up to 26.0-35.7 pieces, and bedbugs up to 4.2-5.1 pieces. (Torenliyazov E.Sh., Yusupov R.O., Eshmuratov E.F., Torenliyazova S.E. 2013).

Observations showed that among the sucking pests on melon crops, the most common species were tobacco thrips (*Thrips tabaci* Lind.), Melon aphids (*Aphis gossypii* Glov.), Apricot-reed aphids (*Hyalus pruni geoffr.*), Acacia aphids (*Aphisoptera craccivora* Koch.), field bug (*Lygus pratensis* L.), spider mite (*Tetranychus urticae* Koch.), whitefly (cotton - *Bemisia tabaci* Genn. and greenhouse - *Trialeurodes vaporariorum* Westw.), and it has been proven that their numbers on each melon plant was on average: melon aphid - 11.5-51.3 pieces, apricot-reed aphid - 12.1-30.6 pieces, acacia aphid - 5.4-13.7 pieces, spider mite - 8.1-17 , 6 pieces, herbivorous bugs - 2.6-3.4 pieces, thrips - 14.0-26.2 pieces (table-1).



**TABLE 1 TYPES OF SUCKING PESTS DEVELOPING ON MELONS (REPUBLIC OF KARAKALPAKSTAN, CHIMBAY, KEGEILINSKY AND NUKUS DISTRICTS)**

Types of crops	Types of pests	Minimum and average number of pests by years, pieces <sup>*)</sup>			
		2012	2013	2014	2015
Melon	Tobacco thrips	1,1-14,0	2,0-26,2	0,9-25,5	1,9-21,1
	Melon aphid	0,1-14,6	0,9-51,3	0,4-46,2	0,2-11,5
	Apricot-reed aphid	0,1-12,6	0,1-30,6	0,1-12,1	0,2-25,8
	Acacia aphid	0,1-6,7	0,1-13,7	0,2-6,8	0,1-5,4
	Spider mite	0,4-11,3	0,2-8,6	0,2-8,1	0,2-17,6
	Bedbugs	0,1-3,4	0,1-3,1	0,2-2,6	0,1-3,4
Watermelon	Tobacco thrips	0,8-26,4	2,3-21,3	1,1-15,7	2,2-20,3
	Melon aphid	0,1-11,2	0,2-31,2	0,2-30,1	0,1-9,5
	Apricot-reed aphid	0,1-6,6	0,2-24,5	0,2-9,1	0,1-23,1
	Acacia aphid	0,1-4,2	0,1-10,1	0,2-5,3	0,1-5,1
	Spider mite	0,3-6,8	0,1-7,4	0,7-6,5	0,1-15,2
	Bedbugs	0,1-2,2	0,1-2,9	0,2-2,1	0,1-3,1
Pumpkin	Tobacco thrips	3,4-27,2	1,6-35,7	2,1-31,3	1,8-26,0
	Melon aphid	0,4-76,5	0,3-85,9	0,4-96,8	0,3-42,4
	Apricot-reed aphid	0,1-21,5	0,2-24,8	0,3-22,6	0,2-30,3
	Acacia aphid	0,1-8,8	0,1-16,1	0,2-12,7	0,1-9,2
	Spider mite	0,1-18,3	0,2-23,4	0,2-20,2	0,2-36,3
	Bedbugs	0,1-4,2	0,1-4,6	0,2-5,1	0,1-4,8

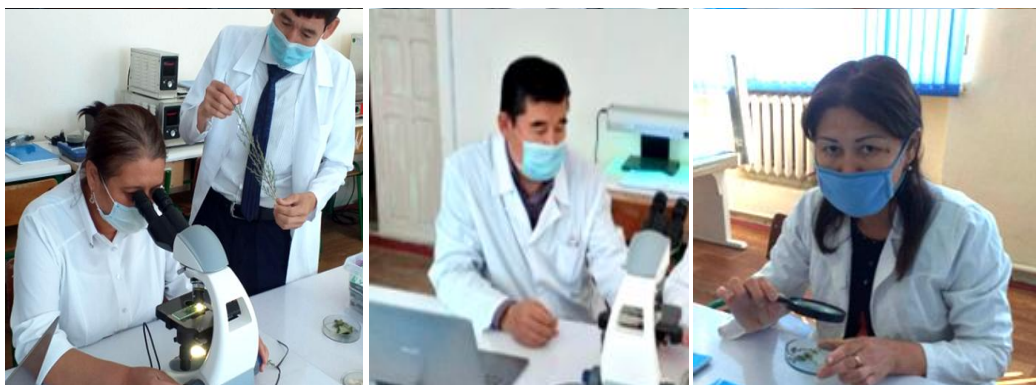
\*) Aphids and spider mite – pieces/1 sheet; tobacco thrips and bedbugs – pieces/1 plants

When determining the species composition, conditions and dynamics of development of aphids, common in the fields of melons and gourds of the southern regions and the middle zone of Karakalpakstan, it was found that, regardless of the type of melons and gourds, three species of aphids were actively developing as the main pests. Observations of 2014 showed that the density of melon, apricot-reed and acacia aphids was low, and the distribution area was wide, while the development of pests was low on melon and watermelon plants and high on pumpkin plants.

In 2015 and 2016, melon and pumpkin plants were most common for melon and apricot-reed aphids, where on one leaf of individual melon plants their density reached 124.8-175.9 pieces, and pumpkins - 212.3-245, 5 items. During these years, the density of apricot-reed aphids on melon reached 42.5-35.3 pieces, pumpkin - 56.5-73.8 pieces, which harmed young seedlings of crops.

The development of aphid species that appeared on melons in 2017 was slightly similar to the indicators of 2014 (Fig-1.).

At the same time, the density of melon aphids on one melon leaf was 35.3 pieces, watermelon - 15.1 pieces, pumpkins - 92.5 pieces. It was found that the number of apricot-reed and acacia aphids was slightly lower.



Pic-1. N.G.Shamuratova, E.G.Eshmuratov, J.U.Khamidullayev, R.S.Satbayeva in the laboratory

In early May (during the period when 2-4 true leaves emerge), on average 2.3-3.1 pieces of melon aphid and 1.9-3.2 pieces of apricot-reed aphid were found on one leaf of the early-ripening variety of melon "Gurvak" ... Before the pests left during the summer dormancy, their number reached a maximum, and leaves with a large accumulation of pests were noted, and the degree of their harmfulness was analyzed (table-2).

It was found that 30.4-61.3% of the total number of leaves of plants was inhabited by melons and gourds, and when their number reached 291.0-315.0 pieces, in comparison with uninfected plants, the yield decreased by 3.4 kg.

The apricot-reed aphid appeared on the melon in the second and third decades of May, and due to its rapid reproduction until the end of June, the yield of fruits from each plant decreased by an average of 1.9 kg.

If we consider that the plant density of melon plants is 10,000-12,000 pieces per hectare of melon, as well as the yield from each plant on average 7.2-7.4 kg, then due to the nutrition of aphids on the leaves of plants, you can lose 19.0- 34.0 tons of crop per hectare.

At the same time, naturally, the quality of the crop obtained from infected plants will also be low.

It was found that when the number of dominant species of aphids, such as melon and apricot-reed aphids, reaches 315.0-321.2 pieces on a melon, up to 58.3-91.9 pieces on a watermelon, up to 711.2- 718.6 pieces, the yield from each plant, respectively, will decrease by 1.9-3.4 kg for a melon, by 1.8-3.1 kg for a watermelon, and by 2.2-3.4 kg for a pumpkin. It was revealed that due to damage to melon plants by aphids, the timing of fruit ripening was delayed: for melons by 7.0-11.0 days, watermelons - 5.0-8.0 days, and pumpkin - by 8.0-9.0 days, and the sugar content in fruits decreased by 3.3-4.6% and 0.5-2.7%, respectively.

In the conditions of the region, the spider mite developed more on pumpkin, less on melon than on pumpkin, and weakly on watermelon. In 2017, there was a massive development of spider mites, their harmfulness was also high; and in 2018, it was found only in some fields, and for the most part it did harm only at the beginning of the growing season.

With the number of spider mites on melon varieties in the period of 4-6 true leaves, up to 3.8-5.2 on one leaf, the ripening time of the crop was 3.0 days late, the yield from one bush decreased by 1.1 kg; and on the pumpkin, the generations that appeared at the beginning of spring reduced the

yield per plant by an average of 3.1 kg. With an increase in the number of spider mites to 18.5-34.2 pieces in August-September, the plants suffered greatly, and it was shown that the yield per plant decreased by 6.1 kg, and the quality of the fruits also decreased.

**TABLE 2 THE HARMFULNESS OF APHIDS ON A MELON (CHIMBAY AND NUKUS DISTRICTS, 2015-2017)**

Types of aphids	Variants and replicates		The number of aphids, on average per 1 sheet, pieces.		Leaf with aphids on one bush, %	Productivity of one plant, kg	Versus control, kg ±
			During 2-4 of this sheet	Maximum amount			
Melon aphid	Repetition	1	2,6	315,0	61,3	3,2	4,0
		2	3,1	292,6	52,6	4,8	2,4
		3	2,3	301,0	48,5	3,1	4,1
		4	2,9	308,8	32,3	4,9	2,3
		5	3,0	291,0	30,4	3,2	4,0
		The average	2,8	301,7	45,0	3,8	3,4
	Control (no pests)		-	-	-	7,2	-
	Difference with control		2,8	301,7	45,0	3,4	-
Apricot-reed aphid	Repetition	1	2,1	316,5	36,5	4,9	2,5
		2	3,2	321,2	44,3	5,3	2,1
		3	3,1	291,6	62,4	5,8	1,6
		4	2,0	285,4	31,3	6,1	1,3
		5	1,9	301,6	41,4	5,3	2,1
		The average	2,5	303,3	43,2	5,5	1,9
	Control (no pests)		-	-	-	7,4	-
	Difference with control		2,5	303,3	43,2	1,9	-

NCR<sub>05</sub> kg.

0,8

**Note:** The minimum number of aphids is in the first half of May, the maximum number is in the second half of June.

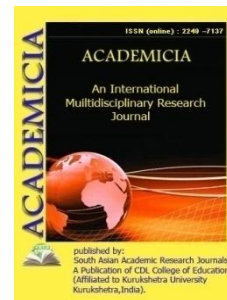
### Output

The results show that melon crops in the fields of farms are located on areas from 1-2 hectares to 18-23 hectares, and in these areas, melon varieties make up 68.1%, watermelon 19.5% and pumpkin 12.4%.

At the beginning, the predominance of melon crops was observed, but over the last three years of observations, it was found that the area under watermelon varieties has increased. On the household plots of the districts, under melon crops it was 0.1-0.4 hectares, and it was noted that melon is cultivated on 70.5% of the area, watermelons by 28.6% and pumpkin by 1.9%.

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## VALUING MOTHERHOOD: A CASE FOR LEGALIZING MARKET IN BABIES

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### ABSTRACT

*As many countries debate on the legalization of surrogate contracts, this paper analyses the ethical objections involved therein to seek the intervention of law thereto. The role of developing economies like India in the commercial surrogacy sphere is increasing by the day, mainly because the potential cost involved in entering into surrogacy contracts is relatively low in India especially when compared to the costs prevalent in the United States and United Kingdom. The opponents of surrogate practices would doubt the fact about surrogate mother freely exercising her rational capacities inasmuch as they would argue that surrogacy arrangements are mainly targeted at poor and vulnerable group of women who are coerced into such arrangements through monetary incentives that baby markets offer.*

**KEYWORDS:** *Legalization, Prevalent,*

### INTRODUCTION

“Both of us [Sunita and her husband] worked all day to earn Rs.10,000-Rs.15,000 per month and lived hand-to-mouth. We did not have enough to provide good education to our two children. Here, they offered me Rs.2.5 lakh in return for bearing a child and to take care of all my expenses till delivery. I could have never made this much money in such a short span of time. I have borne [delivery] pain for my children.... now I can bear it again for their better future,” said Sunita, one of the dozen surrogate mothers at Gurgaon’s first surrogacy home being run by Vansh Health Care in India.<sup>1</sup>

The problems of the infertility spread globally have necessitated a growth in the Assisted Reproductive Technologies [hereinafter ART]. The concept of surrogacy or commissioned adoption comes handy to people with infertility issues where typically, a surrogate mother bears and delivers a child for another person or couple as the case maybe. A gestational surrogacy is a

slight break away from the traditional concept of surrogacy wherein the genetic mother donates her egg, which is fertilized through in vitro fertilization and the embryo is implanted in the uterus of the surrogate mother who has agreed to carry and deliver the baby. In a traditional surrogacy, however, the surrogate mother is also the biological parent due to the fact that she agrees to be inseminated with the sperms of the intending father artificially, thence making her the egg donor also.

The driving force motivating mothers to engage in surrogacy commercial or not can range from monetary incentives to altruism. While some countries like Australia, Canada, Belgium, Netherlands and New Zealand have confined themselves to legalizing only altruistic surrogacy, the other countries like India, Ukraine, Russia, Israel have moved forward to recognize surrogacy in its commercial form. There are also many countries like Pakistan, Italy, Iceland and Finland, which consider surrogacy be it commercial or otherwise to be illegal. Many states in the United States of America like California, State of Massachusetts recognize surrogacy while others like Michigan prohibit all forms of surrogacy.

The role of developing economies like India in the commercial surrogacy sphere is increasing by the day, mainly because the potential cost involved in entering into surrogacy contracts is relatively low in India especially when compared to the costs prevalent in the United States and United Kingdom. The usual fee for a surrogate contract is around \$25,000 to \$30,000 in India, which is believed to be 1/3<sup>rd</sup> of the cost involved for a surrogate contract in developed economies like the United States of America.<sup>2</sup> Thus people from across the world visit India making it a hotspot for surrogacy arrangements because commercial surrogacy is legal in India.<sup>3</sup>

While more and more foreigners enter India in order to enter into surrogacy contracts with Indian surrogates transforming surrogacy into a lucrative business industry, the social activists find the present regulations governing the rights of surrogates and children born out of such contracts, to be insufficient. The activists fear the potential scope for human trafficking involved in commercial surrogacy and hence urge for it to be regulated through an adequately protective legal framework like organ donation. This debate has finally led to formulation of the *Assisted Reproductive Technology (Regulation) Bill and Rules 2008*, a full-fledged law proposing to regulate surrogacy in all its forms and protect rights of both surrogate mothers and children, which is pending consideration by the Parliament of India.

In the interim, sociologists, philosophers, political scientists and legal scholars amongst others continue the debate concerning moral and ethical aspects of commercial surrogacy and market in babies.

Although a surrogacy arrangement at the outset seems beneficial to all the parties involved therein, commercialization of such arrangements invites the dangers of exploitation especially due to lack of regulation in the industry. Thus such a beneficial arrangement calls for effective regulation through a carefully crafted framework of law sensitive to the ethical nuances but accounting for pragmatic concerns to protect the rights of the surrogate mother, intended parents and most importantly the child born out of such an arrangement.

Going forward, many countries (India, UK) seek to break out of operating in the legal vacuum and deliberate on the enactment of a codified law that seeks to regulate surrogacy and protect the rights of children and mothers involved in such arrangements. This deliberation necessitates the analysis of a deeper question what if anything is wrong with the intervention of market and



applicability of commercial norms to the arrangements involving relinquishment and acquisition of parental rights that lead to transfer of offspring.

### **Market in babies: Analysis of ethical and moral objections**

At the outset, it seems like the general collective conscience is against application of market language and norms to human beings and relationships between human beings. Thus to associate words like 'acquisition', 'purchase', 'sale' with human beings and relationships, skirmishes the collective conscience.

Although the present world witnesses a strong breakaway from the traditional definition of many relationships and bonds, the public policy remains fundamentally opposed to baby a system involving transfer of babies for a economic consideration.<sup>4</sup> Scholars examining this opposition attribute it to more than one reason.

### **Analogous to Slavery**

The fundamental opposition to a market in babies comes from treating it as being analogous to a system to slavery.<sup>5</sup> The concept of commercial surrogacy often termed as "baby selling"<sup>6</sup> is thus characterized as a form of human trafficking. It can be contended that transfer of babies between two parties for an exchange of monetary or economic consideration would tantamount to assigning property rights in babies like in cases of slavery, which is not only immoral but objectionable to public policy.<sup>7</sup>

The arguments that analogize surrogacy to that of slavery lose sight of the fact that the intending father in case of traditional surrogacy and both the parents in case of gestational surrogacy, are the natural parents of the child. Thus there is a biological link between the parents or parent who intend to raise the child as the case may be, and the child. Whereas in cases of slavery the child or the person is given away to a total unrelated person or a stranger who may not really intend to raise the child. The involvement of parents who share a biological connection with the child than just being able to pay for the child makes a huge difference. Although it erroneous to presume the strength of the bond based on the genetic connection, thus undermining the strength of social relationships, an arrangement where the natural father or sometimes even both mother and father are also the social parents, is a benign arrangement difficult to doubt.

Here, it also becomes important to emphasize on the extent of control wrapped within the concept of slavery, which is absent in case of surrogacy.<sup>8</sup> The beneficial value in a slavery arrangement is limited to whims and fancies of the buyer and seller and the arrangement thus disregards the interests of the victim subjected to such slavery.<sup>9</sup> However, a surrogacy arrangement more often than not is believed to fulfill all the requirements of a normative economic concept that is 'Pareto Superiority' which implies a transaction that makes at least one person better off and no one worse, to ultimately promote social welfare and is hence efficient.<sup>10</sup> People wanting to harness family bonds while experiencing the joy and pleasures of parenthood enter into a surrogacy contract and it is unlikely that such arrangements diminish the babies' welfare by more than they increase the welfare of contracting parties. While it may be argued that not all surrogate contracts are aimed at child's welfare and thus have hidden ulterior motives, it thus becomes necessary to ponder over the question about the extent to which baby selling should be regulated.<sup>10</sup> This also sets up the case to seek intervention of law to regulate commercial surrogacy to condemn practices that are far from promoting the welfare of child born

therein. It is needless to say that legalizing market in babies would not preclude the application of laws prohibiting child abuse to such transaction and the same would continue to apply with equal force. Further the law can also mandate thorough screening of the intending parents, which is now only done for the surrogate mother to further amplify the best interest of the child. However, in disputes involving custody of the child, the same can once again be left open to the law to decide equitably once again in the best interest of the child.

The idea of surrogacy being analogous to slavery also stems from the element of ownership involved in both the arrangements where children are considered as objects, capable of being owned akin to property in goods, which runs contrary to the perception of traditional parent child relationship.

The intending parties in a surrogacy arrangement are most likely childless couples or persons wishing to experience the invaluable joy that comes along with parenthood unlike slavery that entails elements of coercion, and is not aimed to benefit the victim.

Failure to recognize the distinction between the two concepts may result in perpetuating the grave injustices caused by misdemeanors like mass abortions and illegitimacy especially where transfer of children albeit altruistically is viewed as a violation of law.<sup>11</sup>

### **Co modification of children**

A market in babies is alleged to objectify children as commodities capable of being bought and sold in the market.<sup>12</sup> Such co modification, it is argued leads to degrading human dignity that occurs when human being is subjected to barter. This particularly stems from the popular Kantian philosophy that people cannot be treated as mere means only but are ends in themselves. To treat children as mere use objects by the contracting parties undermines the norms of parental love insofar as it treats them as commodities.<sup>13</sup> Some regard such co modification as corrupting the values of human dignity and integrity that are intrinsic to humans.

An arrangement, involving sale of babies does not violate the nuances of the Kantian ideologies, as it does not take away the intrinsic value in babies merely by valuing them. Kant's 'Humanity Formula' prohibits treating human beings worthy of respect as if they were worthy merely of use. It is important to note that this philosophy does not eliminate use of human beings as a means to an end completely. What Kant seeks to eliminate is to treat human beings *merely* of use and not an end in themselves.<sup>14</sup> This applies with great force to a slavery arrangement where the interests of the slave is completely ignored as against in a surrogacy or baby selling arrangement where the intended parents have the best interests of the child in mind that is provide loving homes for the offspring. Thus is a surrogacy arrangement or baby selling contract the child is not *merely* considered as an object of use. Further, it is most likely that people resort to such arrangement mainly because of the high reverence for the intrinsic value that they perceive in a child.

Further if we were to accept Kantian 'means and ends' argument as those who condemn surrogacy interpret it, then any service rendered using performance of human skill would stand to degrade intrinsic value of human beings. The consultancy firms which value human intelligence by rendering services like business modeling must be considered to damage the intrinsic value of human beings as they are used as a means to an end and not just an end.

The Kantian emphasis on respecting humans is not just limited to human beings but extends to *humanity* in the human beings that he says has to be treated as an end in itself. This humanity scholars say, entails self-directed rational behavior, to pursue one's own ends and any other allied abilities aimed at one's welfare.<sup>15</sup> "The difference between a horse and a taxi driver is not that we may use one but not the other as a means of transportation. Unlike a horse, the taxi drivers Humanity must at the same time be treated as an end in itself" Professor Robert Johnson writes, if the tax driver "has freely exercised his rational capacities in pursuing his line of work, we make permissible use of these capacities as a means when we behave in a way that he could, when exercising his rational capacities, consent to — for instance, by paying an agreed on price."<sup>16</sup>

It is argued that by engaging in the transfer of children by sale, all the contracting parties express attitudes towards children, which tend to undermine the norms of parental love.<sup>17</sup> On the contrary in reality, the intending parents as well as the surrogate mother seek to amplify the norms of parental love by not giving up on their infertile conditions to engage in cultivating the bond of families and relish the joy of parenthood through surrogate contracts.

While scholars accept the failure of parents to fulfill their parental obligations in cases of adoption,<sup>18</sup> it makes no sense to relegate practices of commercial surrogacy and baby selling where intending parents come forward to indulge in upbringing of a child while nurturing a family.

The surrogacy or baby selling arrangements that are considered to be morally reprehensible for co modification of babies and thence degrading their intrinsic value are not accurate inasmuch as in reality such arrangements are initiated with high regard to the personhood that is wrapped within a child and are far from viewing children as mere "use-objects". Further the co modification argument is also not backed by empirical evidence and is mostly criticized for being a theoretical concept far from reality.<sup>19</sup>

### **Conception of personhood**

Some claim that a market in babies would affect the child's self-conception and thus harms personhood.<sup>20</sup> This contention fails to recognize the uniqueness of each market sphere and a market in babies like other market segments would have its own unique rules. Each market segment has its own rules like a market in human resource services is unique and different from that of a market in art. F While Professor Radin analogizes with the BMW Car example, Professor Martha Ertman, says "From an ethical standpoint, parents have the duty to help the child develop a healthy sense of self, become an independent adult, and learn how to be a good citizen. While a car owner is obliged to maintain insurance and refrain from using the car to sell illegal drugs, that owner is also free to destroy the car, or run into the ground through lack of maintenance. Parents are obviously not free to do the same."<sup>21</sup>

While it is important to refrain from language and arrangements that treat children like chattel, it is not fair to assume apprehension of danger to personhood of children merely due to existence of a market in babies. If it were true that market corrupts personhood, then wage labor has to be considered akin to slavery when it is the opposite. The parenthood market is essentially built on the rights and obligations contained in there.<sup>22</sup> The presence or absence of market thus does not affect the personhood or conception of the child crucially.<sup>23</sup>

### Co modification of women's labor and women's body

Commercial surrogacy, it is said, attempts to transform the work of bringing forth children that is women's labor into a commodity. The baby selling or commercial surrogacy is regarded as a practice that makes women's reproductive abilities available for sale is regarded as morally reprehensible as it is alleged to reinforce the traditional perception about women as the breeder class and reinforces the gender inequality of women as a group.<sup>24</sup> Some philosophers once again resort to Kantian ideology that some activities are close to our personhood and to commercialize such activities constitutes the person as less than an end or even worse, less than a person.<sup>25</sup>

It is at this point relevant to reiterate the aforesaid taxi driver illustration by Professor Johnson<sup>26</sup> to elucidate Kantian maxim about respecting not just human beings but the *humanity* in human beings. Thus once a surrogate mother has freely exercised her rational capacity in entering into surrogacy contract, it is not immoral or reprehensible to make use of this capacity as a means when the intending parents pay an agreed price for such a contract.

The opponents of surrogate practices would doubt the fact about surrogate mother freely exercising her rational capacities inasmuch as they would argue that surrogacy arrangements are mainly targeted at poor and vulnerable group of women who are coerced into such arrangements through monetary incentives that baby markets offer. However, if a woman decides to contract herself to delivering a baby for another person albeit due to economic duress, to stop her from doing so seems patronizing and hence objectionable. Many people resort to well paying jobs even if means that the job exploits their health to the maximum and such jobs I doubt are regarded as morally reprehensible.

Further, activities like modeling, gymnastics, wrestling, dance performances, involve use of woman's bodies, the same are less likely to be objected for co modification of human body. It is unlikely that someone would refer to a fashion model as a 'beauty thing' and condemn the industry for objectifying human body that has an inherent attachment of immeasurable intrinsic value to it that places it above the vicissitudes of the market.

Surrogacy contracts are only interested in services rendered by the surrogate mother with the use of her body and are not interested to 'purchase' or 'trade in' any rights over surrogate mother's body. There is no reason to perceive the monetary consideration to women in surrogacy arrangements as payments that constitute *rental* of her body.<sup>27</sup> Professor Heidi Malm, elucidates this proposition well as she says "the woman is being paid for *her* to use *her* body in a way that benefits him (the intending father paying her)—she is being compensated for her services. But this does not treat her body as an object of commerce—as something that can be bought sold or rented—any more than does my paying a surgeon to perform an operation, a cabby to drive a car or a model to pose for a drawing. My payments to the surgeon do not give me a right to her arm, make her an object of my domain, nor deny that there is a person there."<sup>28</sup>

Thus a surrogacy contract that expects the woman to use her reproductive ability does not involve any surrender of the woman's rights to the intending parents thereby giving them exclusive dominion over her body and herself. However, it becomes necessary to regulate surrogate arrangements through the force of law to ensure limit the intending parents from interfering the surrogate's lifestyle and prohibit forceful decisions on the surrogate against her will.

### **Exploitation of the surrogate mother**

Those against the concept of baby selling contend that the contracts are highly exploitative in nature inasmuch as they lead to rich and upper middle class with financial advantages exploiting the unfortunate and under privileged poor and vulnerable groups of women by luring them with monetary incentives to enter into 'renting out their wombs'. They also contend that poorly informed and uneducated class resorts to these arrangements in order to gain some financial advantage therefrom.

Malm, has a four point comprehensive rebuttal to this contention, which is as follows<sup>29</sup>-

- a) Surrogacy arrangements are not merely targeted at poor women inasmuch as statistics evidence that an average surrogate mother is white, with two years of collegiate education, married young and has all the children, she and her husband want.
- b) The exploitative nature of monetary incentives is applicable to all forms of vocations and every instance of rendering of service. It is not in the best interests of poor when in the guise of protecting them from evil of exploitation, one deprives them of an opportunity to get away from poverty.
- c) The economic duress element has gained great emphasis in surrogate arrangements mainly because the practice in general is considered to be distasteful and is viewed with a disdain and hence the opponents consider that if not for the economic coercion, there would not be anyone who would agree to engage in such a practice. However, this is not backed by empirical evidence and also, many women involve themselves in the practice with altruistic motives to gift a couple what they could never have on their own- a family.<sup>30</sup>
- d) If the intention is to protect those who view the practice as degrading, yet have no choice but to indulge in it, given the economic incentives, then the aim has to be to regulate the same by restricting the participation through putting forth eligibility conditions as to who can enter into such arrangements.

Thus if a practice not necessarily surrogacy is proven to be exploitative, the solution is not necessarily to abolish or prohibit the practice altogether but to regulate the exploitative nature of such a practice effectively.

### **Case for legalizing market in babies**

It is important that surrogacy and baby selling arrangements be analyzed from a consequentiality and utilitarian perspective. This is mainly because the moral and ethical objections to surrogate practices are necessarily deontological to say that it undermines the notions of personhood while disturbing societal structure and criticize those who approach the practice from a utilitarian perspective.

As Professor Cass Sunstein says, "It is possible that when people disapprove of trading money for lives, they are generalizing from a set of moral principles that are usually sound and even important but that work poorly in some cases."<sup>31</sup>

The school of thought that morally objects to surrogate and baby selling practices has lost sight of the plight of many single, infertile and gay people who may have been yearning to experience the family bonds. As the world fights for equal rights and protection of gay, lesbian and transgender people and hence legalize same sex marriage, it is significant to not deprive them of



families and parenting in its truest form and surrogacy a practice, which in essence enables the gift of family to many people, cannot be regarded as lacking moral legitimacy.

Further consider the case of holocaust survivor, who wants to continue this progeny and is unable to, an arrangement like commercial surrogacy would come to his rescue. This applies to almost all minorities who are deprived of many rights by virtue of being a minority. The arrangements like surrogacy would help them in building families thereby entitling them to many protective legal rights through legislative process.<sup>32</sup>

Market mechanisms, it is said present a moral vision while prioritizing liberty and innovation than tradition or biological mandates.<sup>33</sup> While some reprehend surrogate practices for being exploitative in nature and for being coercive, it is important to recognize the autonomy, individual choice and liberty of the woman concerned in the arrangement. Here it may be pertinent to recall, Millian idea of individuality and liberty, which furthers individuality as being good and furthers the promotion of social institutions that contribute to that individuality. So, it is said that according to John Stuart Mill liberty, liberty is the right to do as one wants free from the interference of others, so long as what one wants does no harm to others. Although merely offending the moral sensitivities of others does not count as harm. Especially since others often confuse feelings of repugnance with feelings of moral disapprobation.<sup>34</sup> This makes it clear that as long as the surrogate mother while exercising her individual liberty is not harming anyone, the practice cannot be considered morally reprehensible.

Those who oppose the market in babies would not fail to acknowledge the various benefits of commercial markets albeit in other spheres. A market in babies can also be made to prove advantageous allowing norms of law and culture to this market to ensure maximization of benefits and minimization of perils.<sup>35</sup>

It is thus about time that those who are against the practices of commercial surrogacy or baby selling, admit that there already exists a 'legal market' in babies<sup>36</sup> and also acknowledge that the chances of fraud and corruption in a 'black market' trading in babies is greater than those in a lawful market.<sup>37</sup> The law if not abolish fraudulent markets can at least positively incentivize and protect the vulnerable section from the perils of an existing black market.<sup>38</sup>

Thus the baby markets more than any other sphere seek the intervention of law, today. Thus laws should take over and fill in the grey areas guaranteeing protection to interests of mothers and also children who are considered the representative future.

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## HISTORY OF CONTEMPORARY POLITICAL SCIENCE AS THE HISTORY OF SEARCHING ITS IDENTITY

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### ABSTRACT

*Modern political science is still a place of heated debate over the basic elements of its theoretical, methodological and political-practical foundations, which were, as the author claims and justifies, the focus of all previous generations of political scientists, which gives him the opportunity to interpret the history of modern political science as the history of the search for its identity. The very evolution of interpretations of subjects and method of political science, its goals and social responsibility, presented in this article, can be interpreted as a search for the identity.*

**KEYWORDS:** *Identity Of Political Science, Political Science, Political History, History Of Political Science, Politics, Subject Of Political Science, Methodology Of Political Science.*

### INTRODUCTION

The history of modern political science as its sub discipline begins with the publication of the book “American Political Science” by the British political scientist Bernard Crick in 1959, which stated from the first lines that “the study of politics in the United States is today unique in size, content and method as a phenomenon in Western intellectual history” [1, p.xi]. This book set the initial, very high tone of the still ongoing scientific debate on the diverse aspects and meanings of the historical evolution of identity, both of political science itself and of the politics underlying and being the subject of its study. Political, economic and socio-cultural prerequisites and factors for the emergence and institutionalization of political science as an independent scientific and academic discipline. Functions and role of political science in relation to politics and the influence of politics on it. The subject and method of political science and the whole variety of problems of their mutual determination. The normative requirement of the

scientific objectivity of political science and the immanent partisanship of the theoretical constructions of political scientists.

The abstract scientific nature of political theory, which is in conflict with the postulate of the indispensable political relevance of political science. All this is only a part of the most important problems of modern political science, which together make up its contradictory appearance, its identity, all the variety of historical and genetic forms and manifestations of which, as justified in this article, is the actual subject of the history of political science.

Thus, the American political scientist Dwight Waldo, identifying in his article "Political Science: Traditions, Discipline, Profession, Science, Organization" the basic features of the identity of modern political science, asks why it originated in the United States. Defining the victory of the North in the Civil War as a victory in the United States of the industrial way of development over the agrarian one and characterizing the subsequent period of rapid socio-economic growth of the country and the emergence and establishment of the model of a modern university here, he emphasizes the importance of such important factors of the political experience of the United States as "a written constitution that affirms the principle of popular sovereignty; Bill of rights; the growth of active nationalism and the associated notion of a national "mission", which, however, is subject to different and even conflicting interpretations; the growth of theories and practices of democracy superimposed on the original republican design; and a deep, all-pervading feeling that the American experience is or will become the experience of all mankind" [2, p.21]. Such "themes", he emphasizes, "are deeply" inscribed "in American political science, and so deeply that they may not be seen by Americans as self-evident" [2, p. 21].

Initially defining their studies of politics as a "political science", American political scientists soon discovered the fundamental and still urgent need for a theoretical and methodological substantiation of such a name, which created two deep problems: in what sense and to what extent is such a science a science? and in what sense and to what extent is such a science political? Thus, it turns out that the entire period of formation and development of modern political science going on in the second century is nothing more than a continuous series of attempts to answer these two fundamental questions, which together make up the historical process of searching for oneself, i.e. own identity as Political Science.

### **The history of political science as a process of development of its self-awareness**

In general, defining political science as a science of the state, its American "founding fathers" defined the subject of this science in different ways. So, William Crane and Bernard Moses, in their popular at the end of the 19th century. textbook argued that political science is composed of two sections. The first of these, analytical politics, or politics as a science, studies the development and structure of the state as an organism designed for the concentration and distribution of political power in society. Its second section, practical politics, or politics as an art, examines political motives and goals, while determining what the state should do (see: [3]). Another popular author at this time, Theodore Woolsey, also saw two sections in the content of political science. The first of these, political theory, is defined by him as considering the nature and functions of political communities, the fundamental relationship between the state and the people, while the second examines the ways in which goals can be realized, found in the very sense of the existence of the state (see. : [4]). At the same time, Westel Willoughby identified three groups of research areas within political science. "The first is the definition of fundamental

philosophical principles; the second is a description of political institutions, or state bodies, considered statically; third - the definition of the laws of political life and development, motives that induce political action, conditions that cause specific political manifestations”[5, p. 382].

A special role in this period of the emergence and formation of political science in the last quarter of the XIX century. American political scientists attached a link between politics and history. Thus, Herbert Baxter Adams believed the difference between them to be purely temporal, political science was for him only modern history, and his lecture hall at Johns Hopkins University in Baltimore was adorned with the famous saying of the English historian Edward Freeman: “History is past politics, and politics there is a current history.” The aphorism of another English historian John Seeley was also popular among political scientists of that time: “Political science without history has no roots; history without political science has no fruit”.

The most significant event in the formation of such a professional identity of political science was the creation in December 1903 of the American Political Science Association (APSA), the very existence of which was a clear evidence that political science has acquired the role of an independent scientific discipline. At the same time, she became an active and very effective instrument in defending her independence and interests in relation to other scientific disciplines, her interaction with charitable foundations, universities and colleges, with the media and state institutions. With its creation, as well as with the publication in 1906 of its own scientific journal, American Political Science Review, the scientific study of politics acquired a professional quality, implying that a relatively general understanding of the subject and method of such research is inherent in any scientific discipline, about the interests and nature of the activities of representatives of this profession. As a result, the process of formation and development of the professional identity of political science was launched, which is still the subject of interest of political scientists.

The most significant scientist opponent in American political science at the time was William Elliott, who argued that proponents of "scientific" political science, envious of the natural sciences, would like to be part of the prestige that experimental science has in the modern world. ... No matter how hard they try, he believes, political science can never become such a science, since it does not have any constant, stable unit of measurement that could be the basis of measurable variables. Dealing with essentially unique and hopelessly complex phenomena and processes, the subjects of which are endowed with free will and the ability to constantly renew themselves in their adaptation to social reality, she is incapable, Elliott argues, trying to describe and explain these phenomena and processes in abstract universal categories, formulate any rigid deterministic laws (see: [16]).

However, in the early 1930s, during the Great Depression and then Roosevelt's New Deal, “American political scientists were increasingly swallowed up by a multitude of acute economic and political problems. Intellectually and emotionally, the dominant impulse was in favor of action and commitment to the interests of the country, rather than objectivity and scientific research”[19, p.129]. The topics of the programs of the annual APSA congresses of this period “testified that interest in science and methodology was giving way to civic and political education in general” [19, p. 128]. Here, with the support of charitable foundations, the idea that initially

The goal of developing and deepening democracy set by American political science can be most effectively achieved not by studying its scientific foundations, but by creating a wide system of civic education. As a result, the discussion of this period about the scientific nature of political science actually ceased.

The review presented here of the main topics of discussion and stages of the half-century, before World War II, development of the history of political science is a reflection of the evolution of the views of political scientists themselves about various aspects of the identity of political science, about its history as a process of developing its self-consciousness.

This ongoing, in fact, immanent process is complemented, with the formation of the history of political science as its autonomous sub discipline, with a new level of analysis designed to give it a more rigorous scientific form and content.

### **The history of modern political science as a subject of study of its sub discipline, "history of political science"**

The book of the English political scientist Bernard Crick, *American Science of Politics*, which laid the foundation for a professional “conversation” about the history of modern political science, was based on the text of his doctoral dissertation, written in the second half of the 50s, during the period of his study of history American political science at California (Berkeley) and Harvard Universities, and defended in 1958 at the London School of Economics and Political Science. The aim of Crick's work was to demonstrate the extent to which the idea of the scientific study of politics, following the principles of natural sciences, was a uniquely American invention, which, from the early aspirations towards the development of the civic education system to the methodological requirements of behavioralism, should be understood in context traditions of American liberalism, which she reflected and strengthened (see: [20]).

Despite its claims to an objective, value-free study of politics, American political science, Crick argues, “contained implicit but powerful statements of certain political doctrine.” Its “facts” contained assumptions characteristic of active “democratic moralism,” which brings it closer to American political thought rather than to science [1, p. v – vi]. At the same time, he stressed the particular importance, especially in the case of Merriam and the Chicago School, of the often paradoxical relationship between the simultaneous commitment to science and democracy here. The belief in the need for social control, according to Crick, turned into direct totalitarian implications in the manner of Lass well’s thinking and deep semantic chaos in the mentality of American liberalism, which interpreted science as technology, which did not correspond to the best examples of American political experience and its comprehension and put it under threatening the integrity of the very realm of the political.

Overall, "the impact of Crick's work illustrates how the history of political science, acting as the context within which we gain an understanding of the nature and role of political science, is, at least implicitly, the source of its identity." [22, p. 2]. Discovering and analyzing the identity crisis of American political science at that time and proposing ways to overcome it, this book is still very significant for research devoted to the problems of political, scientific and professional identity not only of modern American political science, but also political science as a whole in its connection with modern political realities.



Chronologically, the next important work on the history of modern political science was the book by American political scientists Albert Somith and Joseph Tanenhaus, *The Development of American Political Science: From Burgess to Behavioralism*, published in 1967 (see: [ 19]). Written at the height of the aspiration of American political science towards its acquisition of scientific universalism, it analyzes the historical process of professional development and evolution of political science from its early American origins to behavioralism.

In the proposed periodization of the development process of American political science, its history, with a brief history of it, is divided into four periods: 1880–1903. (period of preparatory formation), 1903-1921 (period of origin), 1921-1945 (middle period) and 1945–1965. (modern period), three of which, starting from 1903, are characterized in three special sections devoted to the analysis of (a) professional growth and development, (b) political science as a scientific discipline and (c) extra-scientific, mainly political forms of activity of political scientists, which allowed the authors to describe and evaluate in sufficient detail various aspects of the identity of political science within the framework of these historical periods. Consciously focusing their attention on those aspects of the past of political science, which, in their opinion, somehow influenced its current state, they thereby applied the methodology of historical presentism, setting out the history of American political science primarily in terms of the identity of its then behaviorist Mainstream, the scientific approach of which they characterized as the most important phenomenon in the entire intellectual history of this scientific discipline, as one of the cycles of fascination with the idea of scientific study of politics and as an attempt to advance political science from the pre-paradigm (in Thomas Kuhn's terms) to the paradigmatic stage its development. At the same time, arguing that behavioralism had not yet become “the prevailing paradigm” and that it would receive further development, Somit and Tanenhaus predicted quite correctly that “its scientific aspirations would become more moderate in the future” [19, p ... 175, 208, 210]. In 1975, Dwight Waldo presented in his extensive text “Political Science: Traditions, Discipline, Profession, Science, Organization” [2] a historical and interpretive analysis of the entire period of development of modern political science in the United States since its creation by Francis Lieberin 1858 of the first department of political science before the post-behavioral phase of the development of political science in the early 1970s. Although Waldo argued here that political knowledge has a cumulative nature, possible only within the framework of the methodology of natural sciences, he himself calls his approach to the interpretation of the history of political science “ecumenical.” He discovers an increasingly obvious pluralism in the research practice and views of political scientists of the early post-behavioral period and believes that “there cannot be any unconditional unique perspective from the point of view of which the history of this scientific discipline could be described”.

He asks here the question of whether “post-behavioral sensitivity” will soon be interpreted as a temporary aberration of consciousness, as a kind of detour towards a more scientific political science, or whether a new balance of power will arise in which science will not be so much goal as a means of realizing certain values. He interprets postbehavioralism itself as a phenomenon that arose in political science rather under the influence of the “new left” movement and the phenomenon of counterculture, than as a result of a rethinking of the philosophical and methodological foundations of political research. The general tone of this text by Waldo reflected an attempt to turn the development of political science of this period, striving to find its identity as a politically significant science, towards “policy science”. He argued that, although it

makes sense to propose options for the development of the methodology of political science similar to the methodology of natural sciences, political science itself, of course, is a culturally determined scientific discipline, largely determined by its socio-historical context.

In the mid-1980s, two more works appeared on the history of American political science. These are *The Tragedy of Political Science* by David Ricci [23] and *The Realists Disillusioned* by Raymond Seidelman [24], executed in the form of criticism of this scientific discipline. The theoretical narrative of both of these works focuses on the relationship between political science and politics and, in particular, on the interdependence and acute contradictions between the goals of developing political science as a scientific discipline and its commitment to democratic values and their implementation.

The starting point for the analysis of Ricci's proposed interpretation of the history of political science can be found in the heated theoretical and methodological battles of the second half of the 1960s between behavioral political scientists and their critics. Ricci here denotes a fundamental gap between the great tradition of studying politics from Plato to Marx and the actual practice of modern empirically oriented professional political science, with its preference for a narrowly scientific approach to the study of social phenomena. He believes that the cause of the "tragedy" of political science is the interpenetration of political science and American liberalism. Political science, he believes, was formed here as committed to two goals, which in different situations reveal their incompatibility. "It is between these two commitments to our discipline - between the adoption of strictly scientific tools and our commitment to democratic ideals - that our problems begin," he writes [23, p. 24].

Seidelman discovers three traditions in the history of American political science, the first of which is embodied in the theoretical activity of conservative institutionalists, the second reflects radical democratic tendencies in political science, while the third tradition, within which an attempt was made to reconcile the first two, is expressed in the desire of political scientists to combine rigorous science with one or another version of political commitment, the science of politics with science for politics, to create a science for democracy, linking objective professional political research with political reforms, as a result of which political science could be manifested as "non-revolutionary alternative to obsolete ideologies and practices" [24, p. 2]. Seidelman argues that this third tradition in the history of American political science, with its focus on achieving social harmony through science-based state-building, is losing ground, while political science and political reality are increasingly losing ground.

An attempt at a balanced, objectivist analysis of the state of modern political science was undertaken by Gabriel Almond in his famous article "Separate Tables: Schools and Sects in Political Science" [25], published in 1988, which has not lost its relevance to this day. Political science, he argues here, is divided in two variations, one of which he defines as ideological and the other as methodological. In turn, in the ideological dimension, he sees the left and right positions, and in the methodological dimension - soft and tough positions.

The soft methodological position, in his opinion, is the purely descriptive approach of Clifford Geertz and the admiring assessment by Albert Hirschman of the biography of the Mexican partisan hero Emiliano Zapata, written by John Womack. In this biography, conceptualization, hypotheses, evidence of any assumptions and other signs of social science are almost completely absent.

Here he also includes the approach of Leo Strauss and his followers, which consists in the interpretation of the ideas of political philosophers, as well as the directions of political philosophy using empirical material and logical analysis, which are most vividly represented by the works of Michael Walzer and Carol Patman. He refers to a rigid methodological position quantitative, economic and mathematical methods of modeling in political science. At the same time, he believes that the most complete expression of this position is the combination of mathematical modeling, statistical analysis, experiment and computer simulation presented in the literature on public choice.

At the same time, the left position of the ideological dimension is represented, according to Almond, by four groups of political scientists, one way or another continuing the Marxist tradition: these are actually Marxists, “critical political theorists”, supporters of the theory of dependence and adherents of the theory of the world system, that is, everyone who denies the possibility of separating knowledge from action and subordinates political science to the struggle for socialism. As for the right-wing position of this dimension, he refers to the neoconservatives, who advocate, among other things, a free market economy, limitation of the powers of the state and an aggressive anti-communist foreign policy.

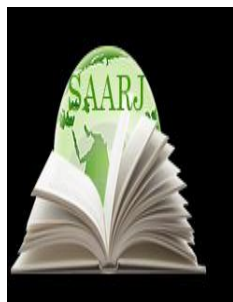
“If we combine these two dimensions,” Almond writes here, metaphorically representing political science as a kind of cafeteria in which representatives of different trends and trends in political science sit at their tables, “then we get four schools of political science, four separate tables: soft left, hard left, soft right and hard right tables” [25, p.830]. At the same time, if the four tables designated here are located at the edges of this “cafeteria”, they are brightly lit, loud voices are heard from them, and they loudly declare themselves, then most political scientists, developing their metaphor Almond, sit at the tables of the central, the less brightly lit part of the “cafeteria”, they are “liberal”, ideologically restrained, eclectic, they are quite capable of changing their methodological preferences.

At the same time, such uncertainty, the eclecticism of the central part of this “cafeteria”, multiplied by the deeply contradictory categorical nature of the “tables” located here at the edges, is an expression of a quite definite characteristic of the state of modern political science, which testifies to the fundamental uncertainty that still exists. , the split of self-consciousness of modern political science, its identity. And the very evolution of interpretations of the subject and method of political science, its goals and social responsibility, presented here, can be interpreted as a search for such an identity.

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## THE MAIN PECULIARITIES OF STYLISTIC DEVICES IN TEACHING KARAKALPAK LANGUAGE

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### ABSTRACT

*This article is intended to give basic information about basic stylistic devices and their usage in teaching Karakalpak language. This article is also devoted to discussing the essential features of stylistic devices in learning the Karakalpak language. In these stylistic phenomena researched differences of stylistic and lexical unities. Actually, it explores how to develop Karakalpak language learners' communicative competence by using stylistic devices in Karakalpak language teaching and gives some useful suggestions, to realize the final objective of language teaching.*

**KEYWORDS:** *Stylistic Devices, Simile, Metaphor, Synecdoche, Metonymy, Personification, Symbol, Imagery.*

### INTRODUCTION

Stylistic devices (also known as rhetorical devices or figures of speech) help to craft lively and interesting texts. We use them to grab and keep the reader or listener's attention. They are useful for analysing texts as well as for writing your essays, speeches etc. The transformation of the Karakalpak language into an object of scientific research began later than other Turkic languages. It should be noted that scientific works on the Karakalpak language have been written since the 30s of the 20th century. Nevertheless, today the Karakalpak language has a well-known Orin in Turkology. Accordingly, the phonetics, lexicology, morphology, syntax, dialectology, history of language, and other fields of linguistics have been studied in detail. In addition to these achievements, there are many unorganized issues in linguistics.

### MATERIALS AND METHODS

Stylistic devices are used in speech with the same aim of intensifying the emotional or logical emphasis that the information transferred should convey. Stylistic devices are represented by two



categories: I. "figures of thought" (tropes, from the Greek tropos 'turning'), which deviate from common usage mainly in the meaning of words, i.e. when a word (or a combination of words) is used to denote an object that is not usually correlated with this word; this double meaning creates what is called an image; II. "figures of speech" (rhetorical figures, or schemes), whose stylistic effect is achieved using an unusual arrangement of linguistic units, unusual construction or extension of an utterance, etc.; in another word which deviate from normal language mainly in terms of syntax. This arbitrary division of stylistic means into expressive means and stylistic devices does not necessarily mean that these groups cannot overlap. On the contrary, the striking effect of many a stylistic device is based on the logical or emotional emphasis contained in the corresponding expressive means and vice versa: a formerly genuine stylistic device can become an expressive means.

Figurative Language is used to express a particular feeling or encourage imagination by a well-developed means of creating images, its purpose being to improve the effectiveness, clarity, and enjoyment of both written and oral communication. Figurative language has developed alongside rhetoric, both rooted as far back in history as the times of such classical rhetoricians as Aristotle, Quintillion, and Cicero. Rhetoric is usually defined as the art of persuasion. Aristotle and Quintillion developed a system of methods and tools of persuasion claiming that a rhetorical discourse should consist of - "invention" (developing arguments) - "disposition" (organizing one's subject) - "style" (the means of persuasion). In the modern era, "style" and "disposition" (as well as "invention", though) are still very important form-making categories. They are known as stylistic language means. Alliteration is the repetition of the initial sound of two neighboring words or words that are near each other in a sentence (i.e. connected by a conjunction or preposition). Alliteration is often used for emphasis because it draws attention to a phrase. Example: beautiful bouquet rare and radiant (poem by Edgar Allen Poe) grass grows greener on the golf course My mother makes a mouthwatering meat pie. Repetition of initial consonant sound means that only the sound has to be the same, but not the actual consonant. Example: a philosopher from Finland giants are jumping joyfully I knew she'd be a natural at kneading the noodle dough. If two words start with the same letter but have a different initial sound, the words are not alliterated. Example: sea shanty cutting chillis.

According to T. Sadikov, who researched the stylistics of the Kyrgyz language, the syntax of the Turkic languages is now in the process of formation. Even then, the subject and tasks of research in morphology, the interrelationship of syntax and lexicology, the unity of stylistics and other issues have not yet been sufficiently defined. V.N.Yarseva's idea that stylistics is left to phonetists and grammaticists in the organization of syntax has been left to phonetists (2.10). For example, Elysium is studied in both phonetics and morphology. Turkic languages, including it, are agglutinative languages. In agglutinative languages, when morphemes are joined together, they do not have a different sound change, which is accepted in linguistics as one of their characteristic features. However, this sign is a puzzle arising from the comparison of agglutinative languages, including Turkic languages, with inflected languages. Research on the morphology of the Chuvash language conducted by I.P.Pavlov in Turkic linguistics. emphasizes the possibility of the emergence of new phonemes and gives examples of evidence for it. In fact, in the structure of morphemes in the language, when affixes are added to primitive morphemes other than the exchange of phonemes, which are historical developments (in all), there are



phonetic changes that are difficult to explain for phonetic reasons, as well as phonetic changes[3,3].

According to N.S.Trubetskoy, stylistics means the figurative meanings of syntactical tools. Stylistics, as a link in language, has a special place in the grammar of any language. Only languages with syntax may not have stylistics. The founder of morphology, N.S.Trubetskoy. The term stylistics, its objects also describe the goals and objectives of Used and marked by N.S.Trubetskoy himself.

The second theory According to N.S.Trubetskoy, it is an important part of the morphology of agglutinative languages. However, some scholars consider this issue to be phonetics. Later, N.S.Trubetskoy's theory gives rise to all sorts of ideas and views. The third theory is related to the morphological function and the exchange of sounds has been endorsed by most scholars in both Russian and Turkish morphology.

Another novelty N.S.Trubetskoy added to morphology was his theory of morphonema. The term morphonema was first introduced to linguistics by the Polish scholar P.Ulashin, who wrote: the term sound means the sound of nature; phoneme means the sounds of speech; the term morphonema means the service sound that separates me[5,58].

Thoughts of scientists on the concept of stylistics Aydirim scientists (A.A. Reformatzky) means a morpheme. Some consider the phoneme to be a unit of morpheme morphology of phonology. stylistics is a complex of the interchangeable device in the construction of a sentence. In the Uzbek language department, according to A.Abduazizov, many scientific articles show that it is convenient to use the term "stylistics" instead of a word sequence for the exchange or change of sentences. The syntax is a formal concept higher than lexicology.

In literature and writing, stylistically elements are the use of any of a variety of techniques to give an auxiliary meaning, ideas, or feeling to the literalism or written. A figure of speech is any way of saying something other than the ordinary way. Figurative language is the language using figures of speech. Now we will define the basic stylistic devices such as simile, metaphor, synecdoche, metonymy, personification, symbol, imagery.

1. Simile. The easiest stylistic device to identify is a simile, signalled by the use of the words "like" or "as". A simile is a comparison used to attract the reader's attention and describe something in descriptive terms. Example: "From up here on the fourteenth floor, my brother Charley looks like an insect scurrying among other insects." (from "Sweet Potato Pie," Eugenia Collier) Example: The beast had eyes as big as baseballs and teeth as long as knives. Example: She put her hand to the boy's head, which was steaming like a hot train.

## 2. Metaphor

A metaphor is a comparison that does not use the words "like" or "as". Metaphors can span over multiple sentences. Example: "That boy is like a machine." is a simile but "That boy is a machine!" is a metaphor.

## 3. Synecdoche

Synecdoche occurs when a part of something is used to refer to the whole. Many examples of synecdoche are idioms, common to the language. Example: Workers can be referred to as 'pairs of hands', and a vehicle as one's 'wheels'.

#### 4. Metonymy.

Metonymy is similar to synecdoche, but instead of a part representing the whole, a related object or part of a related object is used to represent the whole. Often it is used to represent the whole of an abstract idea. Example: The phrase "The king's guns were aimed at the enemy," using 'guns' to represent infantry. Example: The word 'crown' may be used metonymically to refer to the king or queen and at times to the law of the land.

5. Personification. Giving human or animal characteristics to inanimate objects. Example: The wind whistled through the trees. (Wind cannot whistle, humans whistle.)

6. Symbol. A symbol may be an object, a person, a situation, an action, a word, or an idea that has a literal meaning in the story as well as an alternative identity that represents something else. It is used as an expressive way to depict an idea. The symbol generally conveys an emotional response far beyond what the word, idea, or image itself dictates. Example: A heart standing for love. (One might say "It broke my heart" rather than "I was really upset") Example: A sunrise portraying new hope. ("All their fears melted in the face of the newly risen sun.")

7. Imagery. This is when the author invokes sensory details. Often, this is simply to draw a reader more deeply into a story by helping the reader visualize what is being described. However, imagery may also symbolize important ideas in a story. For example, in Saki's "The Interlopers", two men engaged in a generational feud become trapped beneath a fallen tree in a storm: "Ulrich von Gradwitz found himself stretched on the ground, one arm numb beneath him and the other held almost as helplessly in a tight tangle of forked branches, while both legs were pinned beneath the fallen mass." Readers can not only visualize the scene but may infer from it that it is the feud that has trapped him. Note also the diction used within the imagery: words like "forked" and "fallen" imply a kind of hell that he is trapped in.

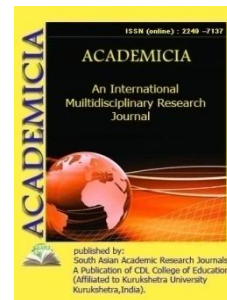
### CONCLUSION

In conclusion, Karakalpak language teaching is the most effective means of cultivation for the students' stylistic competence. Especially, Karakalpak language can be used with stylistic devices by people and most widely used for showing beautiful, meaningful and impressive speech with the help of figurative language. At the same time, we can utilize all grammatical units and stylistic devices in our sentences through Karakalpak language teaching can benefit the largest number of the students than any other language teaching or any other language learning. Moreover, the students who learn and use Karakalpak language will obtain the fundamental knowledge and skills for effective usage stylistic devices and successful career in the educational sphere. Karakalpak language teaching involves not only a set of grammar rules and lexical items but also a set of stylistic conventions governing language form and behaviour within a communicative group.

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## THE SIGNIFICANCE OF SPIRITUAL AND SOCIAL IMAGE OF THE MODERN LEADER FOR THE DEVELOPMENT OF SOCIETY

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### ABSTRACT

*The role of leadership style in managing organizational change has been extensively explored in this article. This article is related to sought to shed light on and present a broad literature on the role of leadership style in organizational change. It has been found that there are several leadership styles that can play a promotional role in change in different literatures management processes; authoritarian leadership, transformational leadership, laissez-faire leadership, from servant leader, transactional leadership, democratic leadership, strategic leadership, bureaucratic leadership, advisory and participatory leadership. It was later found that leadership was one of the leading factors leading to positive change organizations. For example, leadership is about directing executives in the direction they want to achieve organizational goals. It was also found that leadership has become an important component of successful change in any organization to always face the competitiveness of the disputed market. The article is also covered leadership concepts and organizational change management and their types in detail. In addition, in this article you can be informed essential information on the importance of modern leadership in society by consideration, ideas and approaches of many scientists, linguists and writers*

**KEYWORDS:** Leadership, Leadership Style, Organizational Change, Change Management

### I. INTRODUCTION

Globalization has made the world global organizations are rural and always antagonistic compete with each other. As a result, organization is needed creating new useful operational methods in their implementation businesses. In this situation, it became “Leadership” an essential component for successfully changing anything an organization with the aim of always facing

contentious competition in the world market. Such are the leaders of organizations Recognized as a “Champion of Change,” that’s why responsibilities of the top management of any organization continue the change process to ensure sustainability operational reliability of the organization [1]. Besides, the change is obvious and the most important concern in anything organizations. Still, there is always research ‘Indicate that 50% to 70% of the planned changes actions fail’. This may not be good for the organization it wants to make serious changes as the best way to succeed. Studies have also found that many organizations “fast or the constituent side of change”, however, offers a few minutes of effort to do so the human side of change. Organizations to achieve the goal the results required from a new route system or initiative, they need to get the help of change leadership as well change management philosophy. Since then, change leadership such as managing and managing change stages as well as the emotions associated with these stages. That is why, people must not allow continuous change. Change leaders need leaders, and their collaboration organizing everyone together, talking about beliefs and thinking it helps people develop practices and behaviors this can help them become accustomed to change. On contrary to change management (this is considered) the presence of a process with the concentration of external structures, systems and processes); change leadership from the inside out an integral part of addressing change. About it calling people to change and making them happen everything ‘in the face of uncertainties, fears, and distractions.’[2] In addition, the Second [3] emphasized the importance of change which is the second period as the relevance and real reality of our time the solution to the problem is highlighted with the word “unique” what does not change is change itself.” Also when there is constant change, people and organizations need to change to get used to change. Organizations dynamic and open systems common in business and in contact with their surroundings [4]. When from this angle it is understood that it fits It is very important for organizations to adapt to changes in the order of their operational activities to maintain their existence [5]. It is worth noting that so important and strong for organizations to be capable and changing know-how in the process of adapting to make changes.

## II. METHODOLOGY

As noted by Akhitsa [6], almost all of them organizations work in a live environment and experience change in many ways, such as performing new methods business strategies, simplification of new policies, statement, purchase, merger, relocation or implementation of a new one technology, among others. Thus, organizational improvement performance, companies must have planning skills, making and managing change is just a weird phenomenon but constantly. This role is recognized managers typically play a role in managing strategic change in addition to organizations, how they act an organization focused on achieving its goals by using their leadership skills. Ganta and Manukond [7] also emphasized that the lead should be the supervisor or as a ‘change agent’ who can manage the organization more effective management of organizational change and successful’. There are organizations today mandatory due to rapid technological improvement, high customer expectations and an ever-changing market constantly reviewing and reviewing situations how they work and understand, embrace and implement changes in their business in response to changing trends market. Change of organization is the call of the day and the need for organizations to survive. Organizations days, know exactly the importance of the problem and exist always ready to get now and into the future maintained success rate. Again, the organizational change is very difficult and similarly along with an

amazing process and all its consequences importance In addition, Gerwing [8] Lippitt et al al., [9] were probably the first to present the book definition of change agents. According to Lippitt et al., Change an agent is a planned change that results from a decision make a deliberate effort to improve and get the system the help of an external agent in this improvement. We call the external agent a change agent '. More common and The definition of inclusion was carefully chosen by Beckhard [10] "Agent of Change" refers to those people or the people within them outside the technical support organization, specialist or consulting assistance in managing change efforts'. Alqatawenh [11] mentioned changing and managing this a major concern for business organizations in our time as well regardless of obligations. Because organizations a rapid follow-up status and high gross revenue. Also, change is happening to everyone today The cumulative and complex rate will change this leadership can become a huge test for modern organizations. On the other hand, many researchers have confirmed this "The theme of an effective leadership strategy" is constant restructured issue [12]. As a result, the organization did not do so depends on very large feeders, but there is a need for their availability later the ability of leaders to persuade individuals through them the views and responsibilities of the organization in order to create clarity change [13]. However, the ability to cope with change successfully calling for the coherence of leadership behaviors with the work of an organization named by Burns [14] transformational leadership. For the second [3] they should be some important conditions, such as the desire to change, readiness for change and having the necessary resources make changes'. It should also be an organization in order, in addition to change, it should be accompanied by plenty the amount of political support that cannot be ignored [4]. In addition, for the organization to adapt to change it is very important to have an effective leader the approach is well structured and implemented organizational preparation [5]. The main purpose of this, this is an unpredictable view of the purchase physiognomies and the construction of these physiognomies important leadership issues to maintain. So he has some researchers have noted that it has all sorts of prospects an organization for self-renewal and habituation if administrators are strong, changes will depend has leadership skills and a say in management organizations, [15]. In addition, Ali [16] emphasized that leadership would remain Be a test for the future. Therefore, without reference sufficient aspect of leadership for any restructuring be hopeless. Any change in this condition will be conditional how well leadership can see its role in processing change. Leadership is one of the potentials that is informal define rather than describe. Because the leaders themselves are different as a result, the subjects also differ in the nature of leadership on the necessity of certain circumstances. Bunda situation, well-known consultant Peter Draker The organizational management observed the following: Among effective leaders, I have known and worked with, there are extroverts and aloof, retired men, some even morbidly shy. Some are eccentrics, others are painfully straight conformists. Some are fat and some are thin. Some barriers and some are loose. Some drink a lot and others are neutral voters. Some are very attractive and heat; some have no more features than a frozen one mackerel. In addition, Jackson and Parry also noted this These leaders have their own abilities and knowledge of staff management and delivery in the process of the expected action for them being Germany goals and objectives of the organization. He is also an 'effective leader' must have things with strong leadership skills specific characteristics such as passion, consistency, confidence and to see; because only leaders with these qualities are capable building trust in employees'. Therefore, it is worth noting leadership and management are two distinct characteristics. So management can probably be an old style business management as a business owner the absolute control of the



organization, 'and alone creating direction and directing their employees to do their jobs according to the owner's instructions and plan. On the other hand, leadership - this is how a leader manages his employees towards organizational goals as always communicate and motivate their employees to do make sure their employees are in the right position to use them talents and staying true to their work '. However, leadership approaches can sometimes change based on current trends when necessary; as opposed to the management that simply follows it old-fashioned rules. Similarly, Kotter asserted that "leadership produces" movement ». Kotter spoke of leadership efforts contributed to managing the direction that their teams should follow go, as well as how they should behave. Additional, leadership efforts can also inspire and support the team overcoming obstacles. So there can be no leadership same as management. Like, leadership is the exception a skill that some great managers have. As a result, change management experts describe organizational change as a business or method the organization seeks to enhance its position and performance or culture through the redevelopment of its structure as well as its strategy or processing techniques. Similarly, Lewis also indicates that organizational change is a significant feature and at the same time an attractive factor for businesses.

Lewis also observed that organizational change occurs in a variety of ways for example, measurements from minor administrative changes unit until a major change. In addition, the company is planning the transformation itself is usually seen as a tactic of progress. In the year long - term, organizational changes can affect the whole disrupting company and business culture. In addition, Cassie et al., also the reasons for organizational change are many. There may be a reason for this in the form of major changes such as joining, joining, etc. outsourcing, shortening, simplification or structural modification. However, small changes can happen anywhere an organization to increase business activity and efficiency through administrative restructuring, installation of a new one technology as well as new induction systems. Also small changes can occur by closing certain items production lines, 'or opening new branches in other parts country ». Helms-Mills, Paint and Mills are very clearly defined organizational change, "as a change of side activities of the organization. The main aspects include, technology, culture, leadership, purpose or any employee organization ". There may also be modification or modification patterns small or large, along with a single reorganization The whole company in this direction of the department, a new technical institute all the way thoroughly change production or close one manage the department and then lay off all employees Section. As a result, this is not the magnitude of the change it may be considered important, but the effect it creates within the organization. Smirnova briefly mentioned this various internal and external factors can cause the need for organizational change. Similarly, globalization, technological development, emerging competition, ever-changing environmental and economic conditions likely forced companies to make changes survive and continue to be competitive in the market. Tuchman and Anderson also identified "change" management as a process involving movement the organization needs something other than its current state transition period status'. They also stressed efforts to manage change can be demonstrative it is necessary to find a protest in the present situation. 'In order to organizations need to get a serious desire for the future situation create a clear strategy to achieve their views'.

### III. ANALYSIS

However, change is an important feature of transformational leadership placed in the modern leading literature. Hence the transformational change a change made through behavior and attitudes followers of change. Smith, Change Management an important plan in deciding what an organization is like expected to move from the present to the desired future state Therefore, when 'organizational change is planned, it acts as a link between existing parts of the change process including; setting priorities and deadlines, empowerment responsibility, design of review mechanisms and review, if any '. So to manage change appropriate plans need to be made for the process to be active preparations for change can be made earlier Consultations before the changes take effect. In order to make sure any change management plan is effective completed, appropriate plans should be made and, plans should also be fully budgeted. This process can make leadership very important because it is the manager's job is to return employees to their jobs for production maximum benefit from change. This method is simple emphasizes the importance of leaders throughout change.

Thus, the scientists Moran and Brightman explained the changes management as a process of continuing renewal the direction, structure and capabilities of the service organization the ever-changing needs of external and internal customers. On the other hand, the Q5 change highlighted the difference between change management and change management. Question 5 The change also provided an expert description of 37 changes change management with practical management rods, tools and instruments designed to maintain phases controlled changes. These tools are available managing employee reactions and excluding redundancies costs. Instead, change the leader according to their opinion, 'Related to skills, knowledge and behavior a leader must successfully start, manage, and deploy sustainable change in the organization '. However, successful change leaders may have some skills, such as change managers. Still, what replaced the leaders Change managers get their 'ability to accept change people need to buy the basic look and keep them instead of just pushing things, engaged throughout. Also their ability to minimize distortion. Therefore, this article explores the role of leadership style managing organizational change with secondary use data during the study. Leadership styles - concepts and Forms Holmes observed the existence of the idea of leadership led to a remarkable pact of investigation. And, most of them research was conducted through surveys and interviews and; The results provided valuable information about people patterns, as well as stereotypes of good leaders. Reading it also got an idea of what people were thinking be a "good guide". Still, there are still a lot of people for example, the conservative belief that a good leader someone 'who is authoritative, clear, definite and still recently, usually male '.

According to Bunmi, "leadership is social the process of influencing which the leader voluntarily seeks the involvement of subordinates to achieve the organization goals". Mullins then called the leader "a person who entrusts others to carry on or influences others set goals. Therefore, organizations today requires effective leaders who can understand the challenges a rapidly changing global environment. In one case, the task is highly developed and at the same time belongs to the leader good working relationship with employees, then the success of the organization will be highly dependent staff. Checklist 256 mentioned these early theories management and leadership style was mainly by the method of application of authority leadership in organizations. According to research University of Michigan in the 1950s, Ranceis Likert discovered four different leadership styles: operational / competent - there is little in the

way of leadership confidence in subordinates or self-confidence. Therefore, he manages by giving staff gives orders and uses the same tactics of fear and punishment motivators b benevolent / reputable - the leader believes a little its employees, but manages them under sponsorship and authoritarian style c Consultant - Demonstrates leadership trust and confidence study their attitudes and opinions towards subordinates, retains the strong side of decision making anyway organization d participant - the leader relies on his subordinates seeks and applies their ideas entirely and includes the following as well as in setting organizational goals Likert's research has shown that counseling and participatory leadership styles are more operational, however, he never thought of a situation where management needed to should play a role such as directing their employees to do their jobs work in accordance with the order and design of the owner. In addition, Ali [16] noted that Stephen Covey had noted his book, Principle-Based Leadership, has been published leadership usually focuses. He stressed this leadership pays more attention to people than to things. Also 'long-term prospects' rather than short-term goals; day values and principles, not activities; with assignment, methods, techniques, and instead of purpose and direction speed ».

#### IV. DISCUSSIONS

In addition, it was observed this leadership has become a popular field of research such as management found that it had more than twenty different styles as already mentioned in the literature. So every style is different completely different and having similar fields providing, including health, trade, public sector, and others. Importantly, Ali ([16], is similar approaches described the most visible leadership styles especially when organizing a business like: can be authoritarian leadership or autocratic leadership Describe the type of leadership where the leader the organization assumes control over all decisions and orders processes and tasks before the organization. Authoritarian much depends on the discipline within the leadership organization b Transformational leadership: Identify needs developing people and ways to address them; That's right full of goals and values, manners and ethics; prioritize daily activities; Related to the meeting long-term goals without compromising human values and principles. In addition, transformational leadership distinguishes between causes that disrupt development and their warnings signs and works to prevent them. Transformational leadership takes into account the value of profit as the basis of growth. Proactive, catalytic and durable as well as; focuses more on missions and strategies reach them. Makes full use of human resources and, identifies and develops new talent. Transformation leadership recognizes people's results and rewards for their remarkable contributions; brings out the person loves potential and models; always takes people out new directions. Transformational leadership, flattens internal structures and systems for reinforcement values and goals that encompass everything. The Laissez-faire leadership is opposed to authoritarianism leadership in many ways. The head of the Laissez faire tolerates these followers to have complete freedom in decision making it has to do with their work and how they are completed. The leader assumes his responsibility resources required by employees. A servant leader is someone who is primarily caring his team members and their needs. Servant leaders I think it leads to meeting the needs of the staff the success of the organization. Such leaders make it easier exchange of ideas within the organization and the proposal supporting employees to achieve their goals. Also service managers facilitate employee participation in the decision - making process. Transactional leadership: responding to a person's need work and

livelihood; drowned by force and position, policy, and preferences / advantages. Caught daily affairs and; focused on short-term and solid information.

Reasons for transactional leadership and symptoms and more concern than treatment recommendation; focuses on tactical issues; believes human relationships to lubricate people's interactions; are as follows and fulfills role expectations by striving to work effective within current systems; supports structures and systems that amplify and maximize the bottom line guarantee efficiency and short-term results. Democratic leadership, as the name implies, is open and here is the clear concept of the leading crystal distributed among decision-making powers members of the organization; and contributions from all members are evaluated and their contributions to the formula the views of the organization are supported. g Strategic leadership: is considered effective. He sits on the relationship between the company's core operations and its operations growth opportunities. He accepts the burden executive interests while ensuring current performance conditions for all others remain stable. This is it because it is a necessary leadership style in many companies strategic thinking supports several types of employees suddenly. However, managers who work in this way can designate a dangerous practice for how many people they can support at once, and that's the best direction everyone finds their way, the company really is all the time. h Bureaucratic leadership: rarely effective because they lead by the rules. However, this style management can listen and review the information you enter staff. Unlike autocratic leadership, it is bureaucratic Leadership if he rejects the employee's offer conflicts with company policies or past practices. Employees with this leadership style may not feel comfortable they are governed as if under autocratic leadership, however there is still a lack of freedom in how many people there are able to perform their roles. This type of leadership is possible will quickly turn off the novelty, and this is absolutely not the case is encouraged for companies that pursue ambition goals and rapid growth. Alqatawenh [11] is the views that organizations need to reflect about their leadership patterns in the midst of rapid change in the market and in order to save their lives stability Therefore, it is necessary to have mind leaders who need to know the magnitude of the challenges and the complexity of administrative processes allow them to discover the right leadership techniques possible able to be aware of events. Alqatawenh confirms again there must be transformational leadership needed today the ability to motivate subordinates to do their best such as improve their skills, which logically develops subordinate degrees. Accordingly, it has a transformational leader the potential to engage their teams to deliver more than expected by the organization. However, the scientist Conger evaluates a transformational leadership as 'outgoing leadership' in addition to encouraging performance'. The linguist Konger confirmed the idea The goal of a transformational leader is to nurture and inspire workers to be intellectually and creatively balanced. In the year in addition, to change the workers 'own fears an important part of the organization's mission. In addition, Trofino described transformational leadership "As the type of leadership that creates a clear vision for them organizations ". Kirkan also supports this variability 'leadership' is the style of leadership used by leaders to change the current situation by identifying followers organizational issues inspire, persuade and excitement to achieve a high level of clear vision for the goal of recognizing common goals'. According to Gadi et al al, the transformational leadership consists of four people small size. First, transformational leadership has the following the ideal inspiration that allows it increase the level of loyalty, devotion and compassion of employees without focusing on their personal interests. Secondly, there is an

inspiring motivation that can be visualized influencing subordinates to force them to obey organization.

Third, intellectual incentives can invite leaders the ability to teach workers how to be innovative, as well as risk recipient The final, evolving leadership has the following authorized to coordinate or perform a task with subordinates top-down motivator. This is achieved by achieving the role delegating authority to subordinates to implement decisions and their delivery. Rank and Hutchison's also presented the study social work profession and five common features leadership such as "proactivity, values and ethics", capacity building, viewing and communication '. They are too observed significant differences in problems faced by social work managers experienced by others fans. According to McDonald & Chenoweth, these are problems' may be caused by collisions professional values, an example of an integrated and structured line, caring and strong desire for others promoting inclusive practice '. Again, the main thing The leadership approach defined by Rank and Hutchison the study points to a changing leadership style. Similarly, Bass declared four factors described the style of transformational leadership as follows: 'idealized influence / charisma, inspiring motivation, intellectual stimulation and individual attention'. They are reiterated the role of transformational leaders models. They create a friendly feeling with a general vision, pride and confidence instilling in groups, encouragement and empowering groups, encouraging groups to reconsider their conservative practices and ideas and; they give too paying attention to individuals and getting to know their needs. Bass additionally focused this time on the transaction the leadership style he says is characterized by two factors: "Conditional Premium and Exception Management." Lou et al. According to exception management the factor has recently been divided into two properties: 'active' and passive ». As a result, a transactional leadership style is implemented where in a "leader-follower" conversation relationship corrective action is a privilege and therefore a follower meeting specific goals will be rewarded. In one case where transformational leadership style consists of values and demonstrative leadership, transactional leadership style remains well linked to identification and rewarding the individual actions of the follower.

## V. CONCLUSION

Leadership has become an essential component for a successful change in any organization in facing the ever contentious market competitiveness. In view of that leaders in organisations are recognized as supporters of change. Since, one of their duties as top management is to keep the process of change on going in their organisations in order to sustain the organization's operational credibility. Moreover, the role of leaders should be to guide their employees towards the achievement of organizational goals. It is therefore, fundamental for the leadership to always try to communicate and motivate employees in order to get an acceptable

outcomes that can increase workers commitment and loyalty to the organization. Even though, change has become very difficult for humans to embrace because; it at times take away certain privileges and opportunities they use to enjoy which, can in some cases force them to change their lifestyles and make them very much uncomfortable. In order to investigate which leadership style can be used more effectively in the change management processes; several leadership styles were reviewed in this paper: ranging from authoritarian leadership, transformational leadership, laissez-faire leadership, servant leader, transactional leadership, democratic leadership, strategic leadership, bureaucratic leadership, to consultative and participative leadership. Thus, most



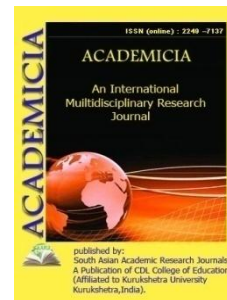
exponents identified transformational leadership as the most famous leadership style that will be in position to address the trials and difficulties of the emerging administrative practices. To them a transformational leader has the potential to stir his group to deliver more than anticipated by the organisation. Moreover, a transformational leader can mobilize separate incentives for performance and, can nurture and inspire workers to be intelligently and innovatively balance (as the leader is always familiar with their needs). Because of these qualities, transformational leaders are considered as role models since, they generate a sense of empathy with a common vision. A transformational leader can also, indoctrinate pride and faith in groups, as well as inspire and empower groups. Thus, in my opinion, transformational leadership style can help to reduce resistance to change. As, resistance to change can be one of the many reasons for the failure of change initiatives. Hence, it is crucial to go deeper in this field while observing organizational change.

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## RESEARCH AND DEVELOPMENT OF EFFECTIVE COMPOSITE CHEMICAL REAGENTS FOR DRILLING FLUIDS

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### ABSTRACT

*The research paper shows that those ways of research and obtaining composite chemical reagents and drilling fluids on their base. In the research work given physical and chemical properties of chemical reagents, methods of their testing, as well as the development of drilling fluids for drilling oil and gas wells. The result of the research work has been implemented in the wellbore with salt anhydrite layer of Kashkadarya gas deposits.*

**KEYWORDS:** *Chemical reagent, composite, gossypol resin, weighting agent, barite, drilling fluids, viscosity, density, stabilization, oil and gas well*

## INTRODUCTION

Nowadays for drilling of oil and gas wells are used more than 3000-ton chemicals in our republic. Most of them imported abroad but not always meet the requirements of geological and technical condition of oil and gas deposits. The quality of the construction of wells, and the quality of opening of the productive formation, largely depends on the used drilling mud, because the drilling fluid is a technological fluid that interacts with the newly opened rock. Based on the analysis of basic research in the field of chemistry and biochemistry of local raw materials and carbohydrates, generalizing the practice of drilling wells, polysaccharides are used as a polymer reagent for regulating the filtration and rheological properties of thin and weighted drilling fluids.[1,2] The main reason for the choice of polysaccharides is their ability to chemical and biological destruction, due to which it is possible to destroy and remove the formed clogging layer during the drilling process, and almost complete recovery of reservoir properties. Most of the global drilling operations use water-based drilling fluids, because of their lower environmental impact and lower costs. However, water-based drilling fluids are limited by their abilities to dissolve salts and interfering with the flow of oil and gas through porous rocks. Oil-based drilling fluids, owing to their excellent lubricity, high rate of penetration, shale inhibition, wellbore stability, high lubricity, high thermal stability, are expected to be used to drill difficult wells.

In all cotton-producing countries and factories proceeding cotton seeds gossypol resin is formed as a final product, which has a viscous-fluid consistency, and now find its effective implementation. The transformation of the viscous fluid gossypol resin into a powdered material by modification of the various ingredients of the organic and inorganic origin can bring to the commercial introduction of the products and expand the field of efficient use in large-tonnage quantities.

## MATERIALSAND METHODS

In the development of new composite chemical reagents for stabilization drilling fluids for drilling oil and gas wells, we used mainly waste of oil and fat production-gossypol resin, as well as low mass carboxy methylcellulose. Gossypol resin consists of 52 to 64 of free fatty acids and their derivatives, and the rest-a product of condensation and polymerization of gossypol and its transformation, resulting from the extraction of cottonseed oil, mainly in the process of distillation of fatty acids from soapstock. In the gossypol, resin found 12% of the nitrogen-containing compounds, 36% of the transformation products of gossypol fatty and oxide fatty acids.[3] It is a homogenous fluid mass from dark brown to black colour.

The innovation of technology for the production of composite polymer reagents by using of high molecular weight sodium carboxy methylcellulose, alkali, water-soluble modified powdered resins and organic-mineral additives of various ratios to improve the physic-chemical properties of drilling fluids had been developed. Water-soluble modified powdery from gossypol resin which contains hydrophobic additives based on sodium salt of fatty acids and ionic surfactants. The use of these reagents for drilling fluids used in drilling oil and gas wells ensures the preservation of the regulated rheological and filtration properties of polymer systems at 120-200 °C for 30-40 days.[3-6]

Minerals are used as drilling mud weights and, in rare cases, chemical and metallurgical wastes. Weighting compounds from natural minerals are distinguished by the method of their

production. Thus, the barite weighting agent can be divided into gravity and flotation. Depending on the base of the mineral, weighting agents from natural ores are divided into several types: barite, ferrous, carbonate and galenic.

Barite weighting. Barite  $\text{BaSO}_4$  (barium sulfate) is a mineral containing 65.7% BaO and 34.3%  $\text{SO}_3$ , as well as impurities: Sr, Ca, Pb, Ra,  $\text{Fe}_2\text{O}_3$ . It can be white, grey, red and yellow. Its density is 4.3 - 4.7  $\text{g/cm}^3$ ; Mohs hardness is 2.5-3.5. Ferruginous weighting compounds. Hematite is a mineral containing 70%  $\text{Fe}_2\text{O}_3$ . Colour from iron black to steel - grey; earthy and bright red. Its density is 5.0-5.3  $\text{g/cm}^3$ , Mohs hardness is 5-6. It is produced in the form of a powder with a density of 4.15-4.20  $\text{g/cm}^3$ . Magnetite or magnetic iron is a mineral of iron ores. Its chemical composition: 31% FeO, 69%  $\text{Fe}_2\text{O}_3$ . Carbonate weighting. Dolomite is a mineral of Ca, Mg ( $\text{CO}_3$ )<sub>2</sub>. Its density is 2.8-2.9  $\text{g/cm}^3$ , Mohs hardness is 3.5-4.0. It is used limited to weighting drilling fluids with a density of up to 1.5-1.7  $\text{g/cm}^3$ . Limestone - sedimentary rocks, consisting mainly of calcite, silica, its density is 2.70  $\text{g/cm}^3$ . Galenic weighting compounds. Galena-PbS, or lead shine, contains 86.6% Pb and 13.4% S. Copper, silver, zinc, sometimes selenium, bismuth, iron, etc. are found as impurities in galena. The density is 7.4-7.6  $\text{g/cm}^3$ .

### Determination of physical and chemical properties of drilling fluids

- **Determination of Mud Density.** The weight of the mud samples was determined using the Baroid mud balance. The cup was filled with mud after calibration. The expelled mud was washed and the balanced arm was replaced on the base with the knife-edge resting on the fulcrum.
- **Determination of Mud Viscosity** The mud viscosity of the samples was determined using Fann V-G meter. The Fann VG meter was filled to the 350 cc mark and placed on the movable work table. The table was adjusted until the mud surface was at the scribed line on the rotor sleeve. The motor was started with a high-speed position (600 rpm) and the reading was taken from a steady indicator dial value. The reading was also obtained at a low speed of 300 rpm [2,3].
- **Determination of pH.** The pH meter which consists of a glass electrode system, an electronic amplifier and a meter calibrated in pH units was used to test the pH of galena mud. The electrical connection with the mud was established through a saturated KCl solution contained in a tube surrounding the calomel cell. The electrical potential generated in the glass - electrode system by the hydrogen ions in the drilling mud was amplified and operated the calibrated meter which indicated the pH. [5-10].
- **Determination of stability and sedimentation indicators.**
- **Stability -** The ability of a solution to its density over a period of time. The stability index S is a value determined by the difference in densities of the lower and upper parts of the drilling mud settled for a certain time. Sedimentation index S, %, is the value determined by the amount of the dispersed phase, separated from a certain volume of the drilling fluid as a result of the gravitational separation of its components for a certain time. The sedimentation rate indirectly characterizes the stability of the drilling fluid.
- **Determination of the stability index by the stability cylinder TS-2.**

Operating procedure:

- pour a thoroughly mixed sample of the solution into a cylinder with a volume of 720  $\text{cm}^3$  to the edge;

- set the filled cylinder in a quiet place and leave it alone for a day;
- after 24 hours, open the cork, drain the upper part of the sample solution along with the settled water;
- thoroughly mix the drained solution and determine its density,  $\rho_1$ ;
- closing the tap with a stopper, thoroughly mix the lower half of the solution remaining in the cylinder and determine its density,  $\rho_2$ ;
- the stability index is calculated by the difference in densities;

$$C = \rho_1 - \rho_2, \text{g/cm}^3$$

- **Determination of sedimentation rate.** To determine the sedimentation index, a glass cylinder with a capacity of  $100 \text{ cm}^3$  is used.

Operating procedure:

- a thoroughly mixed sample of the drilling fluid is poured into the cylinder up to  $100 \text{ cm}^3$ ;
- put the cylinder with the solution in a calm place and leave it alone for 24 hours;
- after 24 hours, the reference position of the solution interface level is determined on a cylinder scale.

The sedimentation rate is calculated by the formula:

$$S = 100 - V, \text{cm}^3.$$

where S is an indicator of sedimentation, %;

V is the position of the solution interface level,  $\text{cm}^3$ .

## RESULTS AND DISCUSSION

The analysis and tests of the developed water-based drilling fluids by using composite chemical reagents have been given in table 1.

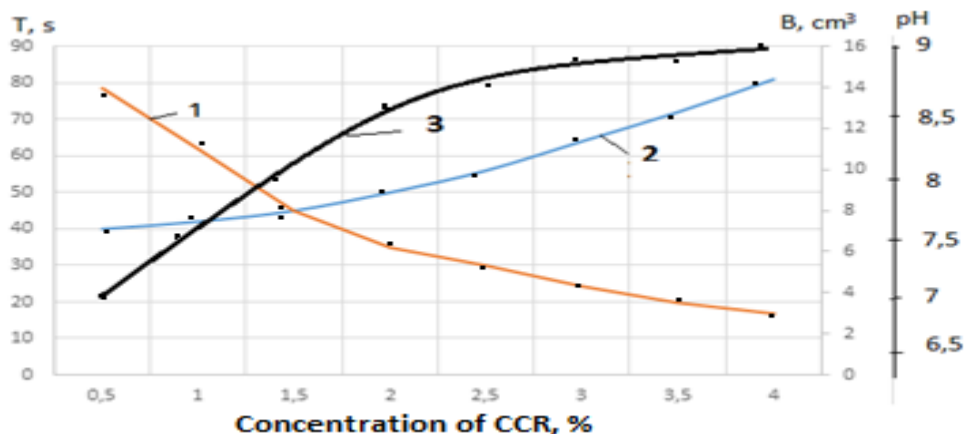
**TABLE 1. PHYSICAL AND CHEMICAL PROPERTIES OF COMPOSITE CHEMICAL REAGENTS**

Drilling fluid receipt	Density $\text{g/cm}^3$	Apparent Viscosity, s	Filtration, $\text{cm}^3/30 \text{ min}$	S, %	pH
CCR(1%)+bentonite(5%) + salinity water	1,150	18	40<	10	8
CCR(2%)+bentonite (5%) +salinity water	1,140	21	40<	7	8
CCR(3%)+bentonite (5%) +salinity water	1,130	28	25	3	9
CCR(4%)+bentonite (5%) +salinity water	1,12	35	15	2	9
CCR(5%)+bentonite (5%) +salinity water	1,110	46	10	1	9
CCR(6%)+bentonite (5%) +salinity water	1,10	58	7	0,5	10
CCR(7%)+bentonite (5%)	1,09	70	3	0,2	10

+salinity water					
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The table 1 shows that technological parameters of drilling fluids based on composite chemical reagents with bentonite based on salinity water. By increasing volume of composite chemical, reagents increase viscosity, decreases water loss and density as well as sedimentation rate. Increasing concentration of CCR from 1 to 7%, density of fluids decreases from 1,15 to 1,09, viscosity increases from 18 to 70 s, water loss decreases to 3  $\text{sm}^3/30$  min, sedimentation rate decreases from 10 to 0,2  $\text{sm}^3$  as well as pH increases to 10.

Next, have been investigated the main stabilization index as a sedimentation rate of weighted drilling fluids. Studies of sedimentation index C,%, is the value determined by the amount of the dispersed phase separated from a certain volume of the drilling fluid as a result of the gravitational separation of its components for a certain time was carried out in a glass flask with a volume of 100  $\text{cm}^3$ . Pour weighted drilling fluid obtained based on composite chemicals and weighting agents. The sedimentation rate indirectly characterizes the stability of the drilling fluid. The developed composite polymer reagents for drilling in salt layer and corrosive environments, as they are stable to cations of polyvalent salts ( $\text{Mg}^{++}$ ,  $\text{Ca}^{++}$ ,  $\text{Na}^+$ ,  $\text{K}^+$ ). Composite polymer reagent has a high lubricity due to the content in its composition of about 35-40% of polymerized fatty acids, pigment, glycerin and other components that serve to emulsify oil in the water. The research work had been implemented in well No.39 of the Chilkubar deposit located in Kashkadarya region of «Uzburneftgaz» JSC, and production tests of weighted drilling mud (obtained based on a composite chemical reagent CCR and barite of the Saribulak deposit), were carried out. In the well was used a rotary type of drilling. The design borehole and productive horizon depth is 3.600 m. The salt-anhydrite strata were drilled from 2.800 m to 3.200 m without any accident by using developed compositions of weighted drilling fluids with a density of 1.85-1.95  $\text{g/cm}^3$ . Figure 1 shows the effect of the concentration of a composite chemical reagent CCR on the viscosity, fluid loss and pH of drilling fluids.



**Fig. 1. Dependence of viscosity T (2), water loss B (1) and pH (3) of mineralized drilling fluids on the concentration of CCR.**

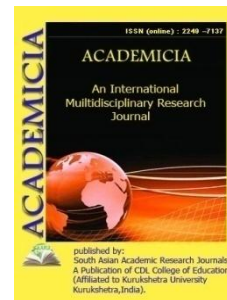
From figure 1 it can be seen that with an increase in the CCR concentration from 0.5 to 4%, the conditional viscosity of the  $T_{500}$  increases from 40 to 82 s, the pH of the solution increases from 7 to 9, the water loss decreases from 14 to 3  $\text{cm}^3$  in 30 minutes and the stability of the solution reaches up to 0.05  $\text{g/cm}^3$ . The speed of drilling had been increased by 10-15%. All the



technological parameters and physic-chemical properties meet the requirements, which given in GTC (Geology technical condition). The expected economic efficiency in the application of 1000 tons of composite chemical reagents will be about 3.54 billion sums. As a result, the study and analyzes of the physic-chemical properties of the developed composite polymer reagents and weighting agents proposed new compositions of weighted drilling fluids, as well as recommended for use in drilling oil and gas wells with abnormally high reservoir pressure (AHPD).

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## SEXUAL BELIEFS AND PRACTICES AMONG THE COLLEGE-GOING YOUTH: A STUDY OF JAMMU CITY

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### ABSTRACT

*Beliefs provide individuals with a sense of certainty and belonging; beliefs are sometimes dysfunctional at the individual as well as societal level. Many studies explored beliefs about sexual practices and attitudes not alike among the young and old generation. The topic related to sex is not easy to study; the present study aims to understand the beliefs and practices among the college-going youth in the Jammu city. The study focused on the beliefs regarding intimate premarital relations among unmarried girls and boys, and respondents experience regarding sexual intercourse and masturbation. The results indicated young college going boys have more liberal views than college going young girls towards premarital sex; however, in the practice of sexual intercourse majority of respondents does not have an experience of sexual engagement. The study has indicated that their socio-cultural background and gender norms have shaped the sexual beliefs of college-going youth in Jammu city.*

**KEYWORDS:** Jammu, Sexual, Beliefs, Premarital Sex

### 1. INTRODUCTION

The Public debates about sex and sexual beliefs in India and particularly in Jammu and Kashmir are not familiar. It is essential to understand that beliefs do not develop in isolation. The social space plays a vital role in shaping beliefs and perceptions. Sex and sexual desire are typically considered morally suspect according to various religious teachings. All major religions have explicit rulings against certain sexual practices, including premarital sex, contraception, masturbation, and homosexuality (LeVay & Valente, 2006). India is the land of the multi religions, and almost all the religions advocated sexual conservatism which includes beliefs that emphasise the affirmation of social and normative conventions regarding sexuality, respect to

traditions, and the maintenance of society. On the other hand, liberalism advocates that individual freedom and sexual liberalism always emphasises individual sexual freedom and sexual autonomy. The present study is an attempt to explore the comprehensive description of sexual beliefs and practices among the college-going youth in Jammu city. The area of study previously unexplored in the area of research, particularly in Jammu city. In terms of individual differences in sexual beliefs and practices, one of the vital variables to study is gender. This study also focused on different views presented by male and female regarding sexual beliefs and practices.

## 2. METHODOLOGY

The present paper is based on purposive sampling technique of data collection which has been used for collecting data regarding the sexual beliefs and practices among the college-going youth in Jammu city. The researcher also used the secondary sources of data like books, journals, government manuals, websites and published and unpublished works related to the study. The primary data collected with the help of the web-based questionnaire created on Google forms. The researcher sent the questionnaire link through email to the targeted population. The telephonic conversation has also used to collect the data. For the selection of the study unit, purposive sampling has been used. As it implies deliberate selection of the sample units that conform to some pre-determined criteria. Purposively, we selected only unmarried youths who are studying in colleges of the Jammu city.

## 3. SAMPLE AND UNIT OF ANALYSIS

The study was conducted in Jammu city in Jammu and Kashmir. The sample consisted of 132 unmarried college-going youth which lies in the age between 18 to 25 years. The online survey was conducted among the college-going youth in Jammu city.

## 4. DATA ANALYSIS

The data has been collected one of the popular web-based survey tool, i.e. Google forms. After the collection of data, it is coded and tabulated & then analysed with the help of various statistical tools. The collected data has been analysed using software like MS Office Word and MS Office Excel

## 5. RESULTS AND DISCUSSIONS

**TABLE:1 DISTRIBUTION OF RESPONDENTS ON THE BASIS OF THEIR RESPONSES REGARDING THE BELIEFS AND VIEWS ABOUT INTIMATE PREMARITAL RELATIONS**

Beliefs	Response	Respondents		Total
		Male	Female	
Belief in it's all right for unmarried boys and girls to have date	Agree	54(67.5%)	37(71.15%)	91(68.93%)
	Disagree	12(15%)	03(5.76%)	15(11.36%)
	Not sure	14(17.5%)	12(23.7%)	26(19.69%)
	Total	80(100%)	52(100%)	132(100%)
Belief	Response	Respondents		Total

		Male	Female	
Belief in its all right for unmarried boys and girls to kiss, hug and touch each other	Agree	42(52.5%)	25(48.7%)	67(50.75%)
	Disagree	26(32.5%)	12(23.07%)	38(28.78%)
	Not sure	12(15%)	15(28.84%)	27(20.45%)
	Total	80(100%)	52(100%)	132(100%)
Belief	Response	Respondents		Total
		Male	Female	
Belief in there is nothing wrong with unmarried boys and girls having sexual intercourse if they love each other.	Agree	33(41.25%)	20(38.46%)	53(40.15%)
	Disagree	33(41.25%)	18(34.68%)	51(38.63%)
	Not sure	14(17.5%)	14(26.92%)	28(21.21%)
	Total	80(100%)	52(100%)	132(100%)
Belief	Response	Respondents		Total
		Male	Female	
Belief in boy will not respect a girl who agrees to have sex with him.	Agree	19(23.75%)	9(17.30%)	28(21.21%)
	Disagree	41(51.25%)	27(51.92%)	68(51.51%)
	Not sure	20(25%)	16(30.76%)	36(27.27%)
	Total	80(100%)	52(100%)	132(100%)
Belief	Response	Respondents		Total
		Male	Female	
Belief in boy and a girl should have sex before they become engaged to see whether they are suited to each other.	Agree	15(18.75%)	04(7.69%)	19(14.39%)
	Disagree	46(57.5%)	28(53.84%)	74(56.06%)
	Not sure	19(23.75%)	20(38.46%)	39(29.54%)
	Total	80(100%)	52(100%)	132(100%)

## 5.1 PREMARITAL INTIMATE RELATIONSHIPS

Premarital relationships are often viewed as a space of acute individualism or as a social phenomenon that can be a threat to the values and norms of the family (Bhandari, 2017). Historically intimate premarital relations between men and women were restricted in all the societies across the globe, especially premarital sexual relations for both men and women. Premarital sex was considered a moral issue which was taboo in many cultures and considered a sin by several religions. Traditionally, marriage was the only institution which guided the sexual relations between men and women. The process of liberalisation in economy and polity also resulted in the liberalism in the sexual attitudes and behaviour. Guerra and Gouveia (2007) defined sexual liberalism as a group of beliefs that emphasise the acceptance of individual sexual freedom and respect for one's sexual autonomy. Table 1 shows that the responses of respondents regarding the beliefs and views about premarital sexual relations.

The data within the table 1, shows that in response to the question of "belief in it's all right for unmarried boys and girls to have the date ", it is evident from the table1 68.93% of total respondents responded "agree" followed by 19.69% "not sure" and 11.36% respondents responded, "disagree". The data shows that the majority of respondents believed that it all right for unmarried boys and girls to have a date. Among the 80 male respondents, 67.5% respondents

responded "agree" followed by 17.5% "not sure" and 15% respondents responded "disagree" and among the 52 female respondents 71.15% respondents "agree" followed by 23.7% "not sure" and only 5.7% respondents responded "disagree". The data indicated female respondents as compared to male respondents have more liberal thinking regarded the unmarried girls and boys have right to date.

In response to the question of "belief in its all right for unmarried boys and girls to kiss, hug and touch each other" it is evident from table1, 50.75% of the total respondents responded "agree" followed by 28.7% responded "disagree" and 20.45% respondents responded, "not sure". The data shows majority respondents believed in its all right for unmarried boys and girls to kiss, hug and touch each other. Among the 80 male respondents, 52.5% respondents responded "agree" followed by 32.5% responded "disagree" and 15% respondents responded "not sure" and among the 52 female respondents 48.7% respondents responded "agree" followed by 28.84% respondents responded "not sure" and 23.7% respondents responded "disagree". The data indicated more male respondents as compared to female respondents have liberal thinking regarded the unmarried girls and boys have the right to kiss, hug and touch each other.

In response to the question of "belief in there is nothing wrong with unmarried boys and girls having sexual intercourse if they love each other" it is evident data within the table1, 40.15% respondents of the total respondents responded "agree" followed by 38.63% responded "disagree" and 21.21% responded, "not sure". The data shows the number of respondents are more who believes in unmarried boys and girls having the right to sexual intercourse if they love each other but the gap between those who belief and those who not believe is very minimal. Among the 80 male respondents, 41.25% responded "agree", 41.25% respondents responded "disagree", and 17.5% responds "not sure". Among the 52 female respondents, 38.46% of respondents responded "agree" followed by 32.68% responded disagree, and 26.92% responded, "not sure". The data indicates more male respondents as compared to female respondents believed in unmarried boys and girls having the right to sexual intercourse if they love each other.

In response to the question of "belief in boy will not respect a girl who agrees to have sex with him" it is evident from table1, 51.51% respondents responded "disagree" followed by 27.27% respondents responded "not sure", and 21.21% respondents responded, "disagree". The data shows the majority of respondents not believed in boy will not respect a girl who agrees to have sex with him. Among the 80 male respondents, 51.25% of respondents responded disagree followed by 25% responded "not sure" and 23.75% responded, "agree". Among the 52 female respondents, 51.92% responded "disagree" followed by 30.76% responded "not sure" and only 17.30% of respondents responded, "disagree". The data indicate the majority of both male and female respondents disagreed with the boy will not respect a girl who agrees to have sex with him.

One of the essential and central functions of the institution of marriage is to regulate the sexual life of human being. It is evident in many studies lack of sexual intimacy is the one of the major causes of divorce in India. In the response of question, "belief in boy and a girl should have sex before they become engaged to see whether they are suited to each other" it is evident data within the table 1 56.6% respondents of the total respondents' responded "disagree" followed by



29.54% "not sure" and 14.39% responded, "agree". The data shows that the majority of respondents has not realised the importance of sexual suitability after the couple gets engaged.

## 5.2 PREMARITAL SEX

Norms of premarital sex across cultures also reliably predict the number of unmarried boys and girls who engage in sexual activity. The patterns are similar for boys and girls, although there are fewer societies in which premarital sex is universal for girls and boys (Broude,2003). Table 2 shows the responses of respondents regarding the engagement in sexual intercourse.

Table 2 shows that the responses to the question of "Do you ever engaged in sexual intercourse" it is evident from the data 75% respondents of the total respondents responded "No" and only 25% responded "Yes". The data shows the majority of respondents does not experienced sexual intercourse; this indicated majority of respondents still seen premarital sex as a taboo. Among the 80 male respondents 67% respondents responded "No and 32.5% respondents responded "Yes" and among the 52 female 86.53% of respondents responded "No" and only 13.46% respondents responded "Yes". The data indicated female respondents are less engagement in sexual intercourse as compared to male respondents; there is another possibility of the fact of responses. Although premarital sex is taboo in almost all the societies all over the globe, however, the majority of societies approved the premarital sex of male. However, still, the majority of societies disapprove the premarital sex of female maybe it was the reason the majority of female respondents hidden their experience of sexual intercourse.

<b>TABLE: 2 DISTRIBUTION OF RESPONDENTS ON THE BASIS OF THEIR RESPONSES REGARDING THE ENGAGEMENT IN SEXUAL INTERCOURSE.</b>				
Question	Response	Gender		
		Male	Female	Total
Do you ever engaged in sexual intercourse	Yes	26 (32.5%)	7 (13.46)	33 (25%)
	No	54 (67 %)	45 (86.53%)	99 (75%)
Total		80 (100%)	52 (100%)	132 (100%)

## 5.3 MASTURBATION

Masturbation is not easy to study because of the extreme sensitivity of respondents to questions on the topic. Masturbation was seen as a common solution to sexual arousal, especially after watching pornographic films. This behaviour was found unacceptable among young girls as compared to young boys(Bhugra et al.,2007). Table 3 shows the response of respondents regarding the experience and views about masturbation.

Table 3, shows the response to the question "Do you ever experienced masturbation" it is evident data within the table3, 58.3% of respondents responded "Yes" and 25.7% responded "No". The data indicates the majority of respondents experienced masturbation. Among the 80 male respondents, 80% responded "Yes", and only 20% responded "No" and among the 52 female



respondents, only 25% responded "Yes" and "75%" responded "No". The data indicated the male respondents have more experience of masturbation as compared to female respondents.

In response to the question of "Do you think masturbation is normal," it is evident from the data within the table 3, 50% of the respondents responded "Yes", and 25.7% responded "No", and 24.24% respondents responded "Maybe". The data indicates this behaviour is acceptable among the majority of respondents; only 25.7% of respondents think the practice of masturbation is not normal. Among the 80 male respondents 63.75% respondents responded "Yes", 20% responded "No" and 16.25% responded "Maybe" and among the 52 female respondents only 28.54% respondents responded "Yes", 34.61% responded "No" and 36.53% responded "Maybe". The data indicates more male respondents accepted this practice is normal.

**TABLE 3. DISTRIBUTION OF RESPONDENTS ON THE BASIS OF THEIR RESPONSES REGARDING THE EXPERIENCE OF MASTURBATION.**

Theme	Response	Gender		
		Male	Female	Total
Do you ever experienced masturbation	Yes	64(80%)	13(25%)	77(58.33%)
	No	16(20%)	39(75%)	55(41.66%)
Total		80(100%)	52(100%)	132(100%)
Theme	Response	Gender		
		Male	Female	Total
Do you think masturbation is normal	Yes	51(63.75%)	15(28.54%)	66(50%)
	No	16(20%)	18(34.61%)	34(25.75%)
	May be	13(16.25%)	19(36.53%)	32(24.24%)
Total		80(100%)	52(100%)	132(100%)

## CONCLUSION

This exploratory quantitative study among college-going youth in Jammu city indicates that there are differences in sexual beliefs and practices between male respondents and female respondents. Male respondents tend to be more liberal in their beliefs about intimate sexual relationships between young boys and girls. However, there are a substantial number of female respondents who are showing a liberal belief in the intimate sexual relationships between unmarried boys and girls but in the context of practising sexual activities although male respondents were having more experience of sexual intercourse. The impact of modernisation reflects in their thinking regarding sexual relations. Although their experiences and practices related to the sexual intercourse indicated they have still stronghold on their traditional norms related to sex and sexual practices guided by their religion and family. These findings should be seen as indicative and not to generalize all the college going youth in the study area but findings can be utilised to develop further research studies related to this field of study.

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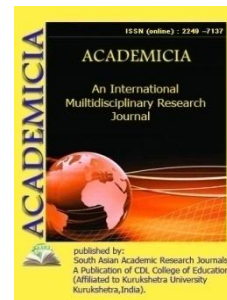
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## THE NATURE OF THE NURATA RIDGE AND ITS PROTECTION

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### ABSTRACT

*A comprehensive study of the nature and natural resources of the Nurata ridge has developed scientific recommendations and considerations for the conservation of nature. They formed a valley on the mountain slope with a depth of 120-170 m, and up to three terraces were preserved at the bottom of the river. The shape of streams usually depends on the rocks they cross. As a result of the unprotected and unsustainable use of mountain spruce as a building material and firewood, spruce has declined sharply. The only surviving spruce from those ancient times is located in the middle of the village of Majerum, and it was this condition that was the basis for its preservation. In the scientific literature, this tree is called spruce, and it grows to an altitude of 1400-2500 meters. According to some estimates, spruce can live more than two thousand years. Different parts of the arch are also used in medicine.*

**KEYWORDS:** Nurata Ridge, Ukhum, Majurum, Hayotboshi Peak, Kyzylkum Desert, Remnant Mountains, Natural Monuments, Natural Objects, Rivers.

### INTRODUCTION

The Nurata Range is the western branch of the Turkestan Range, with a length of 264 km. It stretches from the Gorge of the Snake Pass in the east to the city of Nurata in the west. The Nurata ridge is divided into northern and southern branches.

The slope of the northern Nurata ridge rises sharply from the foothills, and the highest point is the Peak of Life (2169 m), where the Ukhum and Majurum rivers begin. Life Peak is located in the central part of the mountain. The central part of the mountain is higher than the eastern and western parts, with an average height of 1,750 m. In this section, in addition to the peak of Hayotboshi (2169 m), there are also peaks such as Big Fozilmon (2134 m), Qarchigay (2105 m). The western edge turns into hills with an absolute height of 400-450 meters on the meridian of the city of Nurata and gradually merges with the Kyzylkum Desert. The eastern wing enters the

territory of Jizzakh in the form of a low mountain (Yetimtog) at an altitude of 650-700 meters [1. Alibekov L].

**The main part.** Another type of erosion forms spread along the watershed line of the Nurata ridge. These are conical funnels in the catchment area of the rivers, from which the Osmonsay, Kulbasay, Uchmasay, Ukhumsay, Majrumsay and Sintobsoy rivers begin. They extend in a row along the watershed line, the size and depth of which depend on the size of the streams. These streams have different sizes and differ from each other in terms of morphometric parameters (see Table 1).

**TABLE 1 MORPHOMETRIC INDICES OF RIVERS IN THE NURATA RIDGE**

№	The name of the streams	Length, km	Basin, km <sup>2</sup>	Average annual water consumption is m <sup>3</sup> / sec
1	Osmonsoy	13	30	0,200
2	Kulbasoy	10	33	0,140
3	Uchmasoy	10	40	0,200
4	Ukhumsay	11	73	0,430
5	Majrumsay	15	47	0,140
6	Sintobsoy	16	74	0,170
<b>General indicators of streams</b>		<b>75</b>	<b>297</b>	<b>1,280</b>

In addition to large streams, water-collecting funnels and ridges separating them on the mountain slopes, ravines, steep erosion forms, separate peaks, domed rocky hills are also common relief forms.

Located in the northern part of the Nurata ridge, Pistalitog, Baliklitog, Egarbellitog and Khanbanditog are composed of Paleozoic rocks and belong to the group of low mountains. These mountains are Remnant Mountains that extend northwest parallel to the Nurata ridge. The largest of them is Pistalitog, which is 33 km long, 3-5 km wide and 542 m in absolute height. Baliklitogi is 20 km long, 1.5-2.0 km wide, the highest point is the Bozaygir peak (551 m). Egarbellitogi is a continuation of Baliklitogi, 12 km long, 1.5 km wide and 618 m high. Mount Khanbandi is located in the south-west of Pistalitog, 15 km long, 1.5-2.0 km wide, and 420-450 m high. All of these mountains have steep and short northern slopes, and relatively sloping and long southern slopes. The plains near and between these mountains are covered with thick proluvial and alluvial deposits.

In the Nurata ridge, intrusive rocks protrude from the surface in several places of the Paleozoic limestone, crystallized shale, sandstone slopes. The mountain slope is strongly fragmented by streams, forming large streams, deep and relatively wide valleys with constant water flow. They have large villages. For example, from east to west Osmonsay, Ilonchisay, Majrumsay, Sintobsoy, Kattaichsay and others. They formed a valley on the mountain slope with a depth of 120-170 m, and up to three terraces were preserved at the bottom of the river. The shape of streams usually depends on the rocks they cross. Where rivers cross limestones, they have formed a narrow gorge shape, because limestones, dolomites have good solubility in water. When the river crosses the granites, the slopes form an uneven V-shaped valley, and on the slopes the granite rocks lie in a cushion. If the stream crosses shale deposits, in most cases the slopes will be covered with flattened, radiant fine-grained deluvial material. This is because

shales erode evenly relative to granites during erosion. The shape of the ridges between the streams is also similar to the shape of the streams, depending on the rocks. The area around the streams is covered with walnut and fruit forests. In Uzbekistan, walnut and fruit forests are found only in 3 mountainous areas.

## RESULTS AND DISCUSSIONS

On the central and southern slopes of the Nurata ridge is the Nurata Mountain Nut Fruit Reserve. The reserve was established in 1975 and covers an area of 40,000 hectares. The Nurata Nature Reserve protects argali and mountain sheep listed in the Red Data Book of Uzbekistan, as well as wild boar, marten, dwarf falcons and other animals to be included in the Red Data Book of Uzbekistan. The activity of birds living in and around the reserve is associated with Aydar-Arnasay lakes [2. Gudalov M]. These birds get the nutrients they need from the lake's surroundings. According to scientists, the Severtsov wild sheep, which has saved 2,500 heads, could be an important object for the breeding of new breeds of sheep adapted to local conditions. The main task of the Nurata Nature Reserve is to study and develop methods for the protection of mountain-steppe landscape areas, the ecology of the Severtsov sheep. This area is unique not only for its natural landscapes, but also for its flora and fauna. For example, this region is the only place in the world where the endemic species of argali Severtsev sheep live, which is included in the International Red Book. There are more than 100 historical and archeological monuments here [3. Sharipov Sh].

Most of the animals in the Nurata Mountains and foothills are currently in need of protection, some of which are listed in the Red Data Book of Uzbekistan. These include the hongul, the gazelle, the Kyzylkum wild twin, a cauldron of birds, white and black storks, desert eagles, tuvalak, sand sparrows, reptiles such as the goat, the snake.

In the village of Majerum, a very rare tree in the Central Asian region - the Eastern biota - has also been preserved. This biota, which is more than two thousand years old, is called "green savr" by the local people. Its circumference is almost 10 meters. These perennial fruit and ornamental trees are one of the objects taken under the protected area of Nurata Nature Reserve as a natural monument.

According to experts, in the distant past, such spruces were abundant in the Nurata Mountains region, especially in the mountains around the village of Majerum, which is located at its highest point. As a result of the unprotected and unsustainable use of mountain spruce as a building material and firewood, spruce has declined sharply. The only surviving spruce from those ancient times is located in the middle of the village of Majerum, and it was this condition that was the basis for its preservation. It is said that when Alexander the Great came from the west and started marching to Ustrushan, he rested with his soldiers under this tree [4. Sharipov Sh].

In the scientific literature, this tree is called spruce, and it grows to an altitude of 1400-2500 meters. According to some estimates, spruce can live more than two thousand years. Different parts of the arch are also used in medicine. For example, various substances, essential oil, resin, sugar, wax and organic acids have been extracted from spruce domes. Tincture of the dome is used in medicine as a diuretic, expectorant and digestive aid. The essential oil of spruce is used in the treatment of wounds.

In the villages of Ukhum, Sintobsoy and Ustun, as well as places associated with Alexander the Great, 1000-year-old trees are included in the list of state protection. Ancient rock paintings have been preserved in Osrafsoy of the reserve.

**Summary part.** As a result of long-term observation and study of the nature of the Nurata ridge, some suggestions and comments have been made on nature conservation and the rational use of natural resources. Including,

-Establish cooperation with the local population in the identification, registration and protection of existing natural monuments in the Nurata ridge;

-Preparation of schematic maps of specially protected areas and natural monuments in the Nurata ridge and development of ecotourism development projects;

-It is necessary to study the hydrological and morphometric properties of streams larger and smaller than 10, reading from the Nurata ridge. As a result, the water regime of these streams is also developed in proportion to the volume of water consumption. Water consumption should be 80% of the volume of river water;

-it is natural for floods to occur on the Nurata ridge in the spring. For this reason, it is necessary to build floodplains in flood-prone areas;

we must rely on national values in the use of spring water. It is necessary to change the attitude towards springs by inculcating in the minds of young people the notion that “spring water is sacred” spoken by our ancestors.

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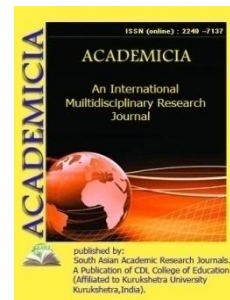
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## IN THE DESCRIPTION OF SHAH GHARIB MIRZO ALISHER NAVOI

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### ABSTRACT

*Alisher Navoi wrote about the poetic power of Shah Gharib Mirza, his human qualities, his literary heritage and his devon. In particular, Alisher Navoi's contribution to Shahgarib Mirza's literary career is invaluable. He pays special attention to the fact that Gharibi finds his place among other Timurid princes. Alisher Navoi dedicates a chapter of the epic "Farhod and Shirin" to Shahgarib Mirzo. In this creative environment, both the sultan and his children have a place as great creators. One of the Timurid princes who had a great respect for the Turkic and Persian-Tajik languages was Shah Gharib Mirzo, who created under the pseudonym Gharibi, and the study of his artistic heritage will undoubtedly enrich Uzbek literature with new information.*

**KEYWORDS:** *Majolis Un-Nafois», Shah Gharib Mirza, Alisher Navoi*

### INTRODUCTION

«Majolis un-nafois» provided information in the report. Including, “sho'x tab'lig' va mutasarriif zehnlik va nozuk taxayyulluq va daqiq taaqqulluq yigitdur”. “Nazm va nasrda naziri ma'dum va mutaxanyila va hofizada adili noma'lum. Ov va qush xotirig'a marg'ub va qurro va o'qush ko'ngliga mahbub”. writes and quotes from three poems of Shah Gharib Mirza in Uzbek and two in Persian.

*Bu matla'a aningdurkim:*

*Qaysi bir Gulchehra ul gulgargi xandonimcha bor,*

*Qaysi bir shamshod qad sarvi xiromonimcha bor?*

*Bu matla'ham yaxshi voqe'bo'lubturkim:*

*Tarki mehr aylab agarchi bo'ldi jonon o'zgacha,  
To tirikman, qilmag'umdur ahdi paymon o'zgacha.  
Bu matlai xos xayol va g'arib ado topibdurkim:  
Porso yoring'a may ichmak shior o'lmish yana,  
Baski tortarman sabu, egnim figor o'lmish yana.*

**Alisher Navoi quotes Shah Gharib Mirza as saying that the following Persian text is very beautifully written:**

*Bozam baloi jon g'ami on mohpora shud,  
Ey voy, on marizki dardash du bora shud.  
(ya'ni, yana o'sha oy kabi go'zalning g'ami jonimga balo bo'ldi.  
Ey voy, o'sha kasallikning dardi ikki barobar oshdi.)*

**In addition, the poet describes the next verse as "a very romantic and fanatical and touching event":**

*Do'ston, har gah guzar so'i Mazori man kuned,  
Joi takbiram duoi joni yori man kuned.*

(i.e. friends, sometimes come to my grave. Instead of blessing me, pray for the soul of my half).

**Alisher Navoi concludes with the following sentences:**

*"Devon ham jam'qilibdur, yaxshimatla', bumuxtasarg'asig'mas, magaryanabirkitobbitilgay".*

It is noteworthy that when Alisher Navoi speaks about Shah Gharib Mirzo, he does not mention his physical shortcomings. This information is found in the works of Zahiriddin Muhammad Babur. In "Boburnoma" about Shah Gharib Mirzo, he was also Gharib Mirza, a fat woman. Although the board was bad, the mood was good. Although his body was weak, his words were weak. He used to call himself "Gharibiy", he used to write poems in Turkish and Persian.

*Dar guzar didam pari-ro'e shudam devonavash,  
Chist nomi, o', kujo boshad nadonam xonaash.*

On several occasions, Hiri's government was handed over to Sultan Hussein by Mirza Shahgarib. In his father's time, he carried a bullet. And now there are no sons or daughters left. <sup>1</sup>.

In his description, Alisher Navoi focused on the abilities and potential of Shah Gharib Mirza, while Babur Mirza or the poet's lineage, image and works.

### **Main part**

As mentioned above, Navoi, like any young man who loved literature and poetry, always gave his advice to the princes who could rule the country in the future. He raised them as his own children. In particular, Alisher Navoi's contribution to Shahgarib Mirza's literary career is invaluable. He pays special attention to the fact that Gharibi finds his place among other Timurid princes. Alisher Navoi dedicates a chapter of the epic "Farhod and Shirin" to Shahgarib Mirzo. From the very beginning of the chapter it is obvious that the poet strictly adhered to the traditions

of classical literature of the East, that is, he began with the hymn of Shah Gharib Mirza, the son of Sultan Hussein Boykaro. The title of the chapter reads: "The fruit of the tree of the kingdom and the tree of the garden of the caliphate It is clear from the fact that he said, "Let my king take these kingdoms from the earth and listen to them, but let him listen to the precious pearls." The word "favorite" in the title means a horseman, a lion. The word "Abulfavoris" is the nickname of Shah Gharib Mirza. Hallada davlatuhu - (Arabic prayer), means "may God make the state eternal." This phrase is said or written after the names of kings, princes. In this chapter, Navoi calls on Shahgarib Mirzo to learn and explains the important aspects of governing the country, citing Mirzo Ulugbek as an example. While praising Shahgarib Mirzo, Navoi writes:

*Gulekim bo'lsa rangi bo'yi oning,  
Ham o'lsa nuktai diljo'yi oning.  
Namudor ichra gulkirdor bo'lsa,  
Takallum ichra bulbulvor bo'lsa.  
g'arib o'lg'ay nihoyatdin ziyoda,  
Bu yanglig'gulkim o'lg'ay shohzoda.  
Qayu Shahzoda ul koni Malohat,  
Takallum vaqti daryoyi fasohat.  
Fasohat bobida shahg'a qarib ul,  
Bori shahlar fasihi Shohg'arib ul.*

The meaning is as follows: "Let there be a flower whose color, smell, as well as the word dilrabo! If it looks like a flower, if it looks like a nightingale ... such a flower is a prince. He is not a prince, but a mountain of grace. When it comes down to it, you call it the sea of fluency. With his beautiful words, he became equal to the king, and he was the most wonderful of all kings, and his name was Shahgarib ..."

When Alisher Navoi called the prince to study, he gave the following advice:

*Quyoshliqistasangkasbikamol et,  
Kamol gar kasbetarsen, bemalol et.  
Kishita'limdintorsamalolat,  
Toparilmahliollindaxijolat.  
Kishifarzanavonuzolimo'lsa,  
Valekinnuktadonuolimo'lsa.  
BasoZohidkishikim om ichinda,  
Angamuhtojo'lurIslomichinda.  
Birovkinqilsaolimlarg'ata'zim,  
Qilurgo'yokirayg'ambarg'ata'zim.*

*Hadis o'lmishnabiydinbo'ylahodis  
 Ki, olimkeldirayg'ambarg'avoris,  
 Kishikimbo'lsaalamrodshohi,  
 Aningummatlig'idindurmubohi.  
 Birovkimilmilabo'ldibarumand,  
 Angakimvoriso'ldi – bo'ldifarzand.  
 Erursenshoh — agar ogohsensen,  
 Agar ogohsensen — shohsensen.*

The meaning is, “If you want to be the sun, be perfect. You will not suffer only when you have attained perfection. Who is tired of learning to read. He was embarrassed in front of the scholars ... whoever bows to the scholars is as if he is bowing to the prophet. If you are aware of everything, you are the king! ... The king, whose body shines with the light of knowledge, will have a good name until the Day of Judgment. ” Navoi exhorted Shahgarib, “Once you clearly understand that wisdom distinguishes what is good and what is bad, deal with the good. But in all things, be inclined to be moderate. ”

*Chu tahqiqangladinghikmatmusirdur,  
 Mungakim ne mufidu ne muzirdur.  
 Mufidashyog'adoyimishtig'ol et,  
 Vale borishdamaylie'tidol et.*

Navoi also uses the arts to exhort Shahgarib. In this case, the poet uses the art of parables: he quotes the proverb "less is better than more than good" to confirm the idea that one should not overemphasize what one wants - the client:

*Nekim bo'lsa muzir, bo'lg'il haroson  
 Ki, bo'lg'ay tab'inga mushkillar oson.  
 Nekim bo'lsa mizojingg'a Guvoro,  
 Anga ko'p mayl qilma oshkoro.  
 Bu so'zni ahli hikmat deb durur xo'b,  
 "Yamondin oz behkim, yaxshidin ko'r".<sup>2</sup>*

Alisher Navoi's sincere attitude to Shah Gharib is also reflected in his epic "Sab'ai Sayyar".<sup>3</sup>Chapter 10 of the epic is dedicated to Khadichabegim, one of Hussein Boykaro's wives. The title of the chapter is in accordance with the above-mentioned traditions: It originally described Hussein Boykaro and Khadichabegim. *Shoir"Ham Sulaymoni ahdg'a Hamdam, hamdamu hamnishinu munis ham"*when he meant Hussein Bayqara,"*Chun Sulaymong'a yor erur ne ajab, anga Bilqisi soniy o'lsa laqab*"means Khadichabegi. Bilqisi means second - second Bilqis. Legend has it that Bilqis was the beloved wife of the Prophet Solomon. Navoi was there with Khadijabegim, the wife of Hussein Boykaro"*Bilqisi soni*"calls it. Its again «махди ульё»

(senior guide), «исматут—дунё» (World purity). “Қайси Билқис, Сораи Ҷам, Қайси Сора, Хадичаи Кубро” I mean Khadichabegim. After Alisher Navoi praises Khadichabegim in the chapter, he goes on to describe his children:

*EyharimingsipehriizzuJalol,  
Anda yo'qo'tgalimalakkamajol.  
Oyukunyo'qagarchimonanding,  
IkkiSa'daxtarikkifarzanding.*

Navoi in the play "*Ikki Sa'd axtar ikki farzanding*" he meant the two sons of Hussein Boykaro and Khadichabegim - Shah Gharib Mirza and Muzaffar Mirza. Muzaffar Mirzo, referred to by Navoi, is the eldest son of Hussein Boykaro, born of Khadichabegim. Babur testified that he would be in much conflict with Badiuzzaman as heir to the throne. Even after Boykaro's death, he and his brother Badiuzzaman fought for the throne of Khorasan, and were soon attacked by Shaybanikhan, who fled to Astrobod and died there.<sup>3</sup> Shah Gharib Mirzo was the youngest son of Hussein Boykaro and Khadichabegim. He wrote poems in Turkish and Persian, collected them and arranged them in the devon. Alisher Navoi also skillfully used artistic images in literature in order to increase the imagery and impact of his thoughts. Navoi witnessed the bloodshed between the Timurid princes and the conspiracies in the palace. Therefore, his only hope was to help the young princes to become patriotic, peace-loving and just rulers. He saw his dreams in the future of these princes. These intentions are also reflected in his works:

*Fazl aro nodiri jahon birisi.  
Lutf birla jahong'a jon birisi.  
Birisi taxi ma'dalat shohi,  
Birisi avji saltanat mohi.*

The poet treated both princes equally. There is harmony in their description as well. He describes one of the princes as the king of justice, justice, and the throne of justice, and the other as the month of the kingdom. When Navoi thought about justice, he used the nickname of Christ Jesus for princes. According to legend, Jesus had the ability to give life to the dead with his breath.

*Tong emasbo'lsalarMasiho dam  
Kim, alarninganosidurMar'yam.  
To jahonbo'lg'ay ul ikovbo'lsun,  
Qo'llaridajahongaravbo'lsun.  
Sen duresenki, shahg'aro'zisen,  
Shohningdurishabfuro'zisen.  
IkkiyoningdaotashinGavhar.  
Dur ikiyonidasaminGavhar,  
Baxtg'atojitorako'lg'aysiz,*

*Shahg'a har kunmuborako'lg'aysiz.*

While Navoi likens princes to Jesus, he likens Khadijabegi, who gave birth to a son, to Mary, the mother of Jesus. At this point, we need to clarify another issue. It is known that Babur in his book "Boburnoma" describes Khadijabegim as follows: In Iraq, Sultan Abu Sa'id came to Hiri after the injury of Mirza. In Hiriyyah, Sultan Husayn took Mirza Mirza and fell in love with him. she was a woman, and so was Rophysia. Muzaffar Husayn Mirza was born with Shahgarib Mirza.<sup>4</sup>

Apparently, Bobur's attitude towards Khadijabeg is not good “беақл ва пурғўй хотун”, “рофизия” It is safe to say that Navoi's use of the attributes Bilqis, SoraiUzmo, Qaysi Sora, Khadija Kubro in relation to Khadijabegim is based on his respect for his children, especially Shah Gharib Mirza, and his confidence that he will be a just ruler in the future.

Alisher Navoi was in constant contact with Shah Gharib Mirzo. The sincere relationship between them can be seen in Navoi's letters to him. Navoi's "Munshaot" contains the following letter to Shah Gharib Mirza:

After the service prayer, the petitioner, my grace, and the color of his face showed that the fire was in full bloom and the tulips were in full bloom. Every leaf of the flower adorned the ruin of my broken heart, and every light of the tulip enlightened the house of my fixed eyes. My graces have been done - I will not be thankful or apologetic in return, so that the lodge atlas of the sky will be free from the sun's rays, your servants will be sewn on their clothes, and the white and red dirams of kindness and consecration will make your hair stand on end.

*Noma yozg'on chog'da bo'lmish erdi xunafshon ko'zum,*

*Oq varaq gulrang bo'ldi toki sochti qon ko'zum.*

*Ruboiya:*

*Ermas andin nola bila oh g'arib,*

*G'urbat istar gar ulus ogoh g'arib,*

*Tushsa kishi bir mulk aro nogoh g'arib,*

*Kim so'rg'ay ani shohi jahon — Shoh g'arib.<sup>5</sup>*

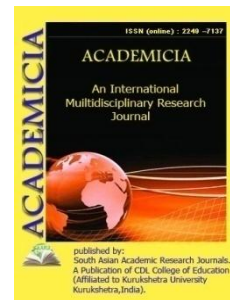
## CONCLUSION

The fifteenth century was a unique period in the history of the development of Eastern science and culture. As a proof of these words, it should be noted that by the time of the Timurid ruler Sultan Hussein Boykaro, thousands of poets, writers, craftsmen, artists, scientists and fuzalas not only created works of art, but also created a unique literary environment. In this creative environment, both the sultan and his children have a place as great creators. One of the Timurid princes who had a great respect for the Turkic and Persian-Tajik languages was Shah Gharib Mirzo, who created under the pseudonym Gharibi, and the study of his artistic heritage will undoubtedly enrich Uzbek literature with new information.



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## THE IMPACT OF CHANGES IN PUBLIC ADMINISTRATION ON THE DEVELOPMENT OF NEOCONSERVATIVE IDEAS IN THE UNITED STATES

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### ABSTRACT

*This article analyzes the peculiarities of US government, political elites and changes in governance, including the US Democratic presidential election victory and its impact on neoconservative domestic and foreign policy, and the impact of the new democracies' political decisions on the development of neoconservative ideas. It also assessed the peculiarities of the political processes under President Barack Obama and the trends in the development of neoconservative views.*

**KEYWORDS:** *US, Neoconservatism, National Interests, Elections, Political Elites, Liberal Leadership, Foreign Policy, Middle East*

### INTRODUCTION

According to traditions and principles, rules and paradigms associated with Public Administration, power varies both in terms of structure and content. That is, there is a law of constant exchange of power. The struggle for power as a means of obtaining a specific superiority of members of society determines the content of political processes. And the political ideology is a concerted basis of the strategy and management of a particular social group struggling for power. They seek to protect national interests on the basis of those or those ideas, to prove alternative variants and models of the development of society. In a word, political ideology is a system of ideas that becomes the basis for those subjects who are fighting for power. In the conditions of the XXI century, neo-conservatism also reached the level of

transformation into an ideology of State Administration on the basis of new era calls and "concerns" about the negative impact of global problems. As we have already considered, in the first decade of the century, the US participation in international politics and foreign policy were fully based on neoconservative ideas.

## MATERIALS AND METHODS

It should be noted that the exchange of power of the political elite of Democrats and Republicans for the national interests of the United States is manifested as an object of necessity. To clarify this more comprehensively, "the elites are divided into two important types - the "Foxes" (the "soft" method of leadership – negotiations, side-presses, persuasion, etc.) and the "Lions"(sharp and determined individuals, mainly relying on force), and through their circulation, that is, regular exchange, the society develops"[1;42].

By the end of Bush's reign(2008), his rating has fallen to a very low level. The forces that have been criticized for their influence, particularly the neoconservatives, have been severely criticized. On the eve of the elections, the performance of the entire Republican Party declined and the problems of the party's domestic policy became apparent. John McCain's foreign policy approach to the 2008 election was not much different from that of George W.Bush. He also demonstrated his continued commitment to the Iraq war and his harsh attitude toward Iran. Democratic nominee Barack Obama offered alternative tools of US leadership. He promotes the concept of "soft power" in foreign policy, that is, non-military diplomatic instruments.

Acquiring and controlling strategically important natural and energy resources, maintaining strong links with allies in different regions, would certainly be a priority for the US foreign policy of the new Barack Obama administration.

With the rise of anti-Americanism throughout the world, Democrats' arrival to the US government in early 2009 has been seen as a political strategy to prevent internal ideological and political confrontation in the United States. The support of this strategy by US neoconservatives has demonstrated the peculiarity of the nationwide consensus. This consensus and US national interests have prompted the new government, particularly President Obama, to address the following issues: First, reinventing the United States' global leadership position amid rising anti-Americanism sentiment during the Republican government, overcoming the consequences of the policy of confrontation in the West and the Islamic world; Second, the growing international systemic crises despite the temporary fall in oil prices and the continuing competition for oil and gas resources, the need to continue a policy of US involvement in the process; Third, the high potential for further development of national militaries in the Middle East, especially the increased threat of nuclear weapons, implies that the new government needs to pursue a traditional "containment" policy.

As a result of the recent Republican government's implementation of the ideas created by neoconservatives, the United States has strengthened its strategic position in the world. Of course, it has not been easy to achieve this through proving the strategies and concepts that have been formulated over many years. Nevertheless, the United States proves that it is the only powerful state in the world. The forthcoming political situation also necessitated the use of "soft" strategies in US foreign policy in order to maintain these advantages and accomplishments and lay the foundation for future strategic objectives. The arrival of Democrats under the leadership of Barack Obama has been driven by the need to address a number of global issues that are of

concern to the international community, as well as the need for policy-making in partnership with the international community. We know that US Democracy has prioritized human rights, compliance with international law, and shared issues. That is why the need for international support and confidence in the international community to address a number of US foreign policy issues - such as Iran's nuclear program and international terrorism - has been urged to stabilize US neoconservative strategies for a while. It is well known that according to neoconservatives, all contracts and agreements are aimed at "limiting and controlling" US forces rather than supporting world order[23;34].

In his pre-election speech, Obama said that he would focus on stabilizing the situation in Iraq and Afghanistan, improving Israeli-Arab relations, and addressing internal challenges in the face of economic crises. From the outset, the Obama administration has begun to reconsider its domestic and foreign policy approaches. In 2007, it was revealed that the two-party commission, operating under the Center for Strategic and International Studies, headed by R. Armitage and J. S. Nye, relied on the concept of soft power. At the heart of it is the need for the US to abandon the weaponry factor in promoting democracy, human rights and civil society in achieving its goals[2;82].

At the same time, global challenges require cooperation with international institutions and large competitive entities. In the field of national security and defense, measures will be taken to reduce, minimize military expenditures and to use more effective means of the modern era. Of course, this position of the Obama administration has been criticized by neoconservatives. Efforts have been made to recognize the crucial importance of the military factor without the use of the soft power tool. R. Kagan points out that the world order of the XX-XXI centuries was dominated by American power[3].

According to Muravchik, communication with the enemy is necessary, but only to tell them that we are thinking and fighting. Continuing this view, W. Kristol argues that if the US wants a peaceful and stable state, it must have sufficient military superiority to cope with the major threats, to win the war they need, and to serve as a police force in the international community[4].

## DISCUSSION

In his role as President, Obama began his political career with the steps of democratic liberals. In particular, he put forward an initiative to improve relations with countries such as Iran and Syria in resolving the Middle East.

Following the war in Iraq, the government began to raise the issue of limiting the US military, which is a powerful force and a universal instrument. With the decline of US popularity and the activation of other major powers around the world, the idea of "Pax America" became popular within expert groups. This, in turn, coincided with neoconservatives' short-term "polar situation". It became even clearer that the "Benevolent hegemony" of the United States was not viable. As Kagan points out, "history is back", stopping competition between big powers is just a short departure from the norm[5]. But such changes did not change the logic of neoconservative ideology. Instead, they focused on the new long-term goal - the struggle to maintain a liberal world order. In this regard, the transformation of N. Podhoretz's concept of the "Fourth World War" into the idea of confrontation between Democrats and autocrats, a key form of conflict in

the 21st century. In general, neoconservative views have not changed the message of necessity for messianism, and they have been able to form new medium and long-term goals.

One of the most important tasks facing the Obama administration was addressing Iran's nuclear problem. Despite sanctions, Iran has continued to build centrifuges to enrich uranium. Despite Iran's explanation for using the program for peaceful purposes, further action would have allowed Iran to acquire nuclear weapons. This, in turn, has a serious impact on security in Central Asia and the Middle East. At the same time, Iran has repeatedly expressed open hostility toward Israel's closest ally, even to "extinguishing Israel"[6]. The United States has therefore sought to resolve Iran's nuclear problems through multilateral negotiations as part of its soft power approach.

The appointment of the US president as special envoy to the Middle East and Iran, D. Ross, an advocate of neoconservative views, was also an important indicator for future Iranian-US relations. Ross also served as US ambassador to the Middle East during Clinton administration. At the same time, it supported the idea of conducting military operations against Iraq, and its strong stance on Iran is also important in analyzing its impact on neoconservative strategies. Clinton's views on the new government team also show a stark reaction to Iran. It appears that the new government is seeking to normalize relations with Iran and that the international community will pay more attention to these processes.

Well-known political scientist Zbigniew Brzezinski also said that the US should enter into negotiations with Iran as soon as possible. In addition, the peculiarities of interstate relations have also been linked to the foreign policy strategy of the new Iranian president. Iran's new leadership welcomes a policy of relative conciliation with the international community over its nuclear program. Known for his moderate views, President Rouhani has sought to formulate a democratically balanced policy in dealing with the United States over its nuclear program.

On the one hand, the collective approach to the issue has brought it under international control, and on the other, negotiations have given the US the opportunity to renew its leadership claims. Negotiations with Tehran in 5 + 1 format began in 2005. And it is characterized by an effort to be an important foreign policy initiative for the Obama administration. Ten years later, the formation of a joint action plan was seen as a foreign policy success of the government. Under this agreement, certain terms and conditions were in place for the parties. International sanctions have been relaxed in return. Democrats regarded the agreement as a major achievement, while Republicans regarded it as a foreign policy crisis.

And the neoconservatives are totally against the process, and admit that the agreement completely undermined the US leadership. They are skeptical of Iran's adherence to the agreement. According to them, Iran may at any time be able to secretly violate the terms of the agreement. On the contrary, it will allow Iran to deviate from time to time to build nuclear weapons[7]. Neoconservatives argued that the region's stakeholders, particularly Saudi Arabia and Israel, were not involved in the deal. Keeping nuclear industry in Iran, in turn, means recognizing Iran's nuclear status and posing a real threat to Israel[8]. As a result, it is detrimental to the US-Israeli relations, which was evident during the Obama administration[9].

According to J. Bolton, the Iranian agreement did not change the Iranian behavior, which in fact was an important goal for Washington. It still remains a major supporter of international terrorism, such as Hezbollah, which represents Iran's interests in Libya, Syria and Iraq. During

Reagan's presidency, the situation with Iran's inclusion in the list of terrorist sponsors has not changed[10]. Neoconservatives have instructed us to return to the sanctions regime. According to Bolton, changing the regime in Iran is not the US goal, but the main goal is to change the behavior of the Iranian government[11]. This approach shows that on the one hand, there is a gradual withdrawal of the idea of using force to change the regime, and on the other, neoconservatives understand that Iran's role in the region and its military potential limit its use of force tactics. As such, it has been recognized that more soft power is effective. In general, efforts to warm the US-Iranian relationship have come amid growing tensions between Sunni-Shia tensions in the region. It is safe to say that the US democrats' internationalization policy has been linked to the need to balance the allies and the opposition forces in the region and keep them to the highest level of tension.

In 2009, there was a simultaneous change of governments in the United States and Israel. It was expected that the Likud party leader Benjamin Netanyahu's coming to Israel's political leadership and A. Lieberman, the leader of the Israeli House of Commons and a strong Arab policy, would play a key role in Israeli-US relations. As we know, Benjamin Netanyahu led the Israeli government during the Clinton Democrat government in the US. In addition, the new government has made a significant number of Israeli advocates and Jews among the political elite community. Although the new Israeli government has stressed the need to negotiate with the Palestinians, it has been shown that concessions are not ready for various benefits. In particular, the arrival of US Secretary of State Hillary Clinton to the post of US Secretary of State, and the arrival of Lieberman, a pro-Arab foreign policy advocate for Israel, would impede the opportunity for finding a better solution. Indeed, no significant progress has been made in dealing with the Israeli-Palestinian issue since the Democrats came to the US government. However, the US leadership has sought to restrain Israel's harsh actions. Of course, there are good reasons. In other words, the wave of colorful revolutions that began in 2011 drew the attention of all political leaders to the "Arab Spring." At the same time, the source of confrontation in US-Israeli relations during the Obama administration was the disagreement over the construction of settlements on the west bank of the Jordan River and the position of East Jerusalem. At the same time, the issue of recognizing Palestinian statehood has caused much controversy. Although the government used the principle of "two countries for two nations"[12] in its policy, this was impossible. And neoconservatives have sharply criticized the government's approach to Iran and Israeli statehood. Interestingly, about 80% of Jews in the United States endorsed the establishment of a Palestinian state[13]. And 46% of Israeli Jews were pro-choice. About 60% of the Jews favored Israel, while 60% of American Jews responded positively to the Iranian nuclear agreement[14]. Generally speaking, US neoconservatives are more closely aligned with the Israeli Jewish views.

The success of the Iraqi operation has not been achieved, even during the Democrats' second term in office. Iraq has become a failed state. The emergence of al-Qaeda in Iraq and later ISIS has made the whole region a global jihadist land. The need for a neoconservative approach to the issue has been highlighted. Democrats have been criticized for their ineffective tactics in Iraq. On the other hand, however, there is a consensus that instability on the eastern Mediterranean is likely to be an important political target for future neoconservative practice, justifying their coming to power.

Neoconservatives have also sought to be moderate in Middle Eastern politics, and have also



taken into account the need for a reassessment of the ideas of democratization of the region, based on the domino principle, based on the policy of regime change in Afghanistan and Iraq. However, these ideas were not completely abandoned. At this time, neoconservatives criticized decisions to reduce military in Afghanistan and Iraq. It has been repeatedly mentioned that the preservation of military presence in these two countries is an effective strategy for democratization, given the peculiarities of the region's "militaristic Islam" ideology. A letter addressed to the president by the Foreign Policy Initiative also said that the reduction of military presence in Afghanistan and the withdrawal of troops would increase the support of the Taliban and other opposing forces such as Pakistan[15].

The shrinking military contingent in Iraq has also had a significant impact on the effectiveness of democratic institutions in the country. It was noted that all efforts made by the US are losing their value. At the same time, neoconservatives have not abandoned the idea that Iraq should be viewed as a democratic model for other Middle Eastern countries, including Iran. The democratic reforms in Iraq were an example of how democracy can be resolved in the multi-faith, multi-ethnic Arab world[17].

In the Middle East in 2011, the so-called "Arab Spring" was welcomed by neoconservatives. In other words, they viewed these events as the basis for the development of the whole region. They described the US position as non-interference in these processes. Noting the insufficient support of the Syrian and Libyan opposition, the opponents in those countries have acknowledged that they are struggling with a permanent military training[18].

According to Abrams, Syria remains the only ally of Iran in the Arab world. Through it, Tehran will be able to supply weapons to Hezbollah and go to the Israeli border[19].

The emergence of ISIS in Iraq was seen as a consequence of the withdrawal of US troops, as predicted for neoconservatives. While a number of political figures and international experts regarded the emergence of ISIS as a consequence of US policy in the Middle East and the war in Iraq, the neoconservative views were completely different. In particular, they regarded the emergence of ISIS as a consequence of the military invasion of Iraq, the destruction of existing socio-political differences and institutions, but rather the failure and diminished military presence in the country. If more measures were taken to increase the number of military forces, this would have prevented the Iraqi Sunni from joining ISIS. In Syria, neoconservatives have found the most effective use of military force in fighting ISIS in Syria. Cooperation with Iran in this regard is equivalent to recognizing Iran's regional hegemony[20].

Neoconservatives have not changed their skeptical attitudes towards radical ideologies and liberal values in the region. In their view, the views of radical religious (Islamic) movements are in conflict with the universal values and multiculturalism of the region. According to the neoconservative publicist M. Rubin, jihad is not a search for the truth but a struggle for the supremacy of Islam. And this struggle has its own anti-Western character. Although Osama ben Laden was killed in 2011, the fight against terrorism will not end[21].

Neoconservatives take seriously the efforts of focusing on narrow radical groups in the region and eliminating them. In their view, only a small number of radicals are postponing the democratization process throughout the region.

According to US neoconservatives, the "polar situation" has been lost due to Clinton's inability to make a decisive decision, the mistakes of the Bush presidency, and the ideological and strategic failure of Obama. Nevertheless, neoconservatives are at the forefront of the US leadership and the need for a global police officer. The main task now is to maintain a "liberal world order" that covers the United States and its allies.

Assessing the arrival of the new Obama-led Democrat government in the United States and the impact of the US on neoconservative ideas, it is not right to recognize only Republicans as conservative politicians. Democrats support such a policy. In this context, the Obama-led Democrats team can be called the "New Democrats" or the "Neoconservative Democrats." Because their ideas are exactly the same with the Republican Party neoconservatives. Democrats and conservatives in the Democrats' Center also assert that they are now in favor of a "prospective strategy for the destruction of jihad and the protection of freedom".

Questions about Obama's neoconservatives began to rise, especially after Vice President Joe Biden, who advocates dividing Iraq, called himself a Jew. In addition, it was stated that Jones, the National Security Advisor, the Governor of Arizona, J. Napolitano, was appointed Minister of Homeland Security, and that the Republican Conservative, R. Gates, was named minister of defense, and would promote neoconservative strategies. When it comes to members of the new government, it is also important to acknowledge the involvement of Israeli proponents in the White House by R. Emanuel, D. Akelrod as the leading adviser, and the special envoy of the Middle East, conservative Jew D. Kurtzer. While President Obama has condemned the Iraq war, he has not dismissed the use of "force" as necessary. In particular, he argues that resisting the Iraq war does not mean hesitating to use force for the sake of American interests. And his call for "funding and expanding US forces to remain the most powerful armed force on earth" is crucial to further implementation of neoconservative ideas.

Although President Obama is expected to follow the traditional foreign policy position of the Democratic Party, experts have used the neoconservative advice effectively for foreign policy decisions in the Middle East. Therefore, the content and direction of its current foreign policy has been somewhat unclear. Surprisingly, it supports the separatist groups in Syria (as it did in Libya) and is watching the region break up into smaller pieces [22].

## CONCLUSION

In general, US neoconservatives have consistently criticized government activities throughout the Obama administration. They strongly opposed any talks with Iran over its nuclear program. The government's policy on Israel has been criticized and urged not to reduce military presence in Iraq and Afghanistan.

One of the most important changes in Obama's foreign policy was the increased focus on the Asia-Pacific region. Because of the US attempt to maintain global leadership, Washington realized that its main rival was not Europe, and that the problems in the Middle East would not be resolved in the short term, and that hegemonic claims would not be a direct threat.

The influence of neoconservatives on political decision-making was considerably lower during this period, but it was not completely abandoned. Streamers fought for and supported Mitt Romney in the 2012 election. And in the 2016 election, they ran against D. Trump. Defeat in the elections, despite the criticisms of the Iraq war, did not change their foreign policy. They have

become supporters of the "peace through force" and the neo-Reaganism concept put forward in the 1990s. Of course, they have had problems revising their views due to changes in world politics. However, the conceptual framework could not be said to change. With the rise of other forces on the world arena more clearly, they gradually shifted their ideas to the "liberal world order" approach. Of course, this approach would not be an alternative to the US concept of global hegemony, but it would reflect a lot of US interests.

From 2009 to 2016, the activities of neoconservatives are characterized by the fact that they are more socialist and active in the media. Since 2009, the Foreign Policy Initiative has been established as their main mental center. PNAC has been active in publishing analytical articles, letters to the government and the president, based on the principles of its activities. It should be noted, however, that it did not have a strong impact. He continued his career until 2017. Nevertheless, it has received constant support from major powers. In particular, Paul Singer, the owner of the Elliott Management Corporation investment fund, is the main sponsor. In addition, the PNAC sponsors, The Lynde and Harry Bradley Foundation and DonorsTrust, also supported them.

In spite of election defeats and criticism, they still retained their seats in the Republican Party. In 2009-2016, the following questions were answered: first, to clarify the possibility of changing neoconservative ideology under the influence of external factors, and secondly to clarify the possibility of further development of neoconservative influence on US foreign policy.

In summary, the reasons for the combination of US policy and neoconservative views under the Obama administration are:

First, an overly "militaristic" approach to the implementation of neoconservative ideas has led to a worsening reaction to the international community. As a result, there was a need to withdraw from the "unipolarist" strategy;

Secondly, the ideas put forward by neoconservatives have been adequately implemented. So the task now is not to complicate the situation, but to lose the results. These results have been important for both Republicans and Democrats. Especially after the "Arab Spring";

Third, the limitations of both economic and political implications suggest that there are still insufficient mechanisms for the implementation of failed strategies;

Fourth, there is a tendency to execute future neoconservative strategies and to create a favorable environment for strengthening the dominance of ideas. It is well known that even during the Clinton administration, neoconservatives were exposed to foreign policy decisions. However, the lack of favorable conditions and the prevalence of neo-conservative ideas have not yet been proven sufficiently to ensure their implementation;

Fifth, the internal destabilization of neoconservative ideas has led to the need for a new robust neoconservative community.

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## COMPLEX THERAPY "DRY EYE SYNDROME" IN PATIENTS WITH DIABETES MELLITUS.

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### ABSTRACT

*Over the past decade, the prevalence of diabetes has increased significantly. Considering the role of metabolic disorders in the pathogenesis of diabetes mellitus and dry eye syndrome, it is safe to predict an increase in the number of patients suffering from corneal-conjunctival xerosis against the background of carbohydrate metabolism disorders. This is also facilitated by the fact that type 2 diabetes mellitus, which gives the main increase in morbidity, is constantly "getting younger", more and more covering a significant group of socially active part of the population, leading a modern lifestyle with all the side effects accompanying rapid urbanization.*

**KEYWORDS:** Dry Eye Syndrome; Diabetes; Cornea; Tear Film Stability; Neuropathy

### INTRODUCTION

The accumulated knowledge about the pathogenesis of both dry eye syndrome (DES) and diabetes mellitus (DM) makes it possible to attribute them with absolute certainty to the diseases of civilization. The modern way of life, its increasing duration will contribute to the steady growth of the number of people suffering from these diseases. Already at present, according to data from various epidemiological studies, DES is detected in 7–33.7% of the population [10, 18, 22].

According to P.D.O'Brien et al., Every fourth patient who seeks an ophthalmologist has a DES, and according to V.V.Brzheshkiy, the number of people suffering from DES reaches 45% (almost every second), of the number of people seeking an ophthalmologic using [1,2, 27].

**Main part:** The high prevalence of diabetes, which has reached the scale of a pandemic in the 21st century, has long been a global "bittersweet" problem in modern society and national health systems. The gloomiest predictions for the incidence of diabetes are being realized, unfortunately, with a significant advance. Considering the fact that metabolic disorders are one

of the causes of DES and the basis for the development of complications of diabetes, it can be assumed that there is a large group of patients suffering from these pathological conditions simultaneously. The data on the prevalence of DES are quite different, which is associated with the sample of patients included in the study, the region of their residence and the diagnostic methods used. Currently, DEWS [13] (Dry Eye Workshop - working group for the study of dry eye syndrome, 2007) defines DES as a multifactorial disease of the lacrimal organs and the ocular surface, which manifests itself as discomfort, visual impairment, instability and increased osmolarity of the tear film, and is accompanied by inflammation of the eye surface. In a study by R. M. Schiffman et al. (2003), assessing the quality of life in patients with DES, it was shown that even its mild and moderate manifestations worsen the indicators to a level comparable to the quality of life of patients with psoriasis and angina [30].

**All risk factors for DES can be conditionally divided into three groups:**

I. Physiological factors, which include age and sex, and hormonal changes associated with them. It is known and proven that women over 50 are more likely to suffer from DES [1, 6, 10, 24, 29].

II. Factors associated with life and the environment [1, 10, 23, 31, 32]:

... y using computers and various monitors,

... y climatic and environmental factors (low relative humidity, extreme temperatures, use of air conditioning in rooms and cars, frequent flights, long driving);

... . Smoking, drinking alcohol;

... . Diet (omega-3 fatty acid deficiency).

III. Concomitant diseases and / or consequences as a result of their correction [1, 5, 8, 10,28]:

... . Wearing "soft" contact lenses;

... . Various keratorefractive operations;.

... . Taking oral contraceptives, antihistamines, antidepressants, etc.;

... . Instillation of eye drops;.

... . Autoimmune diseases;.

... . Diseases of the accessory apparatus of the eye (blepharitis, lagophthalmos);

... . Sjögren's syndrome / disease;

... . Diabetes mellitus.

Assessing the risk factors and mechanisms of DES development, in the context of the pathological processes that occur in the human body with diabetes, it can be assumed that the prevalence of corneal-conjunctival xerosis in these patients will be much higher than in the general population. Although there are few studies devoted to this problem, the literature describes data supporting this point of view [21]. In addition to all of the above risk factors, patients with diabetes have significant metabolic disorders that increase the risk and exacerbate the manifestations of DES. This is especially true for patients with type 2 diabetes, in which diabetes is, in the overwhelming majority of cases, a manifestation of the metabolic syndrome.

The underlying diseases, hyperglycemia and dyslipidemia, lead to changes in the chemical composition of the tear, the protein component of the tear film, metabolic and / or autoimmune lesions of the accessory lacrimal glands, and more frequent inflammatory diseases of the adnexa of the eye [4, 11, 16]. In the studies of L.C. Figueroa-Ortiz et al. there was a decrease in the number of goblet cells and metaplasia of the conjunctival epithelium, which is found even in patients without subjective signs of DES [9]. On the part of the vascular system, microangiopathy that develops in diabetes mellitus affects not only the retinal vessels, but also the vessels of the perilimbal network, which can disrupt the trophic network [25]. A separate link can be considered an isolated neuropathy, in which various types of nerve fibers are affected. As manifestations of neuropathy, one can consider a deficiency of lacrimal production due to impaired innervation of accessory lacrimal glands, decreased sensitivity of the cornea, impaired corneal trophism, impaired blinking reflex, and rare blinking [7, 12, 15]. Confocal microscopy of the cornea reveals a decrease in the number of nerve fibers in the subbasal plexus in many diabetic patients [17, 19]. All of these factors and their combinations ultimately lead to instability of the tear film and / or a decrease in the production of tear fluid. In the treatment of DES, one of the fundamental factors is the use of tear substitutes and hygienic maintenance of the eyelids. One of the many moisturizing preparations is "Oftalron" (company), the advantage of which is the absence of preservatives, and one of the hygienic preparations for treating the eyelids is the hypoallergenic gel "Korneregel".

### Objective

To evaluate the effectiveness of monotherapy with the drug "Oftalron" and a combination of drugs "Oftalron" and "Korneregel" in patients with diabetes mellitus in the treatment of dry eye syndrome.

### Characteristics of the surveyed groups and survey methods

The study included 49 patients with type 1 and 2 diabetes mellitus, of whom 39 (79.6%) were women and 10 (20.4%) men. The average age was  $54.5 \pm 16.6$  years (from 21 to 85 years), the experience of diabetes mellitus was  $13.4 \pm 9.6$  years. Type 1 diabetes was diagnosed in 28 patients (57.1%), and type 2 diabetes mellitus was diagnosed in 21 (42.9%) patients. In most cases, nonproliferative diabetic retinopathy (DR) was observed — 68.4% (67 eyes). Severe forms of DR were detected in 10.2% of cases (preproliferative DR - 5.1% (5 eyes), proliferative DR - 5.1% (5 eyes). In 21.4% (21 eyes) diabetic retinal changes were not diagnosed.

All studied patients had mild corneal-conjunctival xerosis. The severity of DES was assessed according to the classification of E.E.Somov and V.V.Brzheshkiy (1998):

- ☐ y mild- micro-signs of xerosis against the background of reflex hyperlacrimation and a reduction in the time of rupture of the pre-corneal tear film to 8 seconds;
- ☐ y medium degree- micro-signs of xerosis against the background of a moderate decrease in tear production, stability of the pre-corneal tear film;
- ☐ for severe and especially severe- macroscopic signs of xerosis against the background of a pronounced or critical decrease in tear production and stability of the pre-corneal tear film.

The patients were divided into three groups:

- y group I- 24 patients (48 eyes) with type 1 and 2 diabetes mellitus with mild DES, receiving Ophthalron in both eyes 3 times a day;
- y group II- 15 patients (30 eyes) with type 1 and 2 diabetes mellitus with mild DES and any manifestations of meibomian gland dysfunction, receiving Ophthalron 3 times a day and Korneregel 2 times a day;
- y control group- 10 patients (20 eyes) with type 1 and 2 diabetes mellitus with mild DES without therapy.

**Inclusion criteria:** patients with type 1 and type 2 diabetes mellitus with mild to moderate DES, who had not previously received artificial tears.

**Exclusion criteria:** inflammatory diseases of the adnexa of the eye, lacrimal and lacrimal system, fibrous membrane, uveal tract, the presence of surgical interventions with opening the eyeball, violations of the ophthalmotonus requiring the appointment of antihypertensive therapy. All patients underwent standard ophthalmological examination (visometry, tonometry, biomicroscopy of the anterior segment, ophthalmoscopy with mydriasis, if necessary, perimetry and other methods of diagnosing fundus pathology).

According to the complaints and the collected anamnesis, the indicators of subjective discomfort were assessed from the averaged values of the main manifestations of DES, assessed on a three point scale (0 - no sign, 1 - mild manifestations, 2 - moderate manifestations, 3 - pronounced). The parameters for assessing subjective discomfort due to DES were: painful reaction to instillation of eye drops, poor tolerance to wind, smoke and conditioned air, lacrimation, sensation of "dryness", "burning", "cramps" and a foreign body in the eye.

During biomicroscopy of the anterior segment of the eyeball, the indicators of objective signs were assessed from the mean values of the main objective manifestations of DES, assessed on a three-point scale (0 — no feature, 1 — mild manifestations, 2 — moderate manifestations, 3 — pronounced). Parameters for assessing objective signs were considered: conjunctival hyperemia, discharge in the form of mucous "threads", inclusions in the tear film, epithelial threads on the cornea. Also, the state of the meibomian glands, the height of the lower lacrimal meniscus (in mm), the presence and severity of the conjunctival folds - lid-parallelconjunctivalfolds (LIPCOF) according to the classification of H. Hoh [14] were assessed; Schirmer's samples I and II (Jones) [2]. It also evaluated the cornea when stained with fluorescein and evaluated the conjunctiva when stained with lissamine green.

Survey data were carried out at the initial examination and after 1 month.

## Results

In patients of groups I and II, 1 month after observation and use of the recommended drugs, statistically significant positive dynamics were observed (Table 1).

Among the indicators of subjective discomfort, the most disturbing were poor tolerance to wind, smoke and conditioned air (in 95.2% of cases), lacrimation (in 89.3%), painful reaction to instillation of eye drops (in 88.1%), feeling of "dryness", "Burning", "cramps" (in 88.1%) and a feeling of a foreign body in the eye (in 59.2%). 1 month after treatment, slightly better dynamics was observed in the group of patients who used the combination of "Oftalron" and "Korneregel"

(Tables 1, 2). In patients of both main groups, all subjective manifestations of DES have significantly decreased (approximately by a factor of 2).

**TABLE 1 INDICATORS OF SUBJECTIVE AND OBJECTIVE DISCOMFORT**

Group	Indicator of subjective discomfort		Indicator of objective discomfort	
	Initial data	In a month	Initial data	In a month
1 group (ophthalron)	$1,7 \pm 0,05$	$0,6 \pm 0,05$ $p < 0,05$	$1,1 \pm 0,05$	$0,8 \pm 0,05$ $p < 0,05$
2 (ophthalron + corneregel)	$1,7 \pm 1,7 \pm 0,07$	$0,4 \pm 0,04$ $p < 0,05$	$1,2 \pm 0,07$	$0,8 \pm 0,06$ $p < 0,05$
3 (control)	$1,6 \pm 0,04$	$1,7 \pm 0,05$ $p < 0,05$	$0,9 \pm 0,05$	$0,9 \pm 0,05$ $p < 0,05$

**TABLE 2 PARAMETERS OF SUBJECTIVE DISCOMFORT IN DYNAMICS**

Estimated parameter	Data	1 group (ophthalron)	2 (ophthalron + corneregel)	3 (control)
Feeling of "dryness", foreign body	Initial data	$1,5 \pm 1,12$	$1,3 \pm 1,3 \pm 0,17$	$1,7 \pm 0,09$
	In a month	$0,5 \pm 0,11$ ( $p < 0,05$ )	$0,4 \pm 0,08$ ( $p < 0,05$ )	$1,8 \pm 0,12$ ( $p < 0,05$ )
Lacrimation	Initial data	$1,5 \pm 0,11$	$1,6 \pm 0,19$	$1,2 \pm 0,07$
	In a month	$0,6 \pm 0,08$ ( $p < 0,05$ )	$0,4 \pm 0,12$ ( $p < 0,05$ )	$1,2 \pm 0,08$ ( $p < 0,05$ )
Burning, stinging	Initial data	$1,6 \pm 0,07$	$1,5 \pm 0,09$	$1,8 \pm 0,11$
	In a month	$0,5 \pm 0,11$ ( $p < 0,05$ )	$0,2 \pm 0,06$ ( $p < 0,05$ )	$1,8 \pm 0,18$ ( $p < 0,05$ )
Soreness on instillation of eye drops	Initial data	$1,4 \pm 0,08$	$1,8 \pm 0,18$	$1,3 \pm 0,13$
	In a month	$0,6 \pm 0,07$ ( $p < 0,05$ )	$0,5 \pm 0,1$ ( $p < 0,05$ )	$1,1 \pm 0,11$ ( $p < 0,05$ )
Poor tolerance to wind, smoke, air conditioning,	Initial data	$1,8 \pm 0,09$	$1,8 \pm 0,11$	$1,7 \pm 0,07$
	In a month	$1,0 \pm 0,12$ ( $p < 0,05$ )	$0,5 \pm 0,1$ ( $p < 0,05$ )	$0,9 \pm 0,06$ ( $p < 0,05$ )

**TABLE – 3 DYNAMICS OF OBJECTIVE AND FUNCTIONAL PARAMETERS**

Estimated parameter	Data	1 group (ophthalron)	2 (ophthalron + corneregel)	3 (control)
Conjunctiva injection	Initial data	$1,5 \pm 1,12$	$1,3 \pm 0,17$	$1,3 \pm 0,09$
	In a month	$0,5 \pm 0,11$ ( $p < 0,05$ )	$0,3 \pm 0,08$ ( $p < 0,05$ )	$1,3 \pm 0,12$ ( $p < 0,05$ )
Inclusion in the lacrimal	Initial data	$1,4 \pm 0,07$	$1,5 \pm 0,09$	$1,8 \pm 0,11$

Films	In a month	$0,5 \pm 0,11$ ( $p < 0,05$ )	$0,2 \pm 0,06$ ( $p < 0,05$ )	$1,8 \pm 0,18$ ( $p < 0,05$ )
Epithelial filaments on the cornea	Initial data	$0,4 \pm 0,08$	$0,2 \pm 0,18$	$0,3 \pm 0,13$
	In a month	$0,2 \pm 0,07$ ( $p > 0,05$ )	$0,2 \pm 0,1$ ( $p > 0,05$ )	$0,1 \pm 0,11$ ( $p > 0,05$ )
Lacrimal meniscus height	Initial data	$1,8 \pm 0,09$	$1,8 \pm 0,11$	$1,9 \pm 0,07$
	In a month	$1,0 \pm 0,12$ ( $p < 0,05$ )	$0,9 \pm 0,1$ ( $p < 0,05$ )	$1,0 \pm 0,06$ ( $p < 0,05$ )
Conjunctival staining	Initial data	$1,3 \pm 0,12$	$1,7 \pm 0,14$	$1,3 \pm 0,08$
	In a month	$0,8 \pm 0,1$ ( $p < 0,05$ )	$0,8 \pm 0,1$ ( $p < 0,05$ )	$1,4 \pm 0,09$ ( $p < 0,05$ )
Corneal staining	Initial data	$0,5 \pm 0,06$	$0,6 \pm 0,06$	$0,6 \pm 0,06$
	In a month	$0,3 \pm 0,06$ ( $p < 0,05$ )	$0,3 \pm 0,06$ ( $p < 0,05$ )	$0,4 \pm 0,06$ ( $p < 0,05$ )
The state of the meibomian glands	Initial data	$0,4 \pm 0,05$	$1,6 \pm 0,09$	$0,1 \pm 0,04$
	In a month	$0,4 \pm 0,05$ ( $p < 0,05$ )	$0,5 \pm 0,05$ ( $p < 0,05$ )	$0,1 \pm 0,06$ ( $p < 0,05$ )
Norn's test	Initial data	$7,5 \pm 0,3$	$7,2 \pm 0,3$	$7,9 \pm 0,2$
	In a month	$10,2 \pm 10,2 \pm 0,2$ ( $p < 0,05$ )	$12,3 \pm 0,2$ ( $p < 0,05$ )	$7,8 \pm 0,2$ ( $p < 0,05$ )
Schirmmer test	Initial data	$23,4 \pm 0,5$	$20,5 \pm 0,6$	$26,6 \pm 0,3$
	In a month	$25,4 \pm 0,5$ ( $p > 0,05$ )	$22,3 \pm 0,5$ ( $p > 0,05$ )	$25,1 \pm 0,3$ ( $p > 0,05$ )

In terms of objective parameters, patients of the main groups also showed a significant improvement after treatment: a decrease in conjunctival hyperemia and a decrease in inclusions in the tear film, the stability of the tear film significantly improved (Table 3). The indicators of the severity of the conjunctival folds have practically not changed, which is most likely due to the insufficient duration of observation of patients after using the recommended drugs. Also, the parameters of tear production have not changed, which was quite expected. When assessing the state of the meibomian glands, a significant improvement was noted when using the combination of "Ophthalron" and "Korneregel", although it should be noted that initially this group included patients with worse parameters (Table 3).

It should be noted that almost all patients at the initial examination showed some degree of staining of the conjunctiva and cornea (in 97.6%). Such a condition upon repeated examination was noted in 34.1% of cases in group I, in 24.0% in group II and in 96.7% of cases in the control).

Thus, it can be noted that in patients with mild DES, the use of the drug "Ophthalron" significantly and reliably decreases the subjective manifestations of DES, as well as some objective parameters, which has already been shown in our previous study [3]. More significant positive dynamics was observed in group II patients who used Ophthalron and Korneregel, especially in relation to the state of the meibomian glands. In both groups, the stability of the precorneal tear film significantly increased. On the part of tear production and the severity of the



fold of the conjunctiva, parallel to the lower edge of the eyelid, no significant changes were noted. It should be noted that there were no side effects when using Oftalron, one of the patients of group II (who received Oftalron and Korneregel) had eyelid edema, which was later regarded as reactive edema on the newly used cosmetic product.

## CONCLUSION

Considering its high efficiency, good tolerance, absence of side effects and comfort of use, it is possible to recommend the use of "Oftalron" for the treatment of "dry eye" syndrome as monotherapy and / or in combination with "Korneregel", especially in the presence of meibomian gland dysfunction.

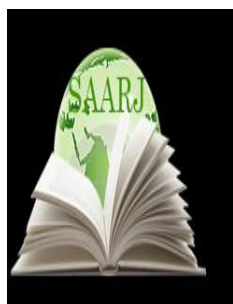
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## DEMOGRAPHIC PROCESSES AND EMPLOYMENT IN UZBEKISTAN: A HISTORICAL PERSPECTIVE (ON THE EXAMPLE OF 1991-2019)

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### ABSTRACT

*In this article, we have high goals for socio-economic reforms, improvement of living standards and welfare of the population, this article covers a wide range of demographic trends and employment issues in the country, and provides analysis and suggestions. The large number of children and adolescents in the population is also a characteristic feature of the demographic situation. It is well known that children and adolescents are particularly vulnerable to state protection. The large number of family members in the population is a characteristic feature of Uzbekistan, as well as other countries in Central Asia.*

**KEYWORDS:** *Demographic Growth Of Population, Demographic Situation, Demographic Trends, Demographic Factors, Population Density, Employment.*

### INTRODUCTION

The special demographic situation in the country is one of the most important features that determine the need to choose the path of socio-economic development. Over the past decades, the population of the republic has grown by an average of 2.5-3% annually, which puts special demands on the pace of economic growth, the solution of employment problems. The economy of the republic is experiencing an extremely heavy demographic burden.

Although Uzbekistan's GDP exceeds that of Singapore, Jordan, the United Arab Emirates, Ireland and other countries, the country is one of the lowest-income countries in the world per capita, according to the World Bank. The large number of children and adolescents in the population is also a characteristic feature of the demographic situation. It is well known that children and adolescents are particularly vulnerable to state protection. The large number of family members in the population is a characteristic feature of Uzbekistan, as well as other countries in Central Asia. The average number of families in the country is 5.5 people, and in

some regions it is more than 6 people, while in the European part of the CIS this figure is 3.2 people. The uniqueness of the national composition of the republic is its distinguishing feature. Indigenous peoples dominate the ethnic composition. Uzbeks make up more than 83.4% of the country's population.

**Main part:** Uzbekistan is geographically located in the center of the Central Asian region, with a total area of 448.97 square kilometers. At present, the population of the republic as of January 1, 2019 is more than 33,523,600 people. Along with the increase in population, the population density in the republic and its regions is also growing. In particular, during the Second World War in our country in 1940 there were 14.6 people per square kilometer, in 1991 this figure was 46.3 people, in 2000 this figure was 54.6 people, in 2010 it was 62.4 people. In 2019, the figure was 75.1 people (almost 5 times more than in 1940).

Currently, 10 out of 14 administrative-territorial units of Uzbekistan are densely populated, and their total area is a quarter of the country's territory. There are four sparsely populated administrative-territorial units, the Republic of Karakalpakstan, Bukhara, Navoi, and Jizzakh, which occupy the remaining three-quarters of the country's territory.

As of October 1, 2019, the most densely populated areas are Andijan (723.3 people), Fergana (552.2 people), Namangan (375.8 people), Khorezm (306 people) per 1 sq. Km. , 8 people), Samarkand (230.0 people) regions and the city of Tashkent (7647.2 people). It is known that one of the factors influencing the sustainable and effective development of the country is a stable demographic situation.



According to analytical data, during the years of independence (1991-2019) the population of Uzbekistan increased by 12.9 million people, or an average of 461.2 thousand people a year.

In 1991-1995, the average annual population growth in the country was 453.8 thousand people (an average of 2.2% per annum), in 1996-2000 this figure was 393.3 thousand people (1.7%), in 2001-2005 303.3 thousand people (1.2%). Population growth was 2.5 times lower than in the 1980s and almost 2 times lower than in the 1990s.

Draw 1. Population density of the Republic of Uzbekistan.

Since 2004, the country's population growth rate has started to increase again. This, according to demographers, is related to the marriages of those born in the late 1980s and early 1990s. During the same period, the figure was 2.2 million in neighboring countries, including Tajikistan 1.2 million people in Turkmenistan 1.0 million people in Kyrgyzstan people, 0.8 million in Kazakhstan people and 1.9 million in Azerbaijan per person. In contrast, some CIS countries, including Ukraine, have 6.0 million, Russia 5.4 million, Moldova 0.8 million, and Belarus 0.7 million and 0.3 million in Armenia a decrease was observed. (Table 1)



Despite the fact that the natural population growth rate in Uzbekistan has slowed down in recent years, it is still the leading country in Central Asia and the CIS in terms of population growth. (Draw. 2)

Draw 2. CIS permanent population (at the beginning of 2018, million people)

According to the sex composition of the population, there are 997 women for every 1,000 men in the country. There has been a stable correlation in recent years on the dynamics of this indicator.

Significant changes are also observed in the interregional distribution of the population of the republic. Currently, the largest population is in the Fergana Valley (Andijan, Fergana, Namangan) (28.6%) and the Zarafshan Valley (Samarkand, Navoi, Bukhara). Kashkadarya and Surkhandarya oases accounted for 17.3%,

Tashkent region and Tashkent city - 16.5%, the Republic of Karakalpakstan and Khorezm region - 11.2%, Jizzakh and Syrdarya regions - 6.6%.

In this situation, it is expedient to develop targeted state programs on internal and external labor migration in order to increase employment and efficient use of available labor resources. Appropriate redistribution of existing labor resources in these programs to the prospects of innovative development in the regions, in this regard, the construction of affordable housing for young families involved in internal migration and the construction of new social infrastructure in the regions.

Changes in the quality of the population of the country are directly related to changes in the age structure of the population. The current age structure of the population of Uzbekistan is young, despite the decline in the birth rate, which began in the 90s of the twentieth century. That is, as of January 1, 2019, the share of young people under 30 in the population - 56.5%, the share of children under 16 - 30.1%, the share of 16-29 years - 26.4%. Also, the analysis of statistical data shows that in recent years the absolute number of people aged 0-15 has decreased (in 2010 the share of children under 16 in the total population was 31.2%).



Dynamics of the permanent population of the Republic of Uzbekistan (As of January 1, 2019, per thousand people.1 Table)

Years	Permanent population	Years	Permanent population	Years	Permanent population
1991	20607,7	2001	24813,1	2011	29123,4
1992	21106,3	2002	25115,8	2012	29555,4
1993	21602,2	2003	25427,9	2013	29993,5
1994	22091,9	2004	25707,4	2014	30480,8
1995	22461,6	2005	26021,3	2015	31025,5
1996	22906,5	2006	26312,7	2016	31801,7
1997	23348,1	2007	26663,8	2017	32121,1
1998	23772,3	2008	27072,2	2018	32700,1
1999	24135,6	2009	27533,4	2019	33523,6
2000	24487,7	2010	28001,4		

From 2010 to 2016, the number of able-bodied people in the country was 31.3% in 2010, and in 2016 - 30.1%. This situation is explained by the decline in the birth rate in our country during the years of independence. In particular, the total birth rate in the country in 1991 decreased from 34.5% to 23.2% in 2010. Currently, this figure is on a further downward trend.

In general, based on the experience of structurally developed countries, the number of able-bodied people will continue to decline by 2050, and the older generation, on the contrary, is expected to increase from the current 10.0-12% to 18-22%.

As a result of population growth, the number of labor resources will also increase. In some areas, the amount of labor resources is also significantly affected by population migration. Changes in the natural mobility of the population, high birth rates and mechanical mobility of the population, i.e. migration processes cause a difference between the number of able-bodied and disabled people.

According to the International Labor Organization, today more than 170 million people worldwide suffer from the problem of unemployment. This problem, of course, does not bypass Uzbekistan. Therefore, based on the national identity of the population in our country, using international experience, the legislation on employment is being improved.

#### 2019 of the Ministry of Employment and Labor Relations

According to the 8-month report, as of July 1 this year, the number of able-bodied people is 18 million 954 thousand, and the number of employed people is 13 million 376 thousand. In the first half of this year, the unemployment rate was 9.1% (9.3% in the same period last year). So, it is clear from these figures that it is necessary to carry out urgent tasks in this regard.

Every year in Uzbekistan, 300,000 people reach the working age and 100,000 leave the working age. As a result, the labor force in the country is growing by 210-220 thousand people. The increase in labor resources creates the need to ensure employment and regulate the labor market. It should be noted that the growth rate of labor resources in the regions of the country has not been uniform. In particular, this figure is higher than the national average in Andijan, Jizzakh,

Kashkadarya, Namangan, Samarkand, Surkhandarya and Fergana regions, and lower in all other regions - the Republic of Karakalpakstan, Bukhara, Navoi, Syrdarya, Khorezm regions and Tashkent.

It should be noted that the population of working age in Uzbekistan in 2000-2019 increased from 20.7% to 61.5%, the working age population was 30.6%, and the working age population was 7.9%. The above indicators show that the labor force has increased as a result of demographic processes, which, in turn, provides employment.

One of the most effective ways to provide employment in our country, where population and labor resources are growing, is to create new jobs. About half of the new jobs in the country are created by small enterprises, micro-firms, due to the further development of individual entrepreneurship, services and services, including the expansion of housing repair and reconstruction.

One of the directions of creating new jobs in the post-independence period in the Republic of Uzbekistan was the development of home-based work. A legal and regulatory framework has been created to provide them with benefits, such as preferential terms for ordering, equipment, raw materials, tools and equipment for home-based workers, reimbursement of costs associated with home-based production, exemption of enterprises from a single social payment from the salary fund. . This has led to the creation of many jobs in the country.

Along with the creation of new jobs, one of the most important issues is the re-launch of bankrupt enterprises. One of the important issues in creating new jobs today is the creation of jobs in regions of the country with high population growth. Therefore, special attention is paid to job creation in the regions of the country, and their number is growing every year.

The values formed in the transition to market relations, the peculiar changes in customs, the desire of the people to create decent living conditions, the proliferation of contraceptives, the increase in employment of women in social production and services, each family within its means. resulting in a slight decrease in the birth rate.

The analysis of current trends in demographic processes in the country shows that the share of children in the age group of the population is declining, and the share of able-bodied people and the elderly is increasing. According to the data, in 2000-2019, the aging index of the population is growing even in the relatively slow aging regions of Uzbekistan. This, in turn, indicates the development of aging in all regions of the country in the near future.

The forecasts of the world's demographers show that this process is intensifying. In particular, according to the forecasts of UN experts, by 2050 the highest aging rate in the world is expected to reach 72.7%.

The creation of conditions for high-quality reconstruction of the population in the Republic of Uzbekistan, taking into account demographic processes, as well as ensuring effective employment should include the following tasks:

- to keep the birth rate at the level of a simple form of demographic reconstruction in the long run;
- improving the medical literacy of the population on healthy lifestyles, proper nutrition and hygiene, healthy pregnancy and child care, healthy lifestyle;

- ensuring safe working conditions in production, prevention of accidents, poisonings and injuries.
  - it is necessary to improve the system of employment services, which regulates the supply and demand for labor;
  - regular monitoring of ongoing programs to improve the rational employment of labor resources;
  - regulating the labor market, unemployment and employment
- organizational, economic and legal mechanisms need to be improved.

Commercial banks should provide soft loans to finance job-creating projects in remote rural areas and areas with difficult labor market conditions. Most of the jobs created in home-based work should be created in the regions that are centers of national crafts, including Namangan, Fergana, Andijan, Samarkand and Bukhara regions.

### CONCLUSION:

In short, the demographic trends of the country in recent years testify to the fact that the ongoing socio-economic state and regional programs in our country have created a high demographic potential that regenerates the population and laid the groundwork for its effective use. Today, as a result of demographic growth, the demand in the labor market is growing. This requires more serious attention to the issue of employment.

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## DEVELOPING INTEGRATING SKILLS OF STUDENTS WITH PHYSICAL DISABILITIES THROUGH DISTANCE LEARNING

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### ABSTRACT

*The article deals with the development of a special methodology of teaching English A2 level through distance learning. The author presents a study conducted over 6 months in the Centre of Society for Disabled People in Samarkand. For a full-fledged study, the article analyzes the level of English language of students with physical disabilities at the beginning and after its implementation. The article deals with the development of socio-cultural competencies in students of pre-school educational institutions.*

**KEYWORDS:** Distance Education, Technological Tools, A Student With A Physical Disability, Foreign Language, Methodology, Flexibility, Motivation, Adaptation, Psychological Principles, And Innovative Technology.

### INTRODUCTION

Today, in the Republic of Uzbekistan great attention is given to the radical reorganization of the educational system that will allow raising it to the level of modern standards [2]. Teaching a foreign language itself corresponds to the current level of technological progress, so the effectiveness of interactive learning technologies in the classroom is obvious [1].

The distance learning technology has taken the teaching of a foreign language to a completely new level and is an excellent choice for learners[8]. Innovative technology has allowed distance learning foreign language classes to blossom and to take form. The use of this technology allows students to speak to their teachers virtually and to hear the language being spoken[6].

While using the most recent technology, we should not forget the students with physical disabilities and their need to use technology effectively. When we integrate technology meaningfully, we are supporting them in the development of two essential tools for lifelong

learning: the skill in the use of another language and the ability to make discerning and effective use of technological tools[7].

With appropriate accommodation, distance education modalities may provide students with physical disabilities with their best chance for educational opportunity. Students whose disabilities do not allow them to get to campus or to function within the confines of the traditional classroom often have met with failure until encountering a flexible distance education format that allows them to work at their sites and their own space[3]. Students who enrol in classes with online education obtain a wider range of networking opportunities. Instead of being limited to networking in the local area, distance learning enables students to make connections with a more diverse range of people.

Education of students with physical disabilities provides for the establishment of a special correctional and development environment, providing adequate conditions and equal with ordinary children educational opportunities. Moreover, education of students with physical disabilities creates specific educational standards, treatment and rehabilitation, education and training, correction of developmental disorders and social adaptation [4].

The Learning Disabilities Association believes that persons with learning disabilities can overcome their learning disabilities and achieve academic success if they are provided with specialized interventions, appropriate to their strengths and needs [5].

Also, one of the main tasks of education is the formation of a child in society, the cultivation of its cultural behaviour. This task is impossible without creating a sociocultural environment. The State Educational Standards of Continuous Education of Uzbekistan reflects the requirement of its formation [4].

Nowadays, the work on creating a unified system for teaching foreign languages to children with disabilities is developing slowly. Today there is a need for application ICT into the system of education. In this case, there is a need to create a distance-based teaching methodology for all levels (A1-C1) [9]. In this regard, the relevance of this work is the development of a special methodology of teaching English A2 level through distance learning.

## METHODOLOGY

Distance learning of English is a significant aspect of education, the strategies to enlarge one's knowledge should be considered as a significant way to achieve success in learning [10]. The researcher carried out a specific study with 28 learners with physical disabilities. The subjects were studied with the help of questionnaires, and lessons during January –June months, 2019. The subjects of the current research were physically impaired children who do not attend schools who are taking courses which involve distance learning. Participants included the learner's of the various disability groups (I, II, III).

Accordingly, the Group "A" covered a distance-based method of teaching. The researchers needed to compare the results with another Group "B" who was taught the traditional method of teaching to identify the effectiveness of the used strategies for four skills. At the end of the study, the researcher aimed at comparing the results of the questionnaires of the two groups on English language acquisition.

The most significant characteristic of the Group “A” and Group “B” was that they were all physical impairment but mentally health learners. The main purpose of the research was to optimize the process of teaching in distance learning. Therefore, Group A and Group B subjects were chosen among Uzbek speakers of English as a foreign language. English proficiency of the subjects in both of the groups varied between elementary to pre-intermediate.

The materials consisted mostly of authentic ones taken from the Internet and course books. They are lesson plans for reading, writing, listening and speaking. The researcher also tried to use such interesting materials as flash- games, video and audio materials, and cartoons, visual aids to inspire and learn materials without much effort. Consequently, all the materials were chosen to take into consideration the topics according to students’ interests without touching their psychological dignity [12]. Materials of testing have been selected and design in accordance with and requirements of State Educational Standards of Continuous Education of Uzbekistan. Requirements for A2 level graduates in a foreign language is presented in the National Standard of teaching foreign language [4]. According to the requirements A2 level learners can:

- understand phrases and expressions related directly to his/her needs and interests
- understand simple directions relating how to get somewhere
- understand the main points in simple messages and announcements
- can extract essential information from recorded passages on everyday topics
- identify the main topic of discussion taking place in her/his presence
- read short texts containing familiar and less familiar language
- communicate in simple and routine tasks requiring asimple and direct exchange of information on familiar and routine matters.
- describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.

For each point of these requirements, concrete tests are created.

With Group A we conducted lessons based on distance learning technologies. The materials were selected from different sources and their task was to involve the students to participate during the lessons. Students online communicated with a teacher by web-camera and phone, they chatted and played online English games with each other, watched video lessons and animated cartoons, listened to English songs and news.

With group B we conducted lessons in traditional way teaching. The lessons the researcher conducted in the Centre for Disabled People in Samarkand. Students were taught by visual materials such as handouts, pictures, cards and audio-video materials.

The system of the exercise was designed according to principles such as real-life communication, psychological principles for encouraging, psychological principles for motivating.

## RESULTS AND DISCUSSIONS

During the post-exam, the researcher decided to organize the online testing for Group A and traditional testing with printed materials for Group B in order to check learners’ level. The



facilitator sent to students the link to websites related to four skills. The questions were general which were based on four skills. Most learners showed their best results.

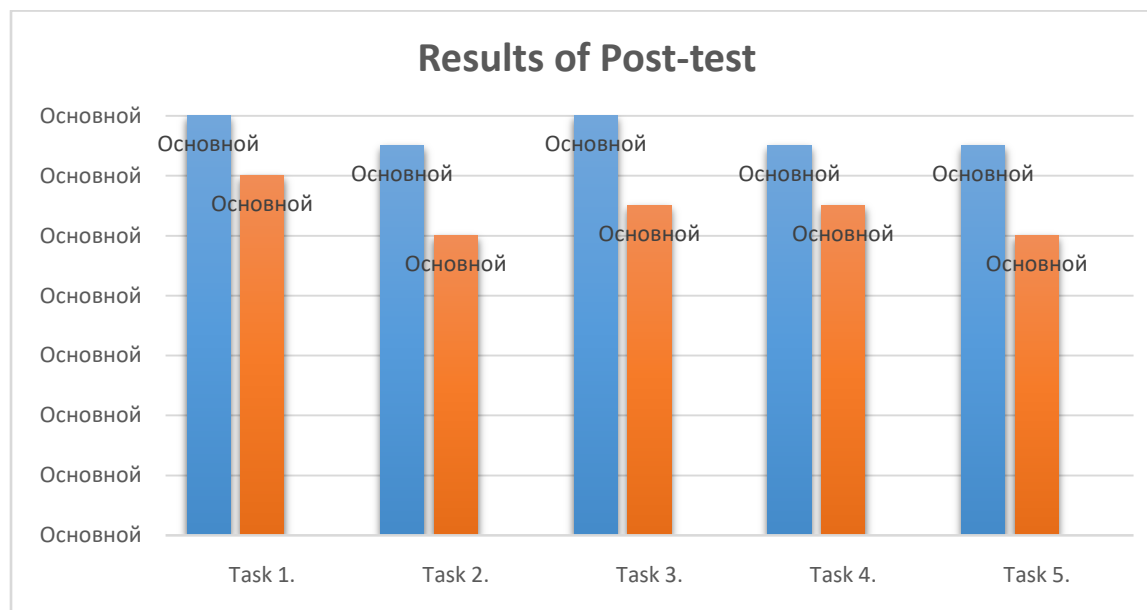


Diagram 1. Results of Post-test

Group A- Distance-based teaching ■

Group B- Traditional teaching ■

As can be seen from diagram 1, the Distance method facilitates learning with many English sources and it can interest and motivate learners. Some example of these strategies are listening to English songs and news and memorizing words from video and flash-games. Comparing traditional learning, learners had a low interest to learn English, because this kind of method demanded a certain place for learning, a certain time, time limit and most learners did not feel self-confident.

Implementing different kinds of strategies the investigators encouraged the students:

- to understand everyday expressions dealing with simple and concrete everyday needs, in clear, slow and repeated speech;
- to understand questions and instructions and follow short, simple direction;
- to understand the main points in simple messages and announcements;
- to extract essential information from recorded passages on everyday topics;
- to recognize the main cultural and speech characteristics of Uzbekistan and the countries of the target language, for example, greetings, methods of address, politeness in communication, etc.

The results of the current investigation are obvious. It is evident, after a search of the existing research that there is a need for research examining learners with disabilities in secondary school, and how they use of online and distance education is impacting their success and degree

attainment. Moreover, this type of educational option has had a positive impact on the success of disabled and special education students.

## CONCLUSION

The current investigation revealed a large gap in the current methodology: how today's use of technology in higher education can influence the lives of students with physical disabilities.

It is evident that after a search of the existing research there is a need how the use of online and distance education impact their success and degree attainment. Moreover, this type of educational option has had a positive impact on the success of disabled and special education students.

To conclude, it is obvious that *Distance learning is the most effective method* of English teaching to disabled learners. The pupils with disabilities enjoy learning English both from face to face and online experiences, by listening to English audio materials, watching English video aids and so on, other than inside their home. Therefore, disabled learners made sustainable progress in English with pleasure and without any pressure.

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## COMEDY SKILLS OF ERKIN VOHIDOV

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### ABSTRACT

*Just as the historical past of our great people and its literature, which has survived many glorious and bloody days over the centuries, are equally rich and sublime, Uzbek literature of the twentieth century is distinguished by many brilliant talents. The hero of Uzbekistan, the people's poet ErkinVakhidov is one of such rare talents. The article considers the unique poems and gazelles of ErkinVakhidov, mature comedies and epics, unique humour.*

**KEYWORDS:** *Comedy, Literature, Theory, skill, poet, comedian, press, politics, Erkin Vahidov.*

### INTRODUCTION

Without exaggeration, we can say that no city does not know the name of ErkinVakhidov and his masterpieces, which are in the hearts of our people with their unique poems and gazelles, great comedies and epics, incomparable humour and translations and deep articles. One of our famous literary scholars, Hero of Uzbekistan OzodSharafiddinov enthusiastically admits this fact: "It is safe to say that ErkinVakhidov is the beauty and pride of modern Uzbek poetry. There is no exaggeration in this opinion". In a television interview, we asked our famous singer: "There have been many days in your life, how do you overcome them?" I remember being asked a question. "This is the will of Allah. I did not sit with my head down and my back bent, I sang, I kept the climax of my soulful songs above. She did not leave the circle of friends, did not fade the love of life, did not retreat from humour. They adopted me". There's a saying that humour extends a person's life, you know... [1]

### MATERIALS AND METHODS

Erkin Vakhidov's sense of humour is really strong. Inspired by Hazrat Navoi, he was a poet who travelled through the garden of gazelles for many years, managed to raise our classical poetry to

a high mountain, which gave it a new meaning. A person with a sense of humour knows what to laugh at, what meanings to put into layers of laughter. [2]

Laughing is easy, difficult to get to the bottom of laughter. "Nasridin Afandi took a mirror lying on the road and saw his reflection. "E, Was it yours?" he said, returning her to her place." Most of us laugh at the simplicity of the Nasridin Afandi. Few people realize that there is a great tragedy behind this, describing the sad state of a person living without knowing himself. [3]

It's not a shame if we don't understand, but we still want to. So this is a great joke composed of some whole person. Thanks to your father! Laughing is not easy, it is even more difficult to protect yourself from the vagaries and shortcomings of near and near people. [4]

They read "Donishqishloq latifalari" with a light smile in their minds, and at the end, they suddenly whisper: what kind of people are these? This is a mockery of his people, a disgrace to his nation! What, does this poet consider the Uzbek so stupid? Where's patriotism? Where is the meaning? Unfortunately, sometimes such obscene words resonate in the language of some "other squirrels", who call themselves literary scholars and even make a living by laughing at others.

From this point of view, this is a joke, a limited person who does not see in the Uzbek a joke for a representative of another nation. When he shows the Georgian, we laugh, accuse the author of indifference and declare that the Georgian is so stupid. The reason for this is simple - he made us all laugh at ourselves (not at our nation) because of an interesting situation that we had never seen before, and more or less the dust in our hearts scattered. Whether this story is true or not, whether it is humour or satire, heavy stone or light, he thinks of it as a "dark thinker". The main innovation for us is that the event is well described. [5]

## RESULTS

Nevertheless, skill is the driving force of the comedy of Erkin Vakhidov, beloved by thousands of readers. Nemat Aminov said that the comedian, first of all, should be able to laugh and think. Like many comedians of the world, Erkin Vakhidov relies on this conviction. This is especially noticeable in his series about Matmusa. [6] In Matmus' Hat, Matmus bought an expensive hat, "washed" it with friends in a restaurant, and finally, without paying for the banquet, gave it to the waiter and got rid of him. In another poem, "Matmus" goes to the city and buys a beautiful bowl, and then thinks - if I take it home, and my wife turns it into a cheese bowl, should I return to the city to limit if my children quarrel over the cheese and break the bowl? Suddenly, the wisdom of Matmusa was so great that she broke the bowl and held back to avoid trouble. When the villagers hear this, they are struck by his mind. Categories that concern not taste, meat and garlic, not laughter, but logic and philosophy, usually do not admire the charm of humour and do not recognize the skill of the author. Why do people need such carefree statements? What does he teach us? While I'm writing. Vassal. [7] A writer who manages to make people laugh in this way can also "bite off" if necessary. For confidence, it is enough to read "Matmusaning uylanishi". Matmusa meets a woman in the city and leads her back to the village. See, she'll have a baby when she's three months old. No, there will be no riots that we expected, on the contrary, there will be a rise in the Matmusa family and the village.

In the local press, a luxurious article, "A Good Example - the Village" is published, and men support the initiative and appear in the newspaper.

On the streets: “News in full swing”, “Nine months is three months!” slogans begin to appear. [8]

Older and middle-aged people remember well that once there were ten times more cotton pickers on a cotton machine, which was 15-20 times higher than the daily workload in factories, and their initiative was widely covered in the media. To "grow" as many supporters of the initiative as possible, it took a lot of effort. In those old days, the creator needed a heart like a horse's head to laugh so openly at the great lies created by the regime itself. By the way, it is worth noting that countless people are creating a new image in a comic book or story, and there are few such cases in poetry.

Erkin Vakhidov managed to create a unique image in the interpretation of Matmus in poetry. [9] “Siyosiy saboq yoki Bek Bekovning garoyib sarguzashti”, “Majlis qiling”, “Qumursqalar jangi”, “Sen menga tegma”, “Bir tavakkalchi deydiki”, “Shaharmi bu, qishloqmi bu?” poet such comic verses were also greeted with applause. Although most of them have changed over time, they have not lost their relevance. Therefore, the virus of vices is extremely viable and extremely adaptable. [10]

## DISCUSSION

Erkin Vakhidov's comic poems are very attractive. It is not difficult to understand what is the secret of someone more familiar with the poet's work. Many critics have repeatedly recognized Erkin Vakhidov as a unique jeweller. This is especially pronounced in his lyrical verses, which resemble necklaces strewn with pearls of the most elegant, most sonorous, most shining words. In comic verses, we also encounter this hobby, enjoy reading and quickly remember. Erkin Vakhidov is an Uzbek poet and public figure. One of the most striking representatives of modern Uzbek literature. Without exaggeration, it can be said that the poet is the true successor to the gazelle genre. Love for the Motherland, its unlimited breadth, faith in the bright future of the Motherland will remain the most important aspect of Erkin Vakhidov's work. Erkin Vakhidov is a poet with a bright civic worldview. His poems are full of concern for the fate of future generations, and the author seeks to understand the deep spiritual and moral processes of modern life. From the same period, the poet travelled the world, saw the world, recognized the world. Based on these impressions, he created new collections of poems, such as “Tirik Sayoralar” (1978), “Sharqiyqirg'oq” (1981). The fate of a person, his happiness and future are the subjects of the poet's work. [11]

I want to say that I am very grateful to such native people and unique talents in our literature and such thoughts come to my mind when reading Erkin Vakhidov's collection *Tabassum* and many other poems. One of the immortal voices of Uzbek literature today has not lost its relevance. He still laughs at ugly vices in society.

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## VARIANTS OF KARAKALPAK FEMALE NAMES

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### ABSTRACT

*The semantics of Karakalpak female names, the principles and options for analyzing them need to be analyzed in all its aspects. The purpose of this article is to study the linguistic and non-linguistic patterns of Karakalpak female names. In order to achieve this goal, the tasks of identifying the linguistic basics and the reasons for the emergence of "variants" in female names, the grammatical structure is put. The factual materials analyzed in the article are useful for the explanatory and spelling dictionary of Karakalpak human names. The article serves as a theoretical basis in determining the orthographic and orthographic norms of Karakalpak female names, in the transcription and transliteration of Karakalpak anthroponyms into other languages.*

**KEYWORDS:** *Anthroponymic Variants, Anthroponymic Parallels, Toponymic Parallels, Abbreviations, Spelling Variants; The Spelling Of The Vowels, The Spelling Of The Consonants.*

### INTRODUCTION

It is important to study the methods and types of creation of variants of female names in the system of Karakalpak anthroponymy.

In lexicology and semiotics, when we talk about synonyms, antonyms, homonyms, we usually do not pay attention to the materials of proper nouns. This, in our opinion, is done by two points of view. 1) proper nouns are considered to have no lexical meaning and for this reason, it is considered difficult to determine their similar and opposite meanings; 2) in the system of proper nouns there are no synonymous, anthroponymic and homonymous relations. Nevertheless, anthroponymic synonymy has been mentioned in onomastic studies. For example, V.D.Bondaletov and E.F.Danilinalar considered Russian names Nikolai - Kolya - Nina - Nikolushka - Kolyan - Kolyay - Kolka as synonyms.[1,196].

E. Begmatov, analyzing the names Kurkam, Gozzal, Barno, considers that in determining the synonymy of this type of names should be taken into account in two cases: 1) the status of human names as anthroponymic fond in the system of Karakalpakonomastics; 2) the situation in which human names become the proper name of people. The names Kurkam, Gozzal, and Barno are important in the onomastic fund, and there is a possibility that the names of the people will be changed.

In the sense of this, these names became synonymous. Because there is a possibility to choose one by replacing another. However, once these names became human names, they could be used interchangeably. This means that although they were synonymous in the anthroponymic fond human names of this type lost their character when it became human names. [1,196].

## MATERIALS AND METHODS

One of the phenomena that are close to variability in the onomastic system is called parallelism in linguistics. In linguistics, there are several works on lexical parallels and onomastic parallels [2,34].

The following conclusions can be made about anthroponymic and toponymic parallels:

1. Simultaneous occurrence of similar terms in different languages in the form of onomastic parallels.
2. Languages of parallel terms may be languages that are related to one system, languages that are relative, or languages that are related to a different system.
3. Parallel terms are terms derived from words derived from other languages, such as low-layer materials (for example, a term that has a Turkic layer in two Turkic languages). For example, the names Muhammad (Arabic) and Nawriz (Persian) can be used in Karakalpak, Uzbek and Kazakh languages.

Variation is the existence of language units in a synchronous state and the performance of the task, which is also characteristic of the onomastic system. There is an opinion about the variability in the onomastic system.

In most of the works anthroponyms and toponymic materials were analyzed. The reasons for the forming of variants in the works are the reliability of the stylish requirements, the interaction effect of languages and the object or recall the object, the possibility of the full and abbreviated forms of the term, having the literary and local forms of terms, the forms of full, endearment and abbreviated, orthographic(al) factor.

Consolidation of ideas related to the appearance of variants helps to determine the spelling variants of human names, phonetic variants, phonological variants / morphological variants.

Also, the shortened versions of Karakalpakfemalenames are effectively used in the anthroponymic system. Scientists who have studied the phenomenon of shortening call the forms of shortening, contraction, endearment and reduction and in different terms.

When it is told about the shortening of human names, we can tell that this is connected with the case or the situation:

1) The desire to pronounce the name in a convenient form; 2) to change the child's name by saying the name in endearing. In both cases, the name takes on a different form from its original form. This change is due to the absence of a certain component, the syllable, the sound in the composition of human names.

Abbreviation of human names is a linguistic phenomenon that follows the phonetic-morphological and accentuation patterns of literary language. Although the abbreviated variation of human names is based on the objective phonetic and morphological regularities of the national language, this phenomenon is also genetically related to the subjective behaviour of people, their insecurity over human names. For example, let's take the phenomenon of human names becoming into various forms: Gúlziyra, Dilaram, and so on are called in the forms Gulziy, Dila.

Thus, the phenomenon of pronouncing human names in various forms, the abbreviation of names affect the stability of the spelling of human names in the emergence of various variants of the same name in anthroponymy. There is no doubt that different calling of a name makes controversial ideas in the spelling of human names.

In general, human names should not be distorted for any reason, and the fight against them is an important factor in promoting the culture of human names.

There is also a demand and view in linguistics that the abbreviated forms of human names should be based on the principles of correct spelling as much as possible. Abbreviated forms of human names can be constantly used by spelling and habit, the requirement to write in full as opposed to the distinctive features of some of the functional features of human names.

Some spelling defect is not only related to linguistic reasons but also subjective cases. Because, incorrect writing the name and surnames in individual documents (passport, birth certificate, certificate, diploma and others) is occurred at the result of ignorance and not knowing the Karakalpak spelling of the person who formalizes these documents. In most cases, these documents were formalized by another nation representative who wasn't Karakalpak wrote the names, surnames and father's names according to spelling them in Russian. As a result, the national uniform of the human name was destroyed. The issue of transcription of Karakalpak names, surnames and father's names into Russian is one of the issues that need to be considered from a special scientific point of view.

The names of one-syllable, multi-syllable and two-syllable, three-syllable can be abbreviated in all the peoples of the world, along with their full pronunciation in the spoken language. The scientists divided the abbreviation case of human names in spoken language into different groups and studied that these cases can occur at the result of omitting some sounds, syllables or morphemes, or one component of compound human names, or last syllable, components, morphemes of human names, or adding the affixes which mean "subjective value" instead of them. E. Begmatov points out two important facts in the phenomenon of abbreviation of people names in the Uzbek language: 1) by giving endearing meaning to human names; 2) to facilitate the pronunciation of human names (especially compound human names)[2,21]. G.F.Sattarov shows two different ways in the abbreviation of Tatar human names: 1) through affixes that mean the subjective value, and 2) the result of the shortening of some sounds, syllables, components in human names. [8,39,40]. A.V. Superanskaya points out that the notion of the distinction between human names, which are both endearment and subjective value, is not

sufficiently clear. It is worth noting about this in the following: the term "diminutive" refers to the subjective attitude of the speaker to the so-called "subject", so it can't be correct to find it convenient the process of abbreviating names [6,12]. The main idea of the abbreviation is to make it easier to use. Any words can be abbreviated, but in proper nouns, they are often used because they are directed to someone. The abbreviation of human names is, first of all, structural, morphological and real objective process, but the subjective value is the factor in a different plan, emotional, sociality, psychological and the term itself, as always, the factor of subjectivity in the project ». In our opinion, it will be correct to study dividing into the abbreviated human names, formed by omitting some sounds, morphemes, components in the content of them, and the subjective value human names formed by adding the suffixes of endearment, diminutive, respectfulness and the words entered into affix meaning (affixoids).

The Karakalpak human names are abbreviated by following phonetic and grammatical changes:

a) omitting some sounds in the word: Gúlásen (Gúlhásen), Shazada (Shahzada), Biybaysa (Bibiaysa), Ulbosın (Ulbolsın), and so on.

b) Omitting some morphemes and syllables: Qalhan (Qallyxan), Gulay (Gulaysha), Gulbiy (Gulbiybi), Gulziy (Gulziyra, Gulziyba), etc.

c) shortening the final component of the compound names: Bağda (Bağdagúl), Bazar (Bazargúl, Bazarxan) and so on.

The different opinions were told about the role of subjective value forms in linguistics. For example, R. Kungurov, telling that the subjective value forms were used by different terms in Uzbek language, stopped to the difference of them from the word formation, word modifier and form formation suffixes. The scientist considered them the same by meaning, although these terms were different. So, he considered to take the subjective value-form terms instead of all these and explained with examples about the difference of subjective forms from word formation, word modifier and form formation suffixes are in speaker's different relation to objective being, evaluation, i.e. in the meaning of endearing, diminutive and respectfulness.

Subjective value forms give emotional-expressiveness form to the word which is connected itself. They serve to increase the coherence of speech.

The forms which have subjective meaning differ from the word-formation and word modifier affixes with the ability to give emotional-expressiveness form to the object or itself. These forms are considered in two ways: 1) affixation method and 2) the method of adding words in emotional character.

**-day** affix in Karakalpak language, mainly, is added to infinitive and means the appearance, colour, difference of subject, in symptoms it is called related to endearing, appreciating meaning to women: Ayday, Palday and so on.

**-sha // - she** affixes is included in the effective affixes which added to root nouns and is close to the affix **-day** in human names. Aysha (Ayday), Gúlsha (Gúldey), Ulsha (Ulday) and so on. It mainly is added to female names and effectively used: Aysha, Ayfmsha, Gulaysha, Orimha, Xamha, Ayxansha and so on.

The affixes **-sh, -esh-ish** have the meaning of reduction, endearing, and are often used in the abbreviation of human names. This affix is effectively used in the composition of male and

female names in the Karakalpak language: Turdysh, Aymash, Almash, Bagdash, Biybish, Gulash, Mirzash, Orash, Toktash, Perdeshe, Sapash, Si'rgash, Gu 'Ipash, Da' mesh, Ma 'riyashand others.

The affix **-m, -im // - im** is an indication of the first form of the possessive case in Karakalpak. In human names, this affix expresses a person's inner emotional feelings and means endearment in both male and female names, and is one of the affixes that can be used effectively: Ayım, Bağım, Gülim, Nazım, Ülim, Ürim, Sanem, Gulsim, Nazlym, Khanym and so on.

The affixes **-dan // -den, -tan // -ten** are in the form of output suffixes, and are used in the sense of placing the second component of a compound human name in conjunction with the first component and used in endearing meaning: Toydan (Toydyk); Aydan (Ayımgúl, Ayjamal, and others.). This affix did not occur much in the composition of human names.

The **-ay** affixoid may be derived from the word moon which is a celestial body. This opinion was also confirmed by R. Kungurov [9,132].

In the Karakalpak language, it means endearing in male and female names: Altınay, Gulay, Gümsay, Yerkinay, Qurbanay, Umitay, Tolg 'anay and others.

Naming a person can be formal and informal.

It is possible to say a person's name, to show him respect, to express affection, to caress him, to love him. In particular, when a parent caresses his children, he loves the person he can change and repeat his name in all sorts of different ways. For example, the name Dilbar is pronounced in the forms Dilash, Dilim, Dilok.

The second factor that causes shortening of human names is the desire to make it easier to pronounce nouns, which are long or difficult to pronounce. In order to facilitate the pronunciation, one of the sections of the human name, syllable, syllables or a sound can be omitted.

However, if there are spelling variants of the Karakalpak female names, they can be a reason to change one name to another.

In the modern system of Karakalpak anthroponymy, the following spelling variants are associated with the combination of vowels, their interplacing, the omitting of the sound or the combination of sounds.

Variants related to the spelling of vowels. The phenomenon **ct > á**: Gcnvhar - Gawhar and others. The phenomenon **e > i**: Feruza- Firuza, Gu'lchehra- Gulchiyra. Variants related to the spelling of consonants. The phenomenon **D > t**: Gulshad-Gúlshat, The phenomenon **z > s**: Nargiz-Nargis.

The transformation of any consonant into another sound in human names is called combinatorial change of sounds and depends on the degree and form of the phenomenon, the assimilation, dissimilation, accommodation, synchronism and the freedom consonant of the vowels. The occurrence of the mentioned phenomenon is met in simple lexics, in the system of proper names, when root word for form proper names is pronounced in certain dialect or folk spoken language, this sign is used when entered into solism task. Among the phenomenon related to the interplacing of vowel and consonant mentioned above, is included to phonetics of spoken and dialects of Karakalpak language.

Options related to the connection and omission of the sounds.

Any change in the language occurs as a result of the processes that allow the internal regularities of the left language. This situation is also used in certain changes in the composition of Karakalpak human names. For example, the phenomenon of omission of a sound at the beginning of a human name:

One of the manifestations of the shortening of human names is the fact that one of its sounds is omitted. Because human names are repeated many times, the same form of the name is pronounced, and it enters the spelling. Forms of human names that omitted a sound in them are usually considered a dialectical phenomenon, it's considered to be a spelling error due to the full form of a human name.

Another sign in forming variants of human names is the addition of a vowel in the composition of individual nouns. This phenomenon also forms an anthroponymic variant; the combination of the sound y: Gulziyra (Gulzira), Patiyma (Patima).

Variation of the anthroponymic system, in factors and methods of formation of this phenomenon, phonetic, orthoepic, morphological, syntactic, especially dialectical, lexical regularities of the Karakalpak language, several nonlinguistic factors are used. For this reason, the study of anthroponymic variants inevitably enriches the linguistic definitions mentioned with separate scientific concepts.

## CONCLUSION

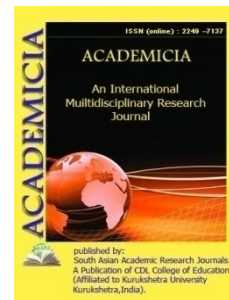
The study of anthroponymic variants is not only theoretical but also has scientific and practical importance. The results of this study serve as a theoretical basis to determine the orthographic norms of Karakalpak human names, informing spelling and explanatory dictionary of Karakalpak anthroponyms, transcription and transliteration into other languages.

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## THE IMPACT OF THE COVID-19 PANDEMIC ON THE ECONOMIES OF THE MIDDLE EAST

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### ABSTRACT

*The COVID-19 corona virus pandemic has far-reaching consequences beyond the spread of the disease itself and the attempts of various countries to organize quarantine. In the mass media, the phenomenon of the impact of the disease on the life of the society and its consequences is increasingly referred to as the term “corona crisis”. The countries of the Middle East region have been hit by two major and mutually reinforcing shocks, which have led to a significant decline in economic growth projections for 2020. In addition to the severe damage to public health, the COVID-19 pandemic and the drop in oil prices are causing economic instability in the region. The impact has been particularly negative in vulnerable and conflict-affected States owing to the already serious humanitarian and refugee problems there, as well as the poor health infrastructure.*

**KEYWORDS:** *Pandemic, COVID-19, Middle East Countries, Stock Market Index, Oil Prices, Quarantine, Economic Activity, OPEC +, Capital Outflows, Per Capita Income.*

### INTRODUCTION

The corona virus pandemic and quarantine measures to contain it have had a dramatic and massive shock to the world economy, plunging it into a deep recession. The World Bank predicts that the planet's economy will shrink by 5.2% this year. The downturn will be the deepest since the Second World War, and the decline in per capita output will affect the largest share of countries since 1870.

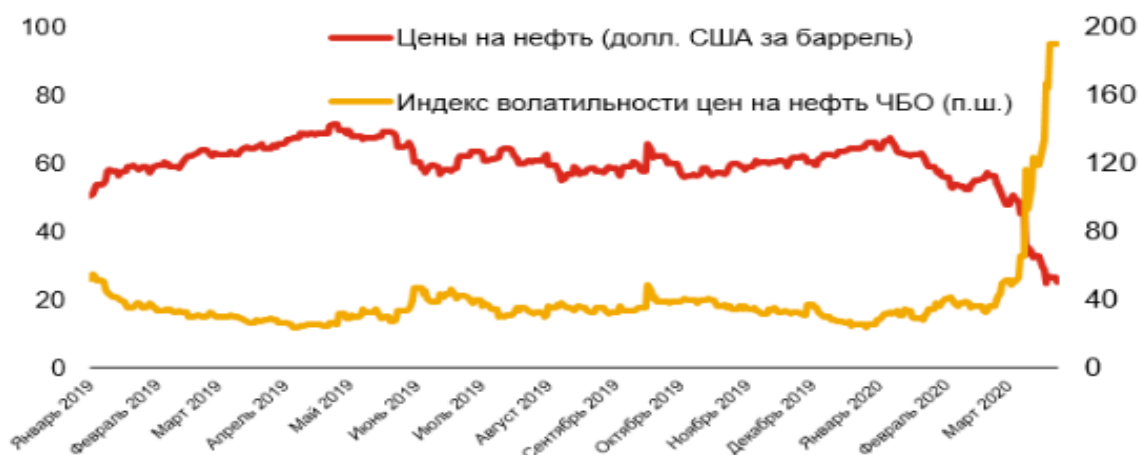
### MATERIALS AND METHODS

Against the backdrop of severe shocks to domestic demand and supply, trade and finance, developed economies are expected to contract by 7 per cent in 2020. Emerging and developing

economies (Emes) are forecast to contract by 2.5% this year - the first comprehensive recession in this group of countries in at least sixty years. Per capita income is expected to fall by 3.6 per cent this year, pushing millions of people into extreme poverty.

The spread of COVID-19 and the fall in oil prices have also had a significant impact on the countries of the Middle East, and this impact may intensify. Economic activity in the Middle East and North Africa is forecast to decline by 4.2 per cent as a result of the pandemic and developments in the oil markets. In addition to its devastating effects on health, the pandemic has produced significant economic shocks - reduced domestic and external demand, reduced trade, disruption of productive activities, loss of consumer confidence and tightened financial conditions. The oil-exporting countries of the region are facing an additional shock of falling oil prices. Travel restrictions due to the public health crisis have reduced global demand for oil, and the inability of OPEC+ countries to negotiate production reductions has led to an oversupply of oil supply. As a result, oil prices have fallen by more than 50 per cent since the beginning of the public health crisis. These interrelated shocks are expected to have a major impact on economic activity in the region, at least in the first half of this year, with possible long-term consequences.[1.2]

Measures to contain the pandemic have had a negative impact on key sectors with a large number of jobs: Egypt has cancelled 80 per cent of tourist arrivals, and the United Arab Emirates and other countries have been hit by hotels and retail. Given the sheer number of people employed in the service sector, rising unemployment and declining wages and remittances will have wide-ranging consequences.



Источник: Bloomberg Finance LP.

Примечание: ЧБО = Чикагская биржа опционов. Индекс волатильности цен на нефть ЧБО оценивает ожидания рынков относительно 30-дневной волатильности цен на нефть. Индекс рыночной волатильности ЧБО оценивает ожидания рынков относительно 30-дневной волатильности форвардных контрактов, рассчитываемой на основе ценовых компонентов опционов индекса S&P 500. Цены на нефть отражают средние спотовые цены на нефть.

**Figure 1. Falling oil prices.**

At the same time, there were irregularities in production and industrial processing and investment plans were frozen. The adverse effects of these shocks are compounded by a sharp drop in business and consumer confidence in all regions of the world.

In addition to the economic disruptions caused by COVID-19, commodity-exporting countries in the region are suffering from lower commodity prices. The decline in export earnings would lead to a deterioration in external economic performance and lower incomes, which would put pressure on government budgets and, through external effects, affect the rest of the economy. Oil-importing countries, on the other hand, are likely to be affected by a second wave of impacts, including declining inflows of remittances and falling demand for goods and services from the rest of the region.[3-6]



**Figure 2. Declining stock market index.**

Finally, the surge in risk aversion around the world and capital flight to secure assets have reduced portfolio investment flows to the region by about \$1 billion per year. The United States of America has received \$1.2 billion since mid-February, with significant capital-risk outflows in recent weeks. Stock prices fell and bond spreads rose. This tightening of financial conditions may prove to be a serious problem, given that the region's forthcoming external sovereign debt stock is estimated at \$35 billion in 2020. USA.

## CONCLUSION

The immediate strategic priority for the region is to protect the population from coronaviruses. Efforts should be directed towards mitigating and containing the pandemic in order to protect the health of the population. Governments, even in countries with limited fiscal space, should spare no effort to ensure that their health and social protection systems are properly prepared to meet

the needs of the population. For example, in the Islamic Republic of Iran, where the coronavirus outbreak was particularly severe, the Government is increasing health spending by providing additional funding to the Ministry of Health. In addition to this overarching priority, economic policy responses are needed to prevent That the pandemic, a temporary health crisis, should lead to a prolonged economic downturn with a prolonged deterioration in social welfare as a result of increased unemployment and bankruptcy. However, the policy response was complicated by uncertainty about the nature and duration of shocks. In countries with appropriate political capacities, this can be achieved through a combination of timely and targeted policies to support particularly affected sectors and populations, including the provision of temporary tax and cash benefits.

In countries facing severe demand shocks, Governments may resort to temporary fiscal stimulus measures, including increased infrastructure spending to increase aggregate demand, Where possible, although such measures will be more effective once economic activity recovers. In situations where liquidity is a serious problem, central banks should be prepared to provide sufficient liquidity to banks, especially those that lend to small and medium-sized enterprises; In so doing, regulators could support a prudent restructuring of problematic loans without compromising the rules on loan classification and reserve formation.

When the immediate corona virus crisis starts to subside, it will be possible to consider more traditional fiscal measures to support the economy, although the fiscal space for this has been significantly reduced over the last decade. Given the nature of the current slowdown, an attempt to stimulate the economy is unlikely to succeed at this time and would risk the complete disappearance of the limited fiscal space that remains.

Targeted assistance is already being initiated in many countries. For example, several Gulf Cooperation Council countries - Qatar, Saudi Arabia and the United Arab Emirates - have announced large financial packages totaling over \$60 billion to support the affected private sector. These packages include targeted measures such as deferred credit and concessional financing for small and medium-sized enterprises.

Other countries, especially oil importers in the region, have more limited political space. Lower revenues as a result of declining imports, together with additional expenditures to combat the pandemic, are expected to increase fiscal deficits in these countries. While well-targeted spending on health should not be sacrificed, it must be borne in mind that the extremely high indebtedness in many of these oil-importing countries means, That they will not have the resources to respond to the wider economic downturn. These countries should therefore try to strike the right balance between easing conditionality's and preventing capital outflows and allow, where possible, exchange-rate adjustments to cushion some shocks. There may be significant funding needs in some countries.

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## A COMPARISON OF BUSINESS COMMUNICATION BASED COMPETENCIES ACROSS INDIAN AND AMERICAN LEARNERS

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### ABSTRACT

*The purpose of the study was to assess and compare learning outcomes from a communication course rooted in fundamentals of business and professional practice within the context of increasing accreditation demands. Face validity, content validity and reliability of the assessment are offered. Thirty American students and twenty-six Indian students comprised the sample groups. Results indicate a disparity between score distributions across students for each sample group with a discussion about what these results suggest in terms of learners' abilities. Conclusions suggest that instructors must not just look at passing rates, but think broadly about how to encourage exceptional competencies.*

**KEYWORDS:** *Business Communication, Comparative Education, Management Education*

### INTRODUCTION

Education across the world has typically utilized exchange systems. Students submit work in the form of assignments, and in turn, receive a grade reflecting their efforts. Instructors create assignments in the form of examinations testing cognitive learning, speeches, role-plays and scenario based assignments testing behavioral learning and reflexive assignments testing affective learning (Edwards, 1990). Exams aim at assessing student learning and knowledge in the course material. Today, universities and institutions of higher education spend copious amounts of time concerned with enrollment, retention, graduation, placement rates, and how to evaluate what students are *really* getting out of their courses.

Higher education, in particular public institutions, turn to standardized tests as a means of gauging student readiness to learn and, as such, enters into a market of commodities rather than exchange. With commodities, unit "cost" matters as much as how "goods" are produced, measured, and sold (Cayton, 2007). Therefore, student evaluations and assessment outcomes are

the means by which programs; even entire universities are evaluated and keep their accreditation. Because of the focus on assessment and assessment outcomes, this research focused on the development and administration of an assessment instrument used to measure student knowledge in a course aimed at preparing students for communication in their business and professional lives.

Assessment outcomes from students in a American based program and a transnational (Singapore, Dubai, and Sydney) based program were utilized for this research. This paper discusses the face and content validity as well as the internal consistency of the exam (the assessment instrument). This discussion of validity and consistency is followed by an evaluation of the exam items themselves. Chronbach's alpha ( $\alpha$ ) and inter-rater reliability for the two essay questions are discussed. Finally, a report of the score distribution is presented.

## **MATERIALS AND METHODS**

Creation of the assessment required familiarity with the current course. The course text had been used by the research previously in courses related to business and professional communication, management communication, fundamentals of communication, introduction to organizational communication. The exam was created using the guidelines outlined by Scannell and Tracy (1975) concerning quality assessment instrumentation.

The final assessment consisted of thirty (30) multiple choice items worth one point each, one matching item set with five (5) items worth one point each, five (5) true-false items worth one point each, and two (2) essay questions worth five points each. The exam was evaluated using item analysis by an assessment team, all of whom were familiar with assessing communication knowledge and had completed graduate course work in communication assessments. The following checks ensured both reliability and validity.

### *Validity*

Face and content validity were considered prior administration of the assessment. As mentioned previously, Scannell and Tracy's (1975) guidelines were utilized in the creation and finalizing of exam items. Face validity was ensured by checks to make certain each exam item was discriminate for knowledge on only one concept. Further, each item had only one correct answer and contained three answer distracters. The exam items were created to measure students' knowledge of a particular concept and not their feelings (affect) or behavior. Face validity was achieved by way of exam design and by the use of items that attempted to assess communication knowledge only.

In determining the exam's content validity an assessment team met and collaborated to ensure that the items reflected the information contained in the text chapters. Content validity can be attained based on the degree to which the exam accurately reflects the concept(s) being tested. The 50 items created demonstrated a breadth and depth of communication knowledge as required for the course. The items were created so that equal number of questions from each chapter was evident. They were also and presented in the order that they were taught in the course. Both samples received the same course instruction prior to the exam. Careful attention was paid to make certain that each chapter's core concepts were represented and evaluated. The items included were both summative and formative in an attempt to assess students' knowledge on both levels. Participants were given 50 minutes to complete the exam, although many did not

need the whole time. The assessment team anticipated that each essay would take approximately five - seven minutes and that the multiple choice, true-false, and matching would take 30 minutes. All participants finished the exam, in its entirety, and no questions were left blank.

Bloom's (1984) Taxonomy of Cognitive Learning was also used to ensure content validity. Bloom's Taxonomy asserts that students move through a learning hierarchy that begins with knowledge and concludes with evaluation. A student, according to Bloom, acquires knowledge and then moves through the following stages: comprehension, application, analysis, synthesis, and that the student will finally reach evaluation. The assessment team categorized exam items with Bloom's Taxonomy in mind. The assessment instrument administered assessed students' knowledge, comprehension, and application.

Cognitive abilities or understandings were assessed using five true-false items, five matching items, and simple items asking for definitions. Comprehension was assessed through the two essay questions. Most of the exam items created for this assessment offered an application scenario and asked students to select a correct answer based on using the communication concept within the scenario presented in the question. This mix of exam items assured the assessment team that newly created exam had achieved both face and content validity.

### *Reliability*

For this type of research, internal reliability is generally accepted if Chronbach's  $\alpha$  is at .70 or greater. The overall exam reliability was acceptable. Chronbach's  $\alpha$  was reported at .757 which indicates that it was possible that there was 24% measurement error in the assessment instrument. The items included in this  $\alpha$  were the multiple choice, true-false, and matching items. In the final analysis, there were five items that could be removed to achieve a reliability level of  $\alpha = .802$ . However, only one item was removed in the final analysis (a multiple choice item) which raised the reliability to  $\alpha = .772$ . None of the suggested items for removal were from the true-false or matching item sets.

The assessment was administered to a batch of 30 American students in the Spring of 2009. Students were all US born citizens. The assessment was then administered to a batch of 26 students hailing from various regions throughout India. Both American and Indian students took exams as a part of core curriculum requirements. Indian students took the assessment as a part of course work requirements for a Global MBA while in Dubai. American students were not abroad during exam administration.

### **Results**

The overall distribution of scores reveals a relatively normal bell curve for US students.

- 4.7% of participants received an "A"
- 4.7% received a "B"
- 46.6% received a "C"
- 22% received a "D"
- 22% received an "F" on the exam.

The score distribution range was between 36 (the lowest score) and 94 (the highest score) with a mean score of 68 and a median score of 74. The results are typical of a first examination. The overall distribution of scores reveals slightly different results of graduate Indian students.

- 38.5% of participants received an “A”
- 7.7% received a “B”
- 3.8% received a “C”
- 11.5% received a “D”
- 38.5% received an “F” on the exam.

## DISCUSSION

Differentiations between American and Indian students exam scores demonstrate disparities between distributions. Collectively, both samples had fairly high passing rates of 56% and 50% for American and Indian students respectively. The majority of American students appear to know enough to pass the assessment with a grade of “C.” The majority of Indian students assessment scores indicate that students either had exceptional knowledge and skills to do well or had not achieved any understanding of the material on the assessment. Level of interest and importance to the learner could also be taken into account.

## CONCLUSIONS

This research suggests that approach to teaching in competencies related to communication for business and non-business majors need to account for the disposition of the learner and instructional interventions. While approach to instruction can be uniform and even output similar passing rates, the distribution of scores demonstrates that student-learning outcomes vary significantly. With an increased emphasis on assessment outcomes for accreditation purposes, it is imperative to continue to prioritize student-centered learning in creative and challenging assessments. Indian students appear to demonstrate exceptional abilities, but an instructor must account for why the remaining (nearly) half of the students were not able to excel. American students appear to fall within an average range demonstrating an only moderately adequate understanding. This research places importance on strategies that push students towards more exemplary standards.

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## THE EFFECT OF SOCIAL MEDIA ON BRAND EQUITY FACTORS IN TERMS OF HOUSING INDUSTRY IN UZBEKISTAN

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### ABSTRACT

*This article is devoted to the analysis of the effect of social media on brand equity factors in terms of housing industry of the Republic of Uzbekistan. In addition, it considers the role of social media in developing a favourable image of the housing industry in our republic.*

**KEYWORDS:** Social Media, Brand, Housing, Traditional Marketing.

### INTRODUCTION

The issue of affordable housing has always been in the focus of the government of the Republic of Uzbekistan. In this regard, **the President of the Republic of Uzbekistan** Shavkat Mirziyoyev has mentioned the necessity to apply the measures for introducing a new system of providing the population of cities and villages with housing.

In order to provide decent housing over the past three years, 104 thousand units of affordable housing have been built, including 63 thousand in villages and 41 thousand in cities. Despite this, the pace of housing construction is not keeping pace with the growing demand of the population. This is evidenced by more than 36 thousand appeals regarding the housing issue received by the People's Reception Office for 9 months of this year. Many are unhappy with the quality of houses. Some areas erected in villages are not connected to engineering and communication networks. There is unrealized housing, and for some houses, repayment of loans is problematic. The reason for these and other shortcomings is that the construction of affordable housing does not have a stable financial source and is carried out mainly at the expense of budgetary funds. Competition in the system is weakly formed, maybe due to the inadequate development of the housing industry in terms of the consumers' demands.



## MATERIALS AND METHODS

Marketers of brands use different strategies and communication tools in order to affect the purchase decision step of consumer purchase decision-making process. More and more customers are using the internet for searching for product information and shopping online. In the area of marketing and communications, social media marketing has evolved as the most effective and widely used tool. The main use of social media for companies is to attract a larger number of potential customers and maintain higher levels of the loyalty of the existing customers. The popularity of social media has been growing so fast that not only ordinary people have been using them, but also government organizations, officials and business entities. Ordinary users mostly use them to socialize with their family and friends, while government bodies and businesses use them for marketing and communications purposes (Kim and Ko, 2012). One of the main changes social media has brought to the business world is that companies are now not the only source of brand communication, as social media has offered customers from all around the world to be connected in a shared platform and spread information. Although traditional media types such as TV, radio or magazines can also serve companies to maintain at least one-way communication with customers, the popularity of social media is resulting in losing interests of customers towards those traditional media. This means that companies now find it harder to grab the attention of customers through traditional marketing tools. Customers have been using social media world more to search for product information (Mangold and Faulds, 2009). One of the reasons for this situation is the superior speed of viral diffusion of information among people on social media compared to the traditional media channels [6].

The main difference that social media has brought in regard to the traditional marketing is that now marketers can develop interactive communication environment, in which they will be able to improve customer relationship (Kim and Ko, 2012). One of the roles of social media in marketing is that when customers make a review on products, it can generate either positive or negative brand buzz. As a result, those messages on social media platforms influence on customer purchase decisions [5].

Following the realization that traditional marketing techniques have been becoming more and more ineffective in communicating with customers, companies have been increasingly more focused on social media marketing, which facilitates direct and two-way communication with their customers (Rana, 2011). As customers have become able to share their knowledge and experiences with products easily on social media and spread it very fast among many people, companies have been more concerned about publicity (Qualman, 2009).

Construction companies, which are effective in social media marketing can experience effective social media interventions. Given the fact that more and more people are using social media and housing products are high-involvement and lifelong in nature, companies of the industry cannot deny the importance of having active, positive and effective social media presence.

There is sufficient literature, which can confirm the strong and positive effect of social media on developing brand equity (Rana, 2011). In such studies, a significant and positive link between online communities, interaction, content sharing and brand equity. The aggregate findings of such studies indicate that social media impacts brand equity through facilitating a new and direct channel, enhancing the brand presence of companies, creating and maintaining customer involvement with companies, and improving customer relationships.



Social media serves as a form of a new communication channel, thus it has sparked many research studies (e.g. Qualman, 2009). Their aggregate conclusion suggests that social media helps companies promote their products and services and the main outcomes they can achieve include higher consumption and greater brand awareness.

In recent years, the number of new users of social media and active users has been increasing worldwide (Nielson, 2010). One of the reasons for such a trend is the increased accessibility of social media tools both on phone and computer devices. According to a researcher Tuten (2008), the benefits of social media marketing for companies include higher brand awareness, greater business reputation, better corporate image, increased sales, a higher level of traffic to corporate websites, and higher efficiency of marketing strategies.

Considering the fact that social media has become popular in usage and accessible for many, there is a need to examine its effectiveness in different research settings. A careful literature review has indicated that many research works are attempting to measure the effectiveness of social media presence (e.g. Qualman, 2009). However, it has been identified that there is an insufficient amount of research emphasizing on the level of effectiveness of social media marketing on the performance of brand equity, especially in the context of Uzbekistan housing building industry.

It has been clear that the features of social media have been increasing in popularity because they allow for specialization and uniqueness for companies in their marketing. However, one of the main expected outcomes of the social media presence of companies is to generate consumer responses towards their social media marketing actions. According to Nielson (2012), social media users from the U.S. and Asian countries tend to show more reactions compared to the customers from the rest of the world. Despite the higher responsiveness of the customers in Asia, there is relatively less attention of researchers on examining the consumer behaviour on social media in the context of Asian countries compared to the U.S. or other countries. According to a researcher Neilson [3], “higher responsiveness” means more sharing, liking and purchasing goods and services on the social media world. For this reason, there is a strong need to conduct such as study in the context of Asian countries including Uzbekistan.

Like many other countries, Uzbekistan also facing the fast increase of social media usage both by business and individuals. For instance, users of Facebook in Uzbekistan has increased by 32% and users of Twitter has increased by 28% within 2017 and 2018 (Stat Counter, 2018). The increase of social media users in Uzbekistan has been supported by the increasing number of internet users in the country. The number of internet users in the country increased from 7.200 in 2000 to 12.7 million in 2017 (The Guardian, 2018). The increase of social media use in Uzbekistan has been on the rate, which is one of the highest among post-Soviet countries. Another reason for such a trend is government intervention into the market by creating its state-led social media sites. As of 2016, the government of Uzbekistan had a total of 38 social media networking websites. This has been done by the government in order to create a favourable environment for businesses to conduct advertisements. It should be noted however, those national social media networks are not compatible with the global ones such as Facebook and Instagram. For example, a Russian social media network, Odnoklassniki.ru alone has 900.000 users in Uzbekistan, while Muloqot.uz which is the most popular and successful social media site of the Uzbek government has about 170.000 users.

Considering the role of social media in promoting brands, first of all, it is appropriate to provide a definition of the concept of social media.

Researchers Richter and Koch (2007) defined the term social media as “online applications and platforms, which aim to facilitate interactions, collaborations and sharing of content”. A similar definition was presented by Neti[4]: “any website, which allows user to share their content, opinion, views and encourages interaction and community building”. Further, the author explains the term social media by dividing it into “social” and “media” terms separately. According to the author, “social” can be understood as “the communication or interaction of individuals within a group or community” and “media” can be understood as “advertising where the communication of ideas or information takes place through publications or channels”. A more detailed definition to social media was presented by Saffo and Brake [6] as “activities, practices, and behaviours among communities of people who gather online to share information, knowledge, and opinions using conversational media”. Neti [4] considered many definitions of the term on the literature and offered a generalized definition like the following: “the communication platforms which are generated and supported by the social interaction of people through the specific medium or tool”.

Social media platforms are based on internet technologies, which are designed for fast knowledge sharing and information sharing to a significant number of web users. Social media platforms enable the creation and sharing of user-generated content. It has been mentioned by many researchers that social media involves using web applications to communicate, collaborate, create and share contents by people.

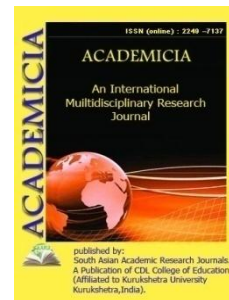
Social media has offered a new platform for people to socialize. It has also offered companies a new type of customer socialization, in which peer communication can have a serious effect on the process of customer purchase decision-making. The social media tools can provide a significant source for customer socialization through giving people a virtual space for communicating online (Veneran et al., 2013). It has been clear that the main effect of social media is creating interpersonal relationships. However, researchers Gillin and Schwartzman [3] argue that it can also give social capital to companies, which assist in gathering marketing intelligence and opportunity craving by examining and monitoring the target market, customer behaviours and prospects behaviours on social media sites. The main types of social media include weblogs, social blogs, microblogging, podcasts, video, rating wikis and social bookmarking [3].

## CONCLUSION

In conclusion, it should be noted, that marketers of brands use different strategies and communication tools in order to affect the purchase decision step of consumer purchase decision-making process. More and more customers are using the internet for searching for product information and shopping online. In the area of marketing and communications, social media marketing has evolved as the most effective and widely used tool. The main use of social media for companies is to attract a larger number of potential customers and maintain higher levels of the loyalty of the existing customers. The popularity of social media has been growing so fast that not only ordinary people have been using them, but also government organizations, officials and business entities.

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## GLOBAL CRISIS OF THE IMPACT OF COVID-19 PANDEMIC ON THE FOOD INDUSTRY OF UZBEKISTAN AND THE ROLE OF BANK- FINANCE SYSTEM TO SOLVE THE ISSUES

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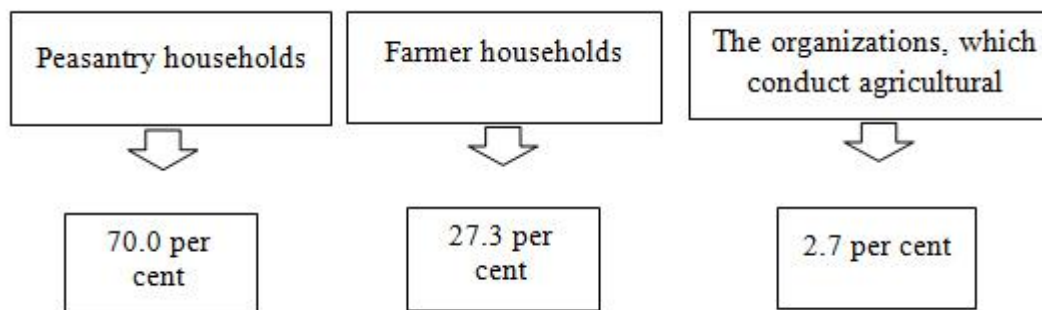
### ABSTRACT

*This article is dedicated to solve the issues related to the corona virus pandemics and to solve the food industry problems. In addition, some governmental laws and reforms by our state are also stated clearly in this article. Practical analyses of cotton and wheat by Agrobank ATB.*

**KEYWORDS:** Food Industry, Peasantry Household, Farmer Household, An Enterprise Of Agriculture, Privileged Credit, Market Price, Bonification, Vessel, Folder Of Credit.

### INTRODUCTION

The population of Uzbekistan is increasing (1). The process of increasing of population causes escalating demand for food as well. The domain of food industry is considered as one of the main parts in our country. Farmer and peasantry households are one of the main factors, which produce foods in our country.



**Figure 1. The division of agricultural products into agricultural households.**

It is clear that, peasantry households are the main parts to produce foods. (2) These households are creating more than 70% of total production. In addition, farmer households are trying to contribute to increase food economy in our country. Their portion consists of 27% of total food. Other organizations, which deal with the activity of household affairs consist of 2,7 per cent.

Social-economic and political condition are dependent to each other in developing food industry in our Republic. On this topic the President of the Republic of Uzbekistan says: “reforming of ruling system of agriculture, implementing new technologies into the resources of water and land, providing the food security are the most important tasks”. (3) In order to achieve these tasks, we must increase the amount of income of the population, supply all the financial and material needs altogether.

## ANALYSES OF LITERATURE

A lot of economic scientists have made researches on the proper development of food industry. D. Konuy and E. Berber points out: “Providing a population of a country with food supplies guarantee active life style”. (4) Actually, in the period of corona virus demand of population for food is increasing day by day. We must take into account that we can achieve to food abundance if we develop agricultural system. Paying back the credit on time and totally depends on the stability of credit takers. The stability of farmer households is really low. Therefore, giving credits by banks and supporting them by country are an objective process, which is needed to prioritize. The results of researches by N. Andreyev (6) show that the capability of paying credits by farmer households in the countries in passing period especially the countries of Commonwealth of Independent Countries is really low. In this condition, the problems to giving microloans to farmer households may appear. There are three principles to solve the problem:

1. A government provides the farmer enterprises with credits from the account of the State budget or specially founded organizations via commerce banks. In this condition, commerce banks play a passive role as financial mean, and they provide with necessary amount of credits because of little deposit.
2. A country takes a full responsibility and credit risk to give credits to agricultural enterprises. When the credits are not paid back on time, the country takes responsibility to pay those credits itself to commerce banks.
3. Low per cent privileged credits are given to agricultural enterprises. The difference between the per cent amount of credits and market per cent is paid by the government.

It has found its own proof that the third approach in international practice is relatively effective. That is, as a result of the application of this approach to practice, it became possible to increase the level of return on credit, to form a stable balance of agricultural loans in the credit portfolio of commercial banks. Scientists from Uzbekistan economist A. According to baymorotov, there are three approaches to increasing the possibility of using the loans of commercial banks of agricultural enterprises, namely the third approach, that is, the difference between the preferential interest rate of loans granted by banks to agricultural enterprises and the market rate of bank loans, the payment by the state to commercial banks is considered to be a relatively.

Q.Toshmatov investigated the issue of lending to agriculture by banks and, based on the findings of the study, comes to such a conclusion: "in addition to the cotton and grain crop grown for the needs of the state, it is necessary to create an effective system of lending of working capital and fixed assets necessary to farmers for the cultivation of other agricultural products, and gradually, for the needs of the state, it is necessary to transfer to preferential lending of farmers directly from the

However, at the present time, farmer farms provide their profitability from the account of preferential loans, which are allocated from the account of state funds. On top of this, commercial banks do not have the cheap resources needed to provide preferential loans.

Also, Q. Toshmatov concludes that the amount of the average cost of cotton raw materials and grain cultivation in the Republic and the exact definition of its price plays an important practical role in preferential lending of farms growing cotton and grain for the needs of the state, forecasting their profitability. In determining the norm of costs for the cultivation of cotton and grain, each region has its own unique soil-climatic conditions, available opportunities and unfavorable conditions.

According to Professor A. Vakhobov, it is necessary to Bonify the interest rates of investment loans granted by banks from the account of funds of the fund for reconstruction and development of the Republic of Uzbekistan in order to establish production enterprises and firms specializing in the processing of agricultural products in rural areas to the subjects of Small Business[9]. We fully agree with A. Vakhobov's opinion. In particular, by the end of 2017, the funds of the fund for Reconstruction and development of the Republic of Uzbekistan exceeded 16.0 billion US dollars. The implementation of the bonification process from the account of these funds allows to increase the volume of investment loans granted to the processing of agricultural products.

According to D. Tadjibaeva, in order to improve the practice of microfinance of small business and private entrepreneurship, commercial banks should open a subsidiary organization providing microfinance services. In the banking practice of Uzbekistan, there is experience in the organization of subsidiary enterprises by banks, including the management of problem assets and bankrupt enterprises, obtained on the balance sheet of commercial banks. This microfinance service subsidiary must have its own policies, separate state and Information system[11]. In our opinion, this conclusion of D. Tadjibaeva has practical significance. Because the results of the study of the activities of commercial banks show that there is a certain type of financial service provided by commercial banks (trust, leasing, factoring etc.) specialized subsidiaries can provide this service qualitatively and efficiently.

Agriculture is a network that is financially supported by the state in any country, including civilized countries. In the European Union, state financial support was introduced to 70 percent

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of agricultural products, this index show 50 percent in the US [12]. The results of the study of the practice of foreign countries show that the granting of tax benefits to agricultural producers by the state is one of the widely used forms of financial support of their activities.

In the countries of the European Union, since the income of farmers is significantly lower than the income of companies of other sectors, a lower rate of profit tax is applied to them.

In accordance with the resolution of the president of the Republic of Uzbekistan dated February 28, 2018 PP-3574 "On measures for radical improvement of the system of financing the cultivation of cotton raw materials and grain crops with a spike in the development of cotton and grain farming in the modern stage of development of the economy of the Republic of Uzbekistan", starting from March 1, 2018, the Guaranteed State price on the purchase of cotton raw materials and grain products with a spike is set in terms of varieties and classes, which will ensure an increase in the profitability of producers and promote the cultivation of high-quality products; the debts of cotton raw materials and grain-growing farmer farms formed in accordance with the status of 1 January 2018 before the service organizations, including pensions and fines accrued before the internal network debts as well as budget and state target funds, have been written off for a period of 3 years; within a week to the Ministry of Finance of the Republic of Uzbekistan, "Agrobank" has allocated 150 billion Manats per annum at a rate of 5 percent to allocate loans to farmers' farms that grow grain with a grain crop in excess of the stipulated volumes of Public Procurement. the task of depositing the sum of funds was entrusted.



**Figure 2. Agrobank has been granted preferential loans for the cultivation of cotton and grain crops in 2014-2017 by [13], millionsoums.**

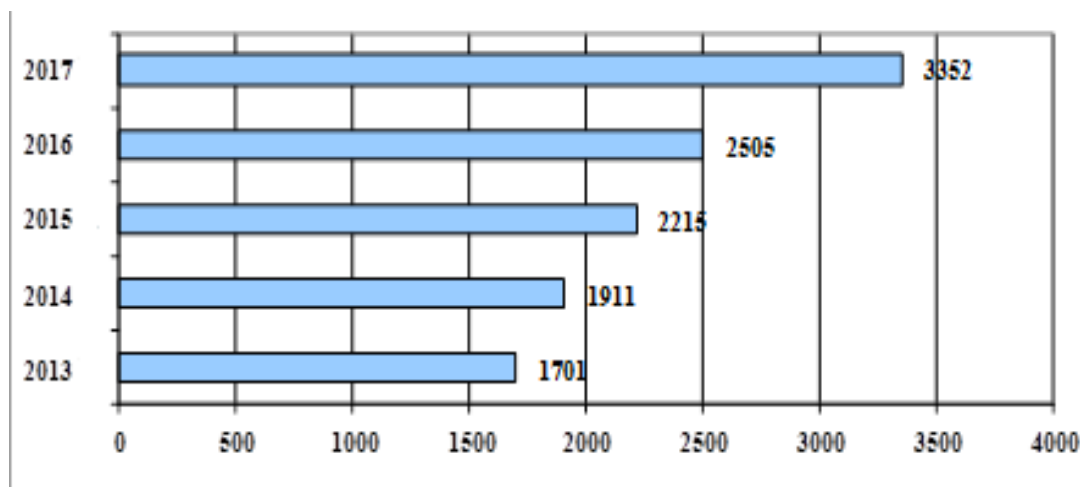
Through the image data below, we will evaluate the amount of loans granted by the ATB "Agrobank" for the cultivation of cotton and grain crops.

As can be seen from the information presented in Figure 2, in 2014-2017, the growth trend of the amount of preferential loans granted by Agrobank to farmers' farms for the cultivation of cotton and grain crops was observed. This is explained by the fact that during this period, the purchase prices of cotton and grain increased.

"Agrobank" also provides credits to other spheres of Agriculture. However, the loans granted for the cotton and grain crop grown for the needs of the state are of high importance compared to the total volume of loans granted to the agricultural sector by the ATB Agrobank. According to the state of January 1, 2018, in the total volume of loans granted by "Agrobank" ATB to the

agricultural sector, the yield of loans granted to farmer farms for cotton and grain crop amounted 39.4 per cent. This suggests that the bank's credit portfolio diversification level is low. However, according to the generally accepted andoza in international banking practice, more than 25 percent of commercial bank loans cannot be collected in a single network or area.

However, the level of profitability of loans granted for cotton and grain crop is low.



**Figure 3. “Agrobank” loans granted to the agrarian sector in billion soums.**

As can be seen from the data of picture 3, “Agrobank” had an unstable growth trend during the period when the amount of loans granted to the agrarian sector was analyzed. A sharp increase in the amount of these loans was observed in 2015. In 2015, the company produced high-performance “Magnum” and “MX” tractors (42 046 million tons). sum) and the purchase of combines “Dominator-130” (18084 million soums). sum) is explained by the fact that a large amount is transferred to the loan. The fact that Agrobank is entrusted with the financing of the entire agrarian sector creates the need to pay special attention to lending costs associated with the strengthening of the material and technical base of agricultural producers and enterprises.

## SUMMARY AND SUGGESTIONS

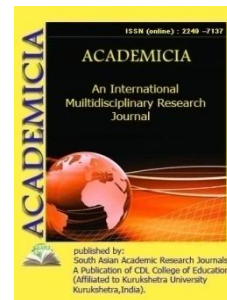
As a result of the corona virus pandemic, global hunger can occur. The rational policy of the states in preventing this hunger occupies a prominent place. When we analyzed, we saw that the salinity of dexkan Farms is high, mainly in the loss of food products. But from the theoretical framework for the activities of dekhkan farms, firstly, the financial situation of agricultural enterprises is not stable and the level of solvency is low; secondly, it is necessary to provide financial support from the state; thirdly, it is observed that the credit solvency of agricultural enterprises in most transition economies countries, including the CIS countries is low. In order to prevent this, it is desirable to carry out the following activities:

- bonification of loans granted to agricultural producers in developed countries from the account of funds of the state budget, granting tax benefits to agricultural producers by the state are the main forms of financial support of their activities;
- In order to increase the volume of loans and leases granted by Agrobank to agriculture at low and stable interest rates, the fund for reconstruction and development of the Republic of Uzbekistan has increased by 500 million manats. The amount of the US dollar should be put

into circulation on the condition that “Agrobank” is credited to the authorized capital of producers of Agriculture.

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## TECHNOLOGIES FOR PRODUCING HIGH-STRENGTH GYPSUM FROM GYPSUM-CONTAINING WASTES OF SULFUR PRODUCTION - FLOTATION TAILINGS

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### ABSTRACT

*Development of technology for obtaining high-strength gypsum from the gypsum-containing waste of sulfuric production-tails of flotation, which required investigation of the effectiveness of various methods for obtaining a gypsum binder and searching for optimal technological parameters.*

**KEYWORDS:** *Monomineral Binder, Gypsum-Containing Waste, Phosphogypsum, Flotation Tailings, Organic And Inorganic Compounds, Chemical Composition, Granulometric Composition, Heat Treatment, Container.*

### INTRODUCTION

Currently, the most important raw materials for the production of gypsum products are gypsum-containing wastes from the chemical industry and, first of all, wastes from the production of phosphorus fertilizers (phosphogypsum). In terms of waste management and ecology, the work solves an urgent problem.

The demand of the industry of Uzbekistan for gypsum raw materials can also be satisfied at the expense of by-products of the industry. This will reduce the production of natural gypsum stone, as well as reduce the cost of the construction and operation of slag storage facilities for gypsum waste. The use of by-products containing calcium sulfates in the industry has not only economic

but also environmental implications. Considerable funds are spent on waste disposal, sometimes reaching 8-10% of the cost of the main product.

A small share of the used gypsum-containing waste from their total amount is due to the peculiarities of the physicochemical composition and properties that do not allow using traditional methods of processing natural gypsum raw materials for them. The flotation tailings contain a small amount of hemi-aqueous calcium sulfate, which was formed during the technology of obtaining sulfur from natural sulfur stone.

## **MATERIALS AND METHODS**

The basis for the production of gypsum binders is the process of thermal dissociation of calcium sulfate dihydrate. Losing part of the water of crystallization, the dihydrate gypsum turns into semi-aqueous gypsum, which is chemically active with respect to water under normal conditions, which makes it possible to use this product as a binder.

The use of gypsum-containing waste in the production of binders is dictated by economic and environmental concerns.

The main reason for the disposal of industrial waste is that waste requires significant funds for the construction of dumps that occupy a large usable area and cause environmental damage due to the containing various harmful impurities [1].

In addition to calcium sulfates, the main substance of gypsum-containing waste, they can contain impurities that significantly change the technical properties of the resulting binders. As impurities, both organic and inorganic compounds can be contained, namely, compounds of silicon, fluorine, aluminum and iron, alkali and rare earth elements, radioactive compounds, as well as some amounts of free acids.

Mechanical impurities of organic substances, as well as the presence of readily soluble sodium and magnesium salts, lead to gypsum staining, promotes the formation of efflorescence on the surface of products, and impairs the setting process. Physicochemical impurities are the most difficult to dispose of. If to remove mechanical impurities, it is enough to wash the raw material, then to exclude physicochemical impurities, it is necessary to carry out the recrystallization process along with the washing. Free acids, which are present as impurities in gypsum-containing waste, help to lengthen the setting time, reduce the adhesion of the binder and the strength of the products, and cause corrosion of equipment. In order to get rid of impurities, active washing and neutralization are required [2-4].

However, the results of later studies indicate that in factories designed for processing natural gypsum stone without introducing additional technological operations, it is impossible to obtain a binder from gypsum-containing waste that meets the requirements of standards.

To improve the quality of the obtained  $\beta$  hemihydrate, some researchers propose carrying out a mechanical activation operation in combination with neutralization of acidic impurities before firing.

The flotation tailings are a greyish-white powdery substance with a specific surface area of 900-1000 cm<sup>2</sup> / g, which are formed as a result of the separation of sulfur inclusions from the ore. According to the technology, sulfur ore from the quarry is crushed, mixed with water, sulfur inclusions due to the difference in the density of materials are on the surface of the pulp, which is

collected by special devices and sent for processing. The slurry with gypsum-containing waste with a significant amount of water is discharged into special collection tanks, where it is dried under atmospheric action.

The average bulk weight of waste in a loose state is  $950 \text{ kg/m}^3$ , in a compacted state -  $1100 \text{ kg/m}^3$ .

The flotation tailings consist mainly of gypsum dihydrate, the total content of which ranges from 80 to 90% by weight. Also, they contain sulfur, silica, alumina and other substances from the original rock.

The flotation tailings also contain a small amount of hemihydrated calcium sulfate formed during the production of sulfur from natural sulfur stone as a by-product according to the technology adopted at the plant.

It is known that each type of gypsum binder has a certain structure of the crystal lattice. Studies show that in terms of granulometric composition, ordinary stucco consists, as a rule, of small and porous grains of a detrital nature, which determine the high water demand of gypsum during mixing and low strength of the products obtained from it. All of the above is a consequence of the free removal of hydrated water from gypsum.

Despite a significant number of works devoted to the technology of obtaining high-strength gypsum binders, researchers do not have a consensus regarding the technological parameters, methods of preparing raw materials for hydrothermal treatment, as well as the comparative efficiency of using various methods for producing high-strength gypsum.

When producing gypsum binder from gypsum-containing waste, the technology may undergo certain changes associated with the material composition of the raw material, i.e. morphology.

In general, the process of obtaining high-strength gypsum from gypsum stone includes the following technological methods: crushing gypsum stone, autoclaving gypsum crushed stone, drying the obtained calcium sulfate hemihydrate and grinding the finished product.

Gypsum-containing raw materials-tailings of flotation of sulfur production differ from the known gypsum-containing waste in the composition of impurities, the state of calcium dihydrate and other features.

In this regard, an urgent problem is the development of a technology for obtaining high-strength gypsum from gypsum-containing wastes of sulfur production - flotation tailings, which required a study of the effectiveness of various methods of obtaining a gypsum binder and the search for optimal technological parameters.

In view of the powdery state of the flotation tailings, it is necessary to determine the possibility of heat treatment in an autoclave in its natural state.

A slightly moistened starting product is placed in a 1-meter high container. After autoclaving, samples of the obtained binder were taken from various points along with the height and width of the container. Experimental data are presented in Table 1.

As can be seen from the table, the deeper (up to 40-50 cm) the samples are taken, the lower the strength indicators. Studies have shown that during autoclaving at an optimal steam pressure of 0.2 MPa, steaming time for 20 hours and drying for 20-22 hours, the formation of the required



number of centres of recrystallization of the dihydrate into hemihydrate in the entire volume of the material occurs only to a depth of 20 cm.

The effect of the height of the waste layer on the properties of the gypsum binder during heat treatment.

**TABLE 1.EXPERIMENTAL DATA**

Raw material layer height in the autoclave container, cm	Strength, MP aat		Setting time, min		Water-gypsumratio
	squeezing	bend	Start	end	
10	8,3	3,6	12	23	0,37
20	8,6	3,8	12	20	0,37
30	2,9	1,6	25	70	0,55
40	2,7	1	37	120	0,55
50	2,7	1	40	lack of grasp	0,55

A special stack was constructed with pallets 20 cm high (based on the above experiments), into which slightly moistened flotation tailings were poured in a loose state. Heat treatment of the product was carried out according to the optimal regime.

Despite the rather high strength indicators of gypsum binder using this technology, it should be noted that certain production processes, in particular, unloading and labour-intensive increases the cost of the binder [6].

## CONCLUSION

In this regard, it is necessary to enlarge the finely ground flotation tailings into granules or briquettes and carry out heat treatment.

As noted earlier, the waste of sulfur production - flotation tailings as a by-product gypsum-containing product in the production of sulfur is a slurry with a significant amount of water (up to 45%), and in the dried state (with dehydration under natural conditions) - a powdery substance of greyish-white colour. It is not possible to get waste with certain moisture content. This complicates the use of sulfur production wastes without additional conditioning operations.

Several conditioning methods (granulating) gypsum-containing waste are known from the literature [7], developed mainly for phosphogypsum. They are not without drawbacks, which makes them inapplicable for conditioning the waste of sulfur production - flotation tailings, since they either provide for the introduction of additives as binders that are not used mainly in production, which significantly complicates the conditioning process, makes it uneconomical, or complex and multi-stage.

All this necessitates the development of more economical and simpler methods of conditioning the feedstock.

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## ISSUES OF MANAGEMENT OF ENTERPRISES ON THE BASIS OF HORIZONTAL AND VERTICAL INTEGRATION

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### ABSTRACT

*In the period of the global pandemic, a lot of spheres of the economy meet with financial difficulties. In these positions managers of companies decide to maintain and develop companies activity. They choose horizontal or vertical integration for companies expanding. This article explains the meaning of integration and the type of integration for developing companies.*

**KEYWORDS:** *Development, Integration, Horizontal Integration, Vertical Integration, Business, Business Entity, Integrate, International, Strategy, Expand.*

### INTRODUCTION

The development of the world economy, the strengthening of economic ties in the regions, the inflow of funds from economically developed countries to other regions as investments lead to the development of integrated relations in the process of globalization. In the global pandemic period, all spheres of the world economy meet with financial difficulties. During the period managers of companies, the main duty is to maintain the activities of the companies. The subjects of international economical relationship are not only business entities but also countries, international organizations and other companies.

Countries, international organizations and business entities take part in these relations. The expansion of business entities from their territories to other regions, the formation of their divisions and the continuation of their activities will lead to the formation of these enterprises as corporations, transnational corporations, international financial industry groups. As a result, international integration will develop. Companies develop on the basis of horizontal or vertical integration in order to strengthen their position in trade and the market, as well as easy access to new markets.

**Economic Integration**- various enterprises and industries, as well as countries convergence in the field, the establishment of integral economic ties between them, the process of formation of a single common economy between countries. Economic integration is observed at the level of national economies of whole countries, as well as at the level of enterprises, firms, companies, corporations. Economic integration is manifested in the expansion and deepening of production and technological ties, the joint use of resources, the pooling of capital and the creation of favourable conditions for the implementation of economic activities, the removal of barriers. [1]

Integration for companies developing means expanding activity and developing business. Integration consists of horizontal integration and vertical integration. These type of integration defines companies developing strategies. Based on one of these types of integration companies choose and managers try to manage them. In the economy, corporations may develop effectively with managing based on one of the types of integration.

**Vertical integration** is a competitive strategy by which a company takes complete control over one or more stages in the production or distribution of a product. It is covered in business courses such as the MBA. [2]

A company opts for vertical integration to ensure full control over the supply of the raw materials to manufacture its products. It may also employ vertical integration to take over the reins of distribution of its products.

A classic example is that of the Carnegie Steel Company, which not only bought iron mines to ensure the supply of the raw material but also took over railroads to strengthen the distribution of the final product. The strategy helped Carnegie produce cheaper steel, and empowered it in the marketplace.

**Horizontal integration** is another competitive strategy that companies use. An academic definition is that horizontal integration is the acquisition of business activities that are at the same level of the value chain in similar or different industries. [3]

In simpler terms, horizontal integration is the acquisition of a related business: a fast-food restaurant chain merging with a similar business in another country to gain a foothold in foreign markets.

Horizontal integration, as we have seen, is a company's acquisition of a similar or a competitive business it may acquire, but it may also merge with or takeover, another company to strengthen itself to grow in size or capacity, to achieve economies of scale or product uniqueness, to reduce competition and risks, to increase markets, or to enter new markets. Advantages and Disadvantages of Vertical and Horizontal Integration of Firms [4]

Vertical integration	Horizontal integration
Benefits: - strict control over suppliers of raw materials and components, directive planning of their prices; - centralization of the profits of all participants in the cycle; - restricting competitors' access to the integrated market segment;	Benefits: - global competition of suppliers selected by competition; selection of suppliers with lower costs and high-quality products; - reduction of capital investments and losses when changing range of products and technologies;

<ul style="list-style-type: none"> <li>- rejection of unnecessary suppliers;</li> <li>- consolidation of tax payments;</li> <li>- the use of transfer prices to lower taxation in</li> <li>- areas with high tax rates;</li> <li>- increase in the number of assets during mergers and acquisitions;</li> <li>- the use of property rights to control all</li> <li>- links of the corporation.</li> </ul> <p>Disadvantages:</p> <ul style="list-style-type: none"> <li>- the disinterest of the corporation's suppliers in reducing costs and quality improvements;</li> <li>- the complexity of the management of multi-tier firms, the growth of organizational and administrative costs, the many floors and levels of management;</li> <li>- the prevalence of administrative command management methods, blocking the initiative of the staff;</li> </ul>	<ul style="list-style-type: none"> <li>- reduction of administrative staff and costs</li> <li>- management;</li> <li>- Formation of global supply chains with modern logistics and flexible contracts;</li> <li>- wide participation of personnel in the development and implementation</li> <li>- management decisions;</li> <li>- flexible change of structure and adaptation to change business conditions.</li> </ul> <p>Disadvantages:</p> <ul style="list-style-type: none"> <li>- the risk of failure to meet deadlines and poor quality of supplies;</li> <li>- growth in transport and communication costs;</li> <li>- the risk of mismatching interests of participants in the supply chain with a sharp difference in the profitability of their business.</li> </ul>
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Vertical and horizontal integration have their typical features. Companies may choose one of them for their aims in business developing. For business purposes, the strategy differs. Managers choose one of the appropriate developing strategic integration.

## CONCLUSION

In the global pandemic economy under the influence of globalization, clustering and due to the transition to a networked organization of business, new economic conditions have been forming, which in many recent monographs by scientists from leading universities the world is seen as a revolution in a business organization. The essence of this revolution is to change the relationship "power-property", the role of the firm in reproduction processes, transformation of human and social capital into the basis of its competitiveness and sustainable development. It leads to the need to change the institutional framework and forms of organization of intra-company ties based on the reorganization of agency relations, outsourcing, development of network structures, clusters, supply chains and value creation, target and design departments of the company developing the concept brigade contract. As economic relations develop in one way or another branch of the country's economy, the vertical integration mechanism should be consistently replaced by a mechanism horizontal integration, more efficient and better adapted to constant significant changes external environment for firms. [5]

Vertical integration and horizontal integration are business strategies that companies use to consolidate their position among competitors.

Horizontal integration helps your company expand into new territories without the high costs of building from scratch because adding an existing, profitable business is usually less expensive than the total cost of a new startup. Horizontally integrated businesses may benefit from economies of scale. Once you reach a certain size, your operating costs grow at a much lower rate than the profit from those activities. For smaller companies, the drawback of this type of integration lies in consumer perception.

Horizontal integration usually takes the form of a merger or acquisition, and these actions can be perceived as greedy or aggressive. That can hurt your combined companies' reputation, and cost you some goodwill in your new market. Larger companies may find that antitrust or anti-monopoly laws can stand in the way of horizontal integration processes, nullifying any cost-saving effect.

In the vertical integration business model, your company expands by gaining control of its entire supply chain. This type of integration can move forward toward the end consumer, or backwards toward the raw materials for goods production. For example, if Flour company processes wheat from farmers into flour for bakeries, another one could vertically integrate by going into business with the farmers, or by starting a bakery of his own. Additional vertical integration might include trucks to transport the wheat and baked goods, or a storefront shop to sell the final product.

Vertical integration allows you to control the entire manufacturing process, from raw goods to the end consumer. This usually translates to better cost and quality control, since you can set your prices for raw goods and manufacturing. The drawback to this control is a loss of flexibility and resilience. If one's farmers have a bad year, he may be short of wheat for his flour, driving up his costs and forcing him to scramble for additional supplies.

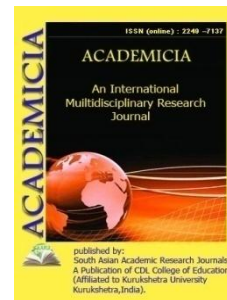
The culture of professionals is better than others for creating and introducing innovations, and the development of the concept of an intelligence organization and its implementation in life is vital the task of innovative development of Uzbekistan.

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## THEORETICAL FOUNDATIONS OF THE “BRAND EQUITY” CONCEPT AND ITS FUNCTIONS

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### ABSTRACT

*This article is devoted to the analysis of theoretical foundations of the concept of brand equity. Also, it considers the functions of brand equity in terms of current conditions. Moreover, the article provides a comprehensive overview of the opinions of various scholars and market analysts on the “brand equity” concept.*

**KEYWORDS:** Brand, Brand Equity, Consumer, Customer, Brand Awareness, Loyalty.

### INTRODUCTION

As far as we know, export is an important factor in the stability of the economy. A sharp increase in exports is the only way to increase foreign exchange reserves. As a result of measures taken in our country to facilitate and support export activities last year, exports amounted to 14.25 billion USD and increased by 13.6 percent.

Over the past two years, the export geography has expanded to 50 countries and has covered 140 countries. Some 120 new products have been exported. In the export structure, the share of finished products was 56 percent, regional industrial exports grew by almost 1.7 times. However, the country's export potential is still not fully utilized.

The President of the Republic of Uzbekistan has noted the need to diversify the structure of exports, to bring the share of non-primary products to at least 60 percent. To this end, it is entrusted to develop a national export strategy for the Republic of Uzbekistan for 2019-2025.

### MATERIALS AND METHODS

Currently, the best efforts are undertaken to facilitate exports of domestically manufactured goods. It should be noted, that it is impossible to enhance the export volume without creating awareness of foreigners about these products. An efficient advertising campaign can promote

various products via social media, thus making national brands known throughout the world. In this regard, the concept of “brand equity” is considered particularly urgent.

Through reviewing the relevant literature, it has been noted that one of the popularly cited definitions of brand equity was provided by Yoo and Donthu[1], who defined the concept as “the difference in consumer choice between the focal branded product and an unbranded product gave the same level of product features”. Similarly, a definition by Aaker [2] was also found popular. It suggests that brand equity is “a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers”.

It has also been noted that is possible to define the concept from customer and company perspectives [3]. From the customer perspective, the definition of the term focuses on customer mindset, which can be explained by utilizing the constructs such as attitudes, awareness, associations, attachments and loyalties (Keller and Lehmann, 2001). When it comes to the definitions from a company perspective, they focus on product-market results such as price premium, market share, relative price and so on. They may also include financial market results such as the purchase price of brands, discounted cash flow of license fees and so on [4, 5].

Researchers Punj and Hillyer[6] examined brand equity from a customer perspective and they explained it to include a set of brand-related associations kept by customers in memory. From this perspective, the concept can be understood as being mostly attitudinal consisting of beliefs, affect, and other subjective experiences, which are connected to the brand like brand attitude and image. A clear definition of customer-based brand equity was presented by researcher Keller [5] as “the differential effect of brand knowledge on consumer response to the marketing of the brand”. The measurements of customer-based brand equity include customer awareness, attitudes, associations and loyalty, which are linked to a given brand [5].

From the above discussion, it is reasonable that 2 basic frameworks to explain brand equity appropriately include those of Aaker [2] and Keller [5]. The concept of brand equity was considered multidimensional by Aaker [2] and he mentioned that there are 4 core brand equity dimensions: brand awareness, perceived quality, brand associations and brand loyalty. In comparison, the brand equity concept of Keller [5] emphasizes on brand knowledge with 2 components: brand awareness and brands image.

Now it is appropriate to consider the factors of brand equity.

## **BRAND AWARENESS**

Before understanding the concept of consumer-based brand equity, one should ask the question of: “What makes a brand strong?” (Keller and Lehmann, 2003). The authors claim that using brands, companies become able to develop blocks in the minds of customers. This simply results in superiority of certain brands over others. The term “block” here can mean for instance, a restriction for customers when they are to consider and evaluate all available brands in the market. When a customer for instance, have some awareness on a brand, he would feel safe with purchasing it compared to risking to purchase the same product from another brand, meaning from another producer. Going back to the question raised, a feature of a brand, which makes it strong is the level of brand awareness, which is present in the memories of customers. When brand awareness is high enough, it creates some perception in the minds of customers. If brand

awareness is broken down, it will be possible to see that it includes information on perspectives and descriptive characteristics of a product, to which a brand is attached. The role of brand awareness was explained by Aaker [5], who explained that companies can achieve a new source of value creation by having a brand, which has high awareness among customers and potential customers. Also, the theorist suggested the process of brand awareness development. According to his explanations, at the first stage of the process, customers must recognize a particular brand by feeling the features and dimension of that particular brand in different life situations. At the next level, customers are required to distinguish various features of the brand to say that those customers have high enough brand awareness on that brand. At the next stage, a brand has a special feature, which is associated strongly in the mind of customers. As a result, those customers will be able to recall that particular brand when they feel the need for the product, to which it is attached (Keller, 2008). Such processes explain the way customers recall certain brands and they can reflect brand identity, which is present in the minds of customers (Percy, 2008). Customer experiences, which are directly related to a particular brand will lead to the development of features and brand image in the customer mind for some time (Batey 2008).

Empirical research works have confirmed that brand image represents the results thoughts that are achieved by marketing actions to develop a positive brand image (Dovalliene and Virvilaie, 2007). When a favourable brand image development is achieved by companies, attributes and relative advantage of their brand are also favourable, their experience positive customer attitude towards their brands (Campbell, 2002; Low and Lamb, 2000). It was found by empirical evidence in the literature that positive brand awareness leads to positive customer attitudes towards brands by developing consumer behavioural intentions later too. For this reason, for a brand image to develop customer attitudes and judgments on brands through customer perceptions, the marketing departments of companies need to create brand awareness first. It should also be noted that brand awareness can also be both positive or negative (Sotiropoulos, 2003). This will lead to customer judgements, emotions, which in turn mostly depend on marketing actions (Keller, 2001). When customers have a high level of awareness with a brand, they start developing some attachment and relationship towards it. Thus, brand awareness will provide companies with an opportunity to create a relationship with their customers (Keller, 2008). Interestingly, Elrod (2007) referred to the relationship between brands and companies as the relationship between two parties.

## PERCEIVED QUALITY

After a thorough review of the related literature, it has been clear that there is extensive research available reporting that perceived quality is a key dimension of brand equity (e.g. Aaker, 1991; Yasin, 2007). However, it has sparked much discussion in various categorization as well. Perceived quality can be understood as the perception of customers regarding the total quality or superiority of a given product or service (Aaker, 1991). Most of the research works, which are related to the examination of brand equity and perceived quality dimension looked at the concept from the perspective of the intangible asset of the business and they suggest that it is a general feeling of the customer on a particular brand and that overall feeling and judgement of customer about the quality of a brand is often subjective. Surprisingly, most of the empirical part of the research related to perceived quality suggest that there is a weak link between product specification and perceived quality towards it. The reason is that in the perception of customers, brands of products can be very valuable. To be more specific, in the perception of customers the

value of products can be more than it is. This is achieved by marketing strategies and actions. As a result, customers will have more and stronger reasons to buy from that brand. An additional benefit of positive perceived quality of a brand is that companies will be able to make differentiation on the market position of their product (Keller, 1998). Some more benefits of such a situation include the possibility of charging a premium on products, more motivated channel members towards performing better, and a chance for introducing product extensions (Aaker, 1991). A positive link between high perceived quality and high customer brand loyalty was found in an empirical work by Delong et al., (2004). The researchers also reported that high perceived quality can lead to a high likelihood that customers will make a repeat purchase of a product.

## **BRAND LOYALTY**

It has been noted that the existing literature offers lots of research on the role of brand loyalty in building brand equity too (e.g. Aaker, 2010; Atilgan et al., 2005). In simple terms, brand loyalty is the attachment of a customer towards a given brand. Brand loyalty depends on the state of customer attitude and behaviours towards that brand (Aaker, 2010). It was concluded in the research by Atilgan et al., (2005) that brand loyalty of customers can have both positive and negative impact on their behaviour. Additionally, brand loyalty can impact on the level of overall brand equity both directly and indirectly. Sufficient amount of evidence exists in the literature, which confirms that brand loyalty leads to repeat purchases of customers. Through brand loyalty, customers will have their preferred and favourite brands among all available brands in the market. What is more, customers with a high level of loyalty towards their brands will be still purchasing products from it even in the cases, where they are offered better product features and benefits (Aaker, 1991).

However, not all researchers simply supported the effects of brand loyalty, which have been mentioned above. For instance, researchers Aure and Nervik (2014) argue that behavioural definitions of customer behaviour including frequency of purchase or proportions do not have sufficient level of precision because they are unable to distinguish an actual brand loyal consumer from a consumer having an intentional faith, with spurious loyalty. According to the authors, the latter types of customers tend to make a repeat purchase of products from brands based on a mere habit. They also mentioned a situation where a given brand is the only one available in a store, thus leading to a purchase, which was not made because of loyalty to that brand. In support of these arguments, Fouladivanda et al., (2013) claim that brands may not have “earned” loyalty when there is a limited number of competitors in the market or when a particular brand is a frequently purchased one. To continue, customers may have been buying from a particular brand because of low-involvement product nature or because of the feelings of familiarity and convenience by customers toward it (Aure and Nervik, 2014). From this discussion, it is clear that brand loyalty should be understood as being in 2 types. The first one is behavioural brand loyalty, which leads to higher market share. On the other hand, the second type is attitudinal brand loyalty, which enables marketers to update their product prices based on the competition they are facing.

Despite the presence of much research related to the effectiveness of brand loyalty, a researchers Burton (2012) argues that comprehension on its effectiveness is not sufficient, mainly because not sufficient distinction on the essential thinking about it is expressly articulated in the

literature. According to the researcher, most of the available definitions on brand loyalty are too general and they are not diagnostic. The author believes that there is not sufficient research, which considered thoughtless purchase habits of customers, random purchases of customers, flagrant disloyalties, and attitudinal form of loyalty.

## BRAND ASSOCIATIONS

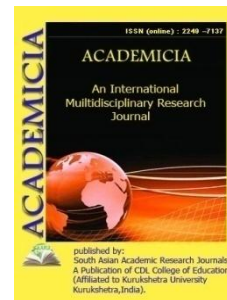
Like the rest of the dimensions of the brand equity, brand associations dimension has also extensively researched in the existing literature. However, its importance in the overall brand equity has been clarified to a varying extent. At least, a consensus on its definition has been identified, especially regarding the link between the memory and brand (e.g. Yasin et al., 2007; Keller, 1998). Overall, the definitions confirm that brand associations contribute to the strength of brand equity and especially to brand image. On the other hand, the research works also not the difficulty of measuring the effectiveness of brand associations, particularly about brand equity. The complexity of the concept to understand was explained by the fact that brand associations are made of various ideas, episodes, facts, which all lead to building brand knowledge network (Yoo et al., 2000). As anything linked to a particular brand can be a brand association, it is not difficult to understand the reason for its complexity as a concept. Brand associations can have a connection to tangible characteristics of a product, as well as intangible features such as innovativeness and uniqueness. For instance, in his empirical research, Mohan (2014) mentioned that smartphone brands have an association with product features like dynamism, innovativeness, sophistication, prestige, high technology etc. Aaker (2010) suggested that companies need to have a combination of tangible and intangible features of products. This way, they can achieve creating their unique set of associations to their particular brand. The direct outcomes of such marketing will be the development of their branding strategies and they can experience success in brand associations, thus having its great impact on their overall brand equity.

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## IMPROVING THE ORGANIZATIONAL AND ECONOMIC MECHANISM OF AGROECO TOURISM DEVELOPMENT

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### ABSTRACT

*The article considers reforms in the field of tourism in our country, trends in the development of agro-ecotourism as a new direction of tourism in foreign countries, research conducted in this regard. In particular, the results of the study of the concept of agro-ecotourism, the requirements for its object, subject and subject of agro-ecotourism, the specifics of agrotourism, the development of agrotourism in the country, the definition of agrotourism, the classification of agrotourism, their use in tourist routes are presented.*

**KEYWORDS:** *Economy, Tourism, Agro-Ecotourism, Ecology, Tourism Industry, Environmental Issues.*

### INTRODUCTION

Great attention is paid to the further development of this sector, the effective use of existing opportunities in the world. Because today the period itself requires a large-scale development of tourism. Agroecological tourism or agro-ecotourism is one of the fastest-growing tourism industries in the world. In addition to performing economic, social, political, spiritual and educational functions in society, it also serves to find solutions to environmental problems. However, its scientific basis in Uzbekistan has not yet been fully developed.

Therefore, agro-ecotourism in Uzbekistan was considered as a separate branch of science and practice. The words "tourism" and "tourist" appeared in the scientific literature at the end of the

eighteenth century. It is derived from the French word “tour”. It was first used since young people in the UK went to study on the continent. More precisely, such a trip was called a “grand tour”, and travellers - tourists. In sports tourism or mountaineering, there are other concepts of the origin of the word “tourism”, in which athletes or climbers, having reached the top, apply a special conical sign of stones on it - “tour,” which indicates that they have reached this point. In a broader sense, the concept of “tourism” is to go beyond where you are, to see beautiful places, historical lands, new cities, architecture, landscape, relief, climate diversity. All this leads to temporary migration of the population to the fold of nature, and these surges are on an increasing scale. In a word, tourism closely connects people with the environment, nurtures a sense of love for nature, encourages its protection, nurtures a sense of love for the Motherland. These are the main factors of nature protection through tourism [2].

## **MATERIALS AND METHODS**

Agro-ecotourism is the journey of people from their permanent habitats to nature and rural areas for recreation, sports, health, education and spiritual purposes, as well as for environmental purposes. Consequently, the goal of agro-ecotourism is to ensure environmental security and sustainable development of present and future generations through tourism [3].

As a result of solving the problem of nature conservation through tourism, the word “ecotourism” arose in the broadest sense. However, many researchers believe that the boundaries of the word “ecotourism” were incomprehensible.

This is due to the fact that when marketers first used this word to offer it to tourists who sought and wanted to protect nature, they did not analyse its meaning and even looked at such tour operators in terms of travelling in nature, not understanding the protection of nature. Uzbekistan is one of the most convenient countries for both travel and pilgrimage [4].

During the long period of historical development, many great scientists, known and known throughout the world, lived and worked on the territory of Uzbekistan. Their rich spiritual and cultural heritage is viewed with great interest in the international arena. To further develop tourism in Uzbekistan, first of all, it is necessary to improve its necessary infrastructure. The tourism industry, in addition to attracting large investments and resources, is also an industry of the economy that performs the spiritual and educational functions necessary for the state and society. At the same time, its unconventional types began to take shape - ecotourism, agro-tourism, archaeological, ethnographic, religious tourism, extreme tourism and others. It is noteworthy that these areas are recognized by experts as fast-growing. The World Tourism Organization recognizes the following types of tourism as the most promising. These are adventure tourism, sea and water tourism and ecotourism. Ecotourism is one of the youngest and most promising types of tourism, which is characterized by development and high incomes. This is due to the fact that in recent years the share of ecotourism in the global tourism industry has been growing. The flow of world tourism is moving from developed to developing countries. The tourism industry of developing countries is mainly based on ecotourism. Uzbekistan is a region in the Central Asian region with great potential for tourism development, including agro ecological tourism [5].

Indeed, since Uzbekistan gained independence, the process of integration into the world community has been gaining momentum. Shortly, political, diplomatic, trade, economic and cultural ties with foreign countries are developing. Tourism occupies a special place in these

relations, and in recent years this issue has risen to the level of state policy. The action strategy in the five priority areas of development of the Republic of Uzbekistan for 2017-2021 is also focused on the rapid development of the tourism industry, increasing its role and share in the economy, diversifying and improving the quality of tourism services, and expanding tourism infrastructure. Uzbekistan's ecotourism, unique beauty, unique landscape, unique flora and fauna, rare world-class archaeological finds, paleontological remains, rare geological sections, hundreds of natural monuments attract the attention of foreigners [6, 13]. As part of the development of tourism in Uzbekistan, much work is carried out in the Ugam-Chatkal State National Natural Park, the Chatkal State Biosphere Reserve, the Aidar-Arnasay lake system and the Chimgan-Charvak resort and recreation zone. In general, today the main goal of the ECOSAN International Public Fund is to reduce the impact of negative factors on human health, to mitigate the social and environmental consequences of the Aral Sea problem.

In 2008 alone, the organization sent 27 humanitarian aid trains worth 1.8 billion sums to 27 regions. Protected areas of Uzbekistan include 9 state reserves with an area of 2,164 km<sup>2</sup>, 2 national parks with an area of 6,061 km<sup>2</sup> and the Republican Center for Rare Animals (Ecocenter Jayron), 9 state reserves with an area of 12,186 km<sup>2</sup>. The total area of specially protected natural areas is 20,520 km or 5.2% of the territory of Uzbekistan.

Uzbekistan is establishing a legal framework for the development of this sector.

Decree of the President of the Republic of Uzbekistan Shavkat Mirziyoyev of December 2, 2016 "On measures to ensure the accelerated development of tourism in the Republic of Uzbekistan" and the Decree "On the organization of the State Committee for the Development of Tourism of the Republic of Uzbekistan". has become a solid foundation [7]. At the same time, the Presidential Decree of July 12, 2017 "On measures to further increase the responsibility of local executive authorities in the development of tourism" introduced the posts of deputy governors of the Khorezm, Bukhara, Samarkand and Tashkent regions for the development of tourism. The process of creating recreational zones in Uzbekistan will be simplified, and ecotourism will be further developed. This is evidenced by the draft law on amendments and additions to certain legislative acts of the Republic of Uzbekistan, which was considered by deputies at the next plenary session of the lower house of parliament. This document provides for amendments and additions to the Land Code of the Republic of Uzbekistan, the Forest Act and the Protected Natural Areas Act. The bill is necessary for the effective and rational use of forest lands, legal regulation of the State Forestry Committee on the rental of land to legal entities and individuals based on investment agreements or public-private partnerships. The speakers of the plenary session emphasized the need to simplify the procedure for the placement of bee families (nests) and farms in forest areas by legal entities and individuals. This can only be achieved by amending the relevant legislation.

As a result of the adoption of this bill, the effectiveness of the State Forestry Committee of the Republic of Uzbekistan will be ensured. In particular, a legal framework will be created for the provision by legal entities and individuals of unused forest land for the implementation of investment agreements or public-private partnership projects for no more than 49 years. The process of creating recreational zones on the territory of the forest fund will also be simplified, new opportunities for the development of ecotourism will appear [8]. It was noted that today in the country there are more than 9,000 unique historical monuments and magnificent examples of

unique architecture, reserves, which are distinguished by their unique beauty. In Uzbekistan, for centuries, national traditions of culture, decorative and applied art have been well preserved.

In 2019, 6748.5 thousand tourists visited Uzbekistan, while in 2018 this figure was 5,346,200 people. Samarkand, Bukhara and Khiva annually attract thousands of foreign tourists from different parts of the world to Uzbekistan. The number of foreign guests tripled, and in 2019 the volume of exIt was noted that today in the country there are more than 9,000 unique historical monuments and magnificent examples of unique architecture, reserves, which are distinguished by their unique beauty.

In Uzbekistan, for centuries, national traditions of culture, decorative and applied art have been well preserved. In 2019, 6748.5 thousand tourist ports of tourist services amounted to 1 billion 313 million dollars. Recently, agrotourism has been developing rapidly. Here, tourists will have the opportunity to escape from noisy cities, live in country houses, participate in local sports competitions and get acquainted with the life and customs of residents. It should be noted that agrotourism is well developed in Europe.

In addition to accommodating tourists in country houses and farms, it has become a tradition to place them in reconstructed old castles, monasteries and mills. Here visitors can get acquainted with the ancient period. In this regard, work is underway in Uzbekistan to develop agrotourism. The main goal of the development of this type of tourism is to strengthen the socio-economic status of the village, in particular, the creation of new jobs, which will reduce the outflow of the population to cities, increase the cultural and intellectual level, as well as contribute to the revival and development of national crafts, traditions and rites [10].

In this regard, several measures were taken to develop agrotourism, in particular, the International Festival of Agrotourism "Anor". To promote agrotourism and tourism in rural areas as a whole, the State Committee for Tourism Development has launched a project to train trainers to help the rural population study all the subtleties of hospitality through the organization and management of hotels. Based on the experience of the United States and Western Europe, it can be said that Uzbekistan can use agrotourism as a tool for the development of tourism in rural areas, as evidenced by:

The presence of a rural population willing to engage in agrotourism;

- The abundance of natural and historical and cultural sites in the area;
- the convenient geographical location of the transit;
- A combination of rural settlements and a favourable environmental environment.

Besides, purposeful work on mitigation of the consequences of a pandemic of coronavirus of COVID-19 for the tourism industry of the country is conducted. Several incentives have been provided to mitigate the effects of coronavirus pandemic in the tourism sector. Including,

- About 60 billion granted Sumov 1750 economic entities on property, land and social taxes;
- Hotels receive a subsidy of 10% of the cost of their services;
- Subsidies in the amount of up to 10% of payments on loans for the replenishment of working capital.

On the territory of the Kumushkon farm in the Parkent district of the Tashkent region, a project was launched to create the first Tourist Village in Uzbekistan.

The project provides for the creation of 50 guest houses, ethnic villages based on 20 apartments, a village of national cuisine for 20 apartments, a village of artisans for 15 apartments, a village of artists for 10 apartments and a village of agrotourism for 20 apartments. Also, there will be a modern hotel, a public library, a youth creative centre, a platform for folk games and sports, pasture, a tourist wellness centre, artificial waterfalls and 7 seasonal resorts. The project will create 450 new jobs and increase the number of tourists to 250,000 per year (60,000 foreign tourists). The volume of tourist services will reach 50 billion sums.

Agroecotourism is a unique animal in the field of rational use of our country's natural resources, acquaintance not only with foreign beaches but also with the landscape, the rich and unique nature of the Motherland, the plant and animal world, friendship between peoples, mutual understanding of countries and peoples. and to preserve and increase the flora of nature reserves (Surhan, Nurata, Gissar, Badai-Tukai, Zarafshan, Kyzylkum, Chatkal, Zaamin, Kitab), nurseries (Jyron "Eco-Center," Saikhun farm) around the world. development of projects for the creation of parks, through their implementation attracting additional foreign investments to create the material and technical base of ecotourism facilities in specially protected areas [11,12].

## CONCLUSION

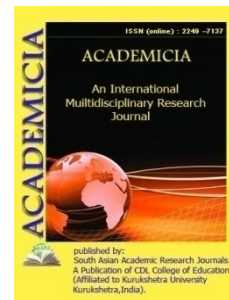
In short, despite the fact that agro-ecotourism is gaining popularity as a new practice area, its scientific and theoretical foundations are not sufficiently developed. The development of agro-ecotourism in Uzbekistan requires the improvement of its theoretical and methodological base. Today, society is aware of environmental problems and the need to preserve ecosystems. Therefore, to achieve such success, every effort is being made in two ways, and it is necessary to continue and improve these traditions. That is, all the activities and programs of the funds are focused on nature conservation on the one hand and the development of ecotourism on the other. In ecotourism, it will be necessary to look for new types of travel and attract interested people. An increase in the potential of agro-ecotourism in the economic development of the new Uzbekistan and a further increase in its share in the tourism sector can increase the economic stability of the country.

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## IMPROVING COMPETITIVENESS BY DIGITIZING THE ECONOMY IN THE SERVICE SECTOR

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### ABSTRACT

*The modern economy is post-industrial, while it is often called a new, innovative, economy of knowledge, competencies, network interaction. The beginning of the 21st century brought the development of digital technologies based on the information revolution and the processes of globalization of the economy. Information in society and business processes has become the main resource. In human hands, it is transformed into knowledge, and socio-economic relations are increasingly transferred to the network space. Increasing the competitiveness of entrepreneurial structures in the domestic and foreign markets involves a transition to an innovative model of economic development, which involves a high concentration of knowledge-intensive production, knowledge, competencies, technologies. The authors of the article show the essence and increase of competitiveness in the service sector due to the digitalization of the economy.*

**KEYWORDS:** *Digitalization Of The Economy, Services, Reforms, Competitive Ability, Entrepreneurial Structures, Innovations, Advanced Technologies.*

### INTRODUCTION

The modern economy is post-industrial, while it is often called a new, innovative, economy of knowledge, competencies, network interaction. The beginning of the 21st century brought the development of digital technologies based on the information revolution and the processes of globalization of the economy [1, 2, 6]. Information in society and business processes has become the main resource. In human hands, it is transformed into knowledge, and socio-economic relations are increasingly transferred to the network space. The development of digital culture is becoming a key factor in the digital transformation in the activities of business entities. In

modern conditions, the digital economy is the main factor in the economic growth of national economies, industries and entrepreneurial structures.

At the initiative of the President, 2020 is declared the Year of Science, Education and the Digital Economy. This, in turn, is fully reflected in the support of modern trends in the world community as the country that has chosen the most profitable and optimal way to further develop the market economy.

The announcement of 2020 as the Year of Science and Development of the Digital Economy shows that shortly in our country, increasing the intellectual potential of the population, especially young people, and supporting the field of information technology will remain one of the priorities of state policy.

During the pandemic, COVID-19 significant growth in the digitalization of services through existing Internet platforms will help create more jobs, make the economy more transparent, expand the range of services and export our products to foreign markets. To continue the comprehensive reforms in the country in the interests of the people, a State program has been adopted to implement the Strategy for Action on the five priority areas of development of the Republic of Uzbekistan for 2017-2021 in the Year of Science, Education and the Digital Economy [3].

The development of humanity today is largely directly related to the pace of development of information technologies. At the end of the twentieth century, with the penetration of the Internet into various spheres of society, terms such as “e-government”, “e-commerce”, “digital economy” appeared. The term “digital economy” was first introduced in 1995 by Nicholas Negroponte, an American computer scientist at the University of Massachusetts, in a lecture to his colleagues on the superiority of economics based on modern information and communication technologies over the old economy.[4] The digital economy, with many advantages over the traditional economy, became popular in a short period of time, first in developed countries and then around the world.

## **MATERIALS AND METHODS**

The methodology includes an overview of key trends in the digital economy. Next, the main factors affecting the competitiveness of business structures are studied. It has been proved that in modern conditions, the level of competitiveness of business structures is determined by the level of their digitalization. The impact of the digital economy on individual industries is being studied. The effects of the introduction of digital technologies in the activities of service structures have been identified.

The digital economy is a system of economic, social and cultural communications using digital technologies, for example, online services, distance learning, electronic payments, online sales of goods and services.

Today the leaders among digital countries are Norway, Sweden and Switzerland.

The top ten countries for this indicator include the United States, Great Britain, Denmark, Finland, Singapore and South Korea.

In recent years, a number of measures have been taken in our country to digitalize the economy. Practical work has already begun on creating conditions for the rapid development of modern information technologies and ensuring information security. Among them are the Decree of the

President of the Republic of Uzbekistan dated February 19, 2018 “On measures for the further development of the sphere of information technologies and communications”, the Decree dated July 3, 2018 “On measures to develop the digital economy in the Republic of Uzbekistan”.

As a result of these measures, an electronic document flow has been introduced, electronic payments are being developed, and the regulatory framework in the field of electronic commerce is being improved. Undoubtedly, the digitalization of the economic sector will create opportunities to reduce the costs associated with the production of goods and services, improve product quality, significantly increase volumes and competitiveness, and save time. In recent years, digital technologies have been used in Uzbekistan in the banking system, retail trade, transport, energy, education, healthcare and other spheres.

The next Presidential Address also sets out a number of tasks for the digitization of many aspects of our lives. Including full digitization of construction, energy, agriculture and water management, transport, geology, cadastre, health care, education, archives. It is planned to comprehensively solve all organizational and institutional issues of the e-government system, create IT parks in Nukus, Bukhara, Namangan, Samarkand, Gulistan and Urgench, as well as continue the project "Million Programmers," launched with foreign partners. caught. In the next two years, it was also instructed to provide all villages and mahallas with high-speed Internet, connect 12 thousand institutions to the high-speed Internet, and complete the development of the Digital Uzbekistan 2030 program within two months.

For the systematic implementation of the above goals and tasks, special deputy posts will be introduced in the government - deputy prime minister, in ministries and departments, as well as in khokimiyats. These initiatives of our President are a guarantee that today Uzbekistan is entering a new stage of development, that in the near future the quality of relations between the state and citizens will radically improve, and cooperation between various socio-economic systems will develop.[7,8] As a result of the “digital revolution” that we strive for, most of the socio-economic relations are carried out using automated services. This, in turn, will significantly reduce human participation in the service of the population, significantly reduce bureaucracy, red tape and corruption, which for many years hampered the development of our country and negatively affected the quality of life and well-being of the population. The Reconstruction and Development Fund will provide a loan of \$100 million or more than 1 trillion for the implementation of service projects. The President of Uzbekistan signed the corresponding decree on June 16, the press service of the head of state reports.

According to the Ministry of Justice, the loan will be issued to commercial banks for a period of 7 years, including a three-year grace period with an interest rate of 4% lower than the current base rate of the Central Bank of 15%.

Loans will be provided to entrepreneurs in the service sector, especially to create and equip enterprises operating in the domestic, educational, medical, information and communication and other sectors with high demand (with the exception of enterprises in the field of finance and trade) at the base rate of the Central Bank up to 1 billion sums. At least 20% of borrowed funds will be allocated to women and young entrepreneurs. In addition, loans will be provided under the Every Family - Entrepreneur program for 64 types of activities that self-employed people can engage in. At a video conference chaired by President of Uzbekistan Shavkat Mirziyoyev on June 16, 2020, dedicated to the development of the service sector and domestic tourism, it was

noted that the service sector is one of the largest sources of employment. Its share in the country's GDP is 35 per cent. According to the International Labour Organization, a 1 per cent increase in services will reduce the number of poor by 1.5 per cent.

It is important to support talented youth, to create conditions for training the population in modern services. At the same time, they, together with the governors, were instructed to develop a program for the development of the service sector in each district and city. At the same time, the task was set to regulate the network, bring its methodology and statistics in line with international standards. It was noted that regional leaders should seize this opportunity to create projects that will create more jobs in the service sector and will be quickly implemented.

In our opinion, the introduction of digital technologies is the most important factor in increasing the competitiveness of entrepreneurial structures in modern conditions [4]. At the same time, entrepreneurial structures should develop a culture of constant innovation. The development of the digital economy contributes to the growth of the purchasing power of the population since digital platforms and trading platforms create intense price competition.

The use of digital technologies makes it possible to improve the business and investment climate thanks to the availability of public services for registration of legal entities, certification and accreditation, obtaining permits, declaration and payment of taxes, customs support, the development of a whole ecosystem of business services (logistics services, mobile banking), and increased transparency in doing business (electronic platforms for tenders and procurement, feedback portals).

## CONCLUSION

- Digital asset ownership creates a competitive advantage. In the near future, the level of competitiveness of companies will be determined by the level of their digitalization.
- It is necessary to study foreign experience and adapt it to Russian conditions, including effective business models, technologies, processes, finished products, management methods. In addition, entrepreneurial structures need to develop ties with domestic educational and research organizations, as well as high-tech companies.
- The digital economy is changing the appearance of entire industries: telecommunications, printing, tourism, passenger transportation, etc.
- In consumer markets, the introduction of digital technologies reduces the cost of searching and ordering, contributes to the optimal selection of products that meet the requirements of consumers and ensures increased transparency.
- Digital marketplaces create intense price competition. Consumers can wait for favourable offers. Published user feedback contains information about goods, encouraging market participants to ensure a high quality of goods and services.
- Thanks to digital technologies, the specialization of entrepreneurial structures are growing.
- Digital business structures are entering new markets. As digital companies take the leading positions in one market, they strive to actively develop related areas, which then become the main ones.

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## FEATURES OF COVERING THE CONSUMED FOOD OF BULLS WITH A LIVING WEIGHT

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### ABSTRACT

*This article presents data on the level of coverage per unit of production consumed by bulls of different breeds. It is known that regardless of the type, breed and lineage of animals, age, sex, the direction of productivity, when evaluating them taking into account any productivity, the characteristics of the product are important, allowing to cover food consumed for a certain period of time. One of the most important indicators in livestock practice is the ability to cover a unit of food consumed by animals. In our experience, purebred bulls of the Simmental breed were left behind the offspring of the first and second generation as a result of covering the feed consumed by the production unit and mixing it with fattening properties.*

**KEYWORDS:** *Body Structure Index, Feed, Growth and Development, Ecsterer Indicators, Productivity.*

### INTRODUCTION

The main object of beef cultivation in various categories of farms of the Republic of Uzbekistan is mixed breeds of different genotypes obtained as a result of crossbreeding of dairy and co-productive breeds.

98% of beef produced today comes from the above-mentioned cattle.

It is known that in order to fully realize the genetic potential of cattle, it is necessary to care for it from an early age. A comparative study of development indicators and thereby the growth and development of etiological indicators of bulls determine the relevance of the topic studied.

## MATERIALS AND METHODS

The experimental part of the study was carried out at the K-Eldor livestock farm in the Pastdargom district of the Samarkand region.

For the experiment, 5 heads of purebred bulls of Simmental (group I), F1 (Simmental x Holstein) (group II) and F2 (Simmental x Holstein) (group III) were selected for each group.

According to the experimental method, the actual amount of food consumed by animals was determined in each study separately, once a month, by control feeding for 2 consecutive days.

In this case, the difference between the actual amount of food given and the amount of residual food remaining was determined [4].

## RESULTS AND THEIR ANALYSIS

One of the most important indicators in zootechnical practice is the ability to cover food consumed by animals per unit of product. Because the cost-effectiveness of scientific research is determined by the results of this indicator. It is known that regardless of the type, breed and lineage of animals, age, sex, the direction of productivity, when evaluating them taking into account any productivity, the characteristics of the product are important, allowing to cover food consumed for a certain period of time. If animal growth and development, fattening characteristics, carcass weight, meat productivity are studied, then the peculiarity of multiplying the consumed food by 1 kg of product unit is taken into account. The increase in live weight of the bulls of the experimental group is shown in Table 1 below. From the tabular indicators, it is known that the duration of the experiment was the same in all groups of bulls and amounted to 540 days.

According to Turkish weight, at the beginning of the experiment, animals of the I experimental group gave a high result and weighed 35 kg. This figure was 25.5 and 27.9 kg, respectively, in animals of groups II and III. It can be seen that animals of group III are in the intermediate position, and animals of group II are in the last place. At the end of the experiment, i.e. after 540 days, the bulls of group I had a live weight of 590.5 kg, group II 479.5 kg and group III 456.9 kg.

During this period, a group I was first in weight, group II animals were third, and group III animals were second. The average daily gain in animals of the experimental group was 1027, 837 and 793 g, respectively. It is obvious that the animals of group I in priority for this indicator are ahead of their peers, Bulls of groups II and III, respectively: 190 g or 18.5% and 234 g or 22.8%, respectively.

**TABLE 1. FEATURE OF THE LIVE WEIGHT OF THE FEED CONSUMED BY THE BULLS IN THE EXPERIMENTAL GROUP.**

Indicators	Groups		
	I	II	III
Duration of experiment, days	540	540	540
Live weight at the beginning of the experiment, kg	35,6±2,0	27,5±2,11	28,9±2,17

Live weight at the end of the experiment, kg	590,5±3,95	479,5±3,20	456,9±4,31
Additional live weight obtained during the experiment, kg	554,9±3,11	452,0±5,81	428,0±4,03
Average daily growth, g	1027±4,49	837±5,81	793±6,11
Total feed consumed during the experiment, food unit	4196,2	3661,2	3426,7
Feed consumed per 1 kg of live weight, kg	7,56	8,10	8,0

One of the most acceptable zootechnical indicators for animals is the excess live weight that they give over a certain period of time. In our research, bulls from the I experimental group gained 554.9 kg of live weight in 540 days. This is 102.9 kg or 18.5% and 126.9 kg or 22.9% higher than its peers, group II animals. In group II and III animals, this difference is 24 kg or 4.3% in favour of group III animals. During the experiment, there were 540 days, purebred bulls of the Simmental group I consumed the most feed, and this figure was 4196.3 feed units. This applies to bulls from their peers, II and III experimental groups: 535.0 feed units or 12.7% and 770.0 feed units, or 18.4%, who achieved high indicators. The more purposefully we take care of animals and feed them quality food in a timely manner, the less feed is spent per unit of production. We fed and cared for our research projects on the basis of a diet made up of detailed, high-quality feed in the context of seasons and years. Therefore, 1 kg of live weight in the context of groups is spent, respectively: 7.56; 8.10; 8.0 units of feed. Apparently, for 1 kg of live weight, bulls belonging to the pure Simmental breed of group I spent the least amount of feed and amounted to 7.56. This indicator is 0.54 units of feed or 7.1% and 0.44 units of feed or 5.8% of the indicator of animals of group II. From the analyzed figures, it can be seen that the nature of reproduction of animals in the experimental group was at the normal level, while animals of group I had priority over animals of group II and III of the experimental group.

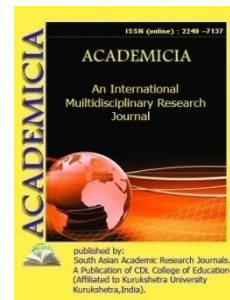
## CONCLUSION

One of the most important indicators in livestock practice is the ability to cover a unit of food consumed by animals. In our experience, purebred bulls of the Simmental breed were left behind the offspring of the first and second generation as a result of covering the feed consumed by the production unit and mixing it with fattening properties. This is a characteristic of their genotype.

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## FORMATION AND DEVELOPMENT OF NAVOI CITY AS AN INDUSTRIAL CENTER

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### ABSTRACT

*Navoi region is one of the relatively new administrative units in the Republic of Uzbekistan, it was founded in 1982 on April 20. Its area is 111,0 thousand km, occupies 24,7% or 1/4 of the territory of the Republic of Uzbekistan. The fact that the main part of the zone of the region is located in the steppe zone, it does not have enough local water sources, on top of this, the Zarafshan River, the main source of water, also flows through the southern part of the region, is considered a negative attribute of the nature of the country.*

**KEYWORDS:** *Navoi Region, Folk Dance Industry, Agriculture, Development Indicator, Natural Factor, Navoi Free Economic Zone, Zarafshan River.*

### INTRODUCTION

Along with this, the geographical location of the region has favourable opportunities for its socio-economic and cultural prosperity. The passage of the Great Silk Road in ancient times from the territory of the region is also a direct link with its geographical location. Also, the size of the area of the region is determined by the fact that the state is located at the junction of water and communications. It is one of the factors contributing to its socio-economic, political and cultural heritage. The transformation of Navoi region into a free economic industrial zone is also a clear proof of our opinion [1].

At present, the total population of the region is 935,3 thousand people (2017) and 3% compared to the Republic of Uzbekistan. Interestingly, these geographical indicators have a great polar character on the scale of Uzbekistan: they are second only in terms of area and second only in terms of the population from the end of the Syrdarya region. This comparison shows that the population density in the Navoi region is extremely low. Navoi region differs sharply from other

regions of the Republic in terms of its geographical features. On its territory, there are large and small residual Highlands (Kuljuktov, Ovminzatov, Yetimtov, Bokkantov, Tomditov, Kazakhtov). The lowlands are in the far north and northwest (Kyzylkum steppes). Boats (Karakota, Mullali, Mingbulak) are located in the interior of the region[2].

Heights pass 250-300 meters above sea level. And the top points of the mountains are close to 2000 meters (in the Aktov Ridge). Nurota, Aktov, Karatov ridges join the ridges of Turkistan and Zarafshan in the south and South-East. These ridges are regions rich in various natural resources.

## **MATERIALS AND METHODS**

The climate of the region is formed in the interaction of several factors. But the geographical position of the territory of the country has a leading role in this regard. If we take into account the fact that the Central Asian plague is located in the inner part of the Eurasian mainland, the territory of the region is located in the middle of the Central Asian steppes, which have characteristic features of deserts. The climate of the region is tropical in summer, and in winter it is formed under the influence of cold air, which comes from temperate latitudes. Since the region is located in the lower geographical latitudes, the illumination period of the Sun also lasts much longer. The average solar radiation period in Navoi region is around 2900-3000 hours a year. The number of precipitation increases from the north-west of the region to the South-East [3]. The main reason for this is the increase in the height of the territory of the region in this direction. The amount of annual precipitation is equal to 125-250 mm in the northern part of the region, and 250-282 mm in the southern part. The climate and natural conditions of the region are different and unique compared to other villages.

In the following years, Navoi region occupies a significant place in the regions of the Republic with its economic and social indicators.

Structural changes in the industry, the creation of a favourable investment climate in the Republic, various preferences were given to producers, which in turn caused a wide penetration of foreign investment. To create a qualitatively new investment climate in our country, on December 2, 2008, the first free economic zone was created in our country according to the decree of the president of the Republic of Uzbekistan “on the establishment of Free Industrial Economic Zone in the Nvoi region”. This decision is based on the creation of favourable conditions for the direct attraction of foreign investments, first of all, for the organization of production based on modern high technology, ensuring the production of products that meet world standards and are in demand in regional markets, as well as the development of the industrial potential of the region, production, transport-transit and social infrastructure. The main direction of the activity of economic entities in the Navoi free industrial and economic zone is the wide production of high-tech, competitive products in the world markets on account of the involvement of modern foreign equipment and Technology, Innovation Technologies[4].

The economy of Navoiy region has an industrial – agrarian direction. 47 percent of the gross regional product is provided by industry, 7 percent by construction, 14,0 percent by agriculture, 8 percent by transport and communication, the remaining 24 percent by trade and public catering, taxes, etc. Also, the volume of gross regional product per capita in 2017 amounted to 4578.7 thousand rubles, this figure was 104.3 percent compared to the corresponding period of last year. The analysis shows that the Navoi region occupies a special position in all spheres. For example, in terms of the share of industry in the gross regional product, among the regions of the



Republic, the first, but the last places in terms of Agriculture, Trade and public catering, taxes, small business and services share. Only about 1/3 of the gross regional product of the region is accounted for by small business, while this figure is equal to an average of 50.1 per cent in the Republic. Such regional characteristics are more dependent on the structure and specialization of the farm, the demographic situation, depending on the natural conditions and resources of the region. The leader sectors of the industry are power engineering, mining (gold and b. mining of metals), metallurgy, chemistry, building materials, cotton cleaning, food industry enterprises.

The total number of small business entities (without farmer farms) registered for January 1, 2017, was 6617 units. The share of small businesses in the total volume of Gross Regional Product (GDP) produced in the region amounted to 35.9 percent, including 4.4 percent of small businesses, 13.5 percent of microfirms, 8 percent of individual businesses and 10.0 percent of peasant farms. The Small sector of the economy provided employment for 55.8 percent of the total employment in the economy (230,7 thousand people). A large part of those employed, namely 41.4 percent (171.3 thousand people) of the private sector and 14.4 percent (59.4 thousand people) of small enterprises and microfirms. 213.7 billion by small business entities. the production of industrial products totaled 147.6 per cent (5.2 per cent of the share of the total industrial products produced by the region), as well as agricultural production by them, increased by 108.4 per cent and amounted to 850.3 billion. sum (the share of gross agricultural output was 96.5 percent).

22.0 percent of the investment in the main capital by region has been appropriated by small business entities (283.4 billion. sum). The volume of construction work carried out by them amounted to 365.2 billion. in comparison with the corresponding period of the previous year, the sum was 16,6 percent (the share of construction works carried out by the region was 64,9 percent). Cargo turnover of small business entities in the automotive sector increased by 2.5 percent (the share of cargo turnover in the region by 35.5 percent), passenger turnover by 1.7 percent (the share of passenger turnover in the region by 66.6 percent).

48.7 percent of the total turnover of retail trade or 546.5 billion. sum (growth 113,7 percent) and 54,5 percent of the total volume of paid services to the population or 159,3 mlrd. sum (growth 111,8 percent) was formed in small business. The volume of production of people's consumption per capita is 203,4 thousand sums. 61,3 percent of the people's consumer goods are non-food products, including light industry provides 6,9 percent of them. In 2010, 953.5 thousand tons of ammonia nitrate, 472.2 thousand tons of synthetic ammonia, 25.4 thousand tons of alkali acid, 11.9 thousand tons of Nitronfibre, 17.7 thousand tons of sodium cyanide, 7.2 thousand tons of mixed chlorine were produced in the region. Also here are obtained other chemical products, for example, means of chemical protection of plants, vinegar, hyposlotide sodium vs. The main enterprises are "Navoiyazot", "Electrochemical industry", they are produced in the territory of Navoi region in raw materials – phosphorites of superphosphate plant, which are necessary for the economy of our country. The chemical industry of Navoi region occupies previous positions in our republic. In this regard, the construction materials industry is also of great importance. In particular, the largest cement plant is located here, namely in the city of Navoi. In a year, about 3151 thousand tons of cement is obtained (in our republic 6853 thousand tons, which means that about half of it is produced in the same region). In addition to cement, building materials such as reinforced concrete products, marble slabs, mortar, gravel, stone are obtained. Navoi construction organizations carry out major construction works in our republic[5].

**CONCLUSION**

In general, Navoi region, Navoi city and districts occupy much earlier places in terms of economic and social indicators than other administrative and territorial units of the Republic. From the main Accountants of this can be cited the following:

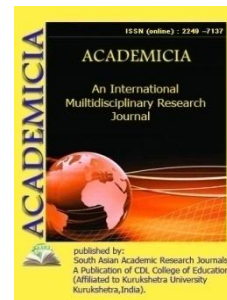
A good supply of Natural Resources;

Availability of a favourable investment climate;

It is possible to say that labour resources are enough and others.

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## ONLINE TEACHING –EDUCATION AMID THE PANDEMIC

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### ABSTRACT

*From the very beginning, India has practiced a traditional form of teaching - The face-to-face lectures but due to the virus that has recently hit the entire world, having no cure, has led us to practice the principles of social distancing. The classroom teaching can no longer be implemented keeping in mind the number of ever increasing cases. The education systems around the world had to switch to an online mode of teaching. This study focuses on how the online teaching has given more promising results than the old, traditional classroom teaching.*

**KEYWORDS:** *E-Learning, Online Teaching, Pandemic, COVID-19, Education Systems Amid Covid-19, Social Distancing*

### INTRODUCTION

The COVID – 19 crisis has caused a mayhem world-wide. Grounded on the experiences of China, where COVID-19 had first placed its roots, a conclusion was drawn that the virus spreads mainly through droplets formed as an effect of coughing or sneezing by a person infected by the COVID-19 virus. The only prospect to prevent the former was to practice the concept of ‘social distancing’. In the spring this year, in order to curb the number of exponentially rising cases due to the virus, the Government of India implemented a five stage lockdown (Ghosh,2020).<sup>1</sup>

The COVID-19 pandemic is a huge challenge to education systems. The educational institutions in India are based on a traditional form of teaching, where in there are face-to-face lectures. Amid the pandemic, education systems globally had to shift to an online mode of teaching overnight (Dhawan, 2020)<sup>2</sup>. The concept of online teaching is now the ‘new normal’ people must adjust to. With great technological progression, students now want quality programs that are available to them at flexible hours just with one internet connection. Because of these demands, online education has become a worthwhile, alluring opportunity to business officials, ‘work from

home' parents, and other similar inhabitants. In addition to flexibility and access, multiple other face value benefits, comprising program choice and time efficiency, have amplified the desirability of online learning. (Paul, Jasmine and Jefferson, Felicia, 2019)<sup>3</sup>,

According to a recent study by The Times of India<sup>4</sup>, One out of four inhabitants of India living in urban centres suffers from some diagnosable form of mental illness of which 29.5 % account for students (Census of India, 2018) .The students face a social stigma of not being enough and find it difficult to raise their voice or to answer in the lecture to avoid the lack of acceptance from their peers. The peer pressure is ever increasing and in a face-to-face forum, students often find it difficult to express them. While as for the online teaching they sit behind their screens without the fear of being judged by the peers. Even if a pupil feels shy, they can still approach the teacher through a text message. This helps enhance the efficiency of teaching.

One of the other factors complementing online forums is that even if a child falls ill, he/she may attend the classes at their own comfort and can leave in between if feeling uncomfortable, which helps attain a better and a promising attendance. The most common issue faced by teachers is that they cannot understand the child's psychology by their body language without actually looking at them but thanks to the advancement, even the poor households in the country have stepped into the digital race and now have electronic devices with web cams which enable teachers to have a watch over what the child is doing and whether or not the child is understanding the topics being covered in the class.

In the unprecedented times like these, many households have lost their means to earn a livelihood. According to a recent study by the World Bank, two-third of the Indian population lives in poverty. 68.8% of the residents live on less than \$2 a day and over 30% have less than \$1.25 per day handy to them. In a country like India, with these poverty levels, people find it hard to even manage food twice a day. And in such times, people often tend to look at their young ones to support them. Many students consider doing a job in order to support their family and even lose the chance to educate themselves because of the same. But through online learning, one can easily work in the morning and can continue to study around the evening. This practice will help students to not miss out on their building blocks of life. The teachers and students may consider a time which is mutually agreeable and can still attain proper education while supporting their families.

*In the heart of every Indian, there is an image of India – a digital India. Despite the endless number of dreadful things this pandemic has approached the world with, it has brought India a mile closer to the dream of digital India. It has also helped a lot of people getting digitalized. Even the students of poorest households are now acquainted with new forums online. This has helped not only in the academic development but has focused on an overall holistic development. The government schools are still hosting the happiness classroom classes online in order to reduce the stress among the students. Online teaching has not only helped the people but has had a tremendously improving impact on the environment. The Open University in Britain have found out that online teaching equate to an average of 90% less energy and 85% fewer CO2 emissions per student than traditional in person face-to-face lectures. This certainly makes it a better practice for business organisations as well as the educational institutions so that each individual could do its duty to the environment while still being at comfort (Dexway,2020)<sup>5</sup>.*

## LITERATURE REVIEW

Nimarpreetkaur et al (2020)<sup>6</sup> concluded from the study that e-education can supplement the process of present education, but it cannot be a substitute for the established system of education in India. Aflaazali and Israr Ahmad (2011)<sup>7</sup> interpreted that just like in traditional education, in distance learning has enough interaction taking place between students and instructors; courses are up to date and well-designed; instructors are devoted, motivated, and equipped with the required competencies.

Kainatanwar and Muhammad Adnan(2020)<sup>8</sup> explored that online learning cannot produce desired results in underdeveloped countries, where a vast majority of students are unable to access the internet due to technical as well as monetary issues. The study addressed the effectiveness of online versus traditional classes especially for students of higher education. It was concluded that 73% of students had proper internet facility and 71.4% students felt that they were well qualified to use a computer/laptop for online classes even then 78.6% respondents felt that conventional classes were more effective as compared to online learning. Yong Zhao (2020)<sup>9</sup> inferred that COVID-19 pandemic has caused so much damage and disruption in every aspect of human society and has given us the opportunity to abandon schooling for education. In his opinion, one must not try to improve schooling. Instead, try to reimagine education.

## CONCLUSION

COVID – 19 has majorly affected the conventional form of teaching worldwide. The administration staff of all the educational institutes had to switch to an online forum to continue with the classes for the safety of the students and the faculty. This transition from offline to online has helped India advance towards the digital age. It has also helped the students get better education at their own comfort with a wide range of courses. It has been a more flexible and alluring method for teachers, students and even other officials. It has increased the efficiency of teaching.

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## PARTIAL SELECTION METHOD AND ALGORITHM FOR DETERMINING GRAPH-BASED TRAFFIC ROUTES IN A REAL-TIME ENVIRONMENT

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### ABSTRACT

*In developed countries special attention is paid to the solution of the problem of dataflow full control in telecommunication networks in real-time, implementation of automated information systems in particular spheres and the expansion of their existing capabilities. Development of dataflow control system due to the increasing number of users in the network and emergence of various types of traffics has become one of the most important problems today. The solution of problems refers to traffic control, i.e. traffic map, the determination of spare nodes by results of determination of the optimal traffic routing in the network.*

**KEYWORDS:** *Telecommunication, Control System, Algorithm, Transmission, Selection Method.*

## INTRODUCTION

The problem of constructing of a traffic network map of geo-location and determining of the spare traffic network nodes, intellectual analysis of information, doing researches using automated systems is carried out in developed countries in this sphere, such as the USA, South Korea, Russia, Denmark, Japan, Spain, Germany, Great Britain, France and Uzbekistan. The traffic control system is similar to the control system of transport facilities of a big city. Problems for both of them are considered to be the same. Firstly, it is the distribution of the flow; secondly, it is the violations of traffic rules. The emergence of terms of traffic control in networks is explained as follows:

- discontinuity of the traffic;
- the diversity of the quality requirements of information transfer of different types;
- No stationary of traffic network, i.e. randomness.
- The emergence of reloading and lockout in the network as the result of no stationary of the traffic network.

Mentioned above conditions in computer networks cause the appearance of the problem of discontinuity traffic control and lead to the necessity of solving the following problems:

1. insurance of reliability of information transfer, i.e., deliver information to subscribers without loss;
2. effective use of expensive technical equipment in the network, i.e., regular distribution of information flow in the network while adaptive routing process;
3. reduction of transmission time in the network, especially while transmitting multimedia;
4. to avoid the reload and to prevent a lockout in traffic networks.

Algorithm of finding traffic routes with dynamic parameters in real-time environment and elaboration of partial selection method based on graph in a solution of traffic route problems in limited life is one of the most important problems of traffic engineering in communication networks.

## MATERIALS AND METHODS

### Partial selection method of choosing informative edges of the graph

**for determining L number traffic routes.** Let us assume that multiparameter  $G=(V,E)$  graph is given and enter Boolean vector, which means existing of all completed routes  $\lambda_p = (\lambda_p[1] \lambda_p[2] \dots \lambda_p[m])$ , if the value of  $i$ -component of Boolean vector  $\lambda_p$  is equal to one, then it means that presence of  $e_i$  edge of graph in P route compound, but if not i.e. the value of  $i$ -components equal to zero, then it means the absence of  $e_i$  edge in P route compound.

Let us assume, the assessment criteria of P route quality which is related to Boolean vector is defined as follows:

$$I(\lambda_p) = \frac{\sum_{i=1}^m a_i \cdot \lambda_p[i]}{\sum_{i=1}^m b_i \cdot \lambda_p[i]}$$

the value of edge  $I(\lambda_p)$  is explained as quality criteria of P-routing. The greater the value of the function, the better the selected route is. The optimistic view of this is expressed in the following way, it is necessary to find  $\exists \lambda_p$  a solution,

$$I(\lambda_p) = \frac{\sum_{i=1}^m a_i \cdot \lambda_p[i]}{\sum_{i=1}^m b_i \cdot \lambda_p[i]} \rightarrow \max_{\lambda_p} \quad (1).$$

Let Optimization problem have a solution.

Here, each  $i$  edge corresponds to  $a_i$  and  $b_i$ ,  $1 \leq i \leq m$  components of  $a$  and  $b$  vectors, the following  $a_i \geq 0$  and  $b_i > 0$ ,  $1 \leq i \leq m$  is required for the values of these components.

So, while  $a_i$  component increases the quality of  $e_i$  graphic edge, the  $b_i$  component reduces its quality, which means that the values of  $e_i$  the graph determine the overall traffic quality.

Let's define the set  $\lambda_p$  of all available traffic routes through  $\Lambda^p$  on the given graph. Then  $\lambda_p \in \Lambda^p$  expression will be appropriate.

**Task.** It is required to find L number of the most perfect traffic routes for optional nodes (three) of the graph among all  $\lambda_p \in \Lambda^p$  traffic routes.

In order to solve the problem,  $I(\lambda_p)$  functional values are calculated using all the elements of the set and they are sorted by reduction and the first L numbers are taken and serve as a solution to the task with  $\lambda_p$  representing the route.

This is a complete selection method and it is a functional value for all  $\lambda_p$ s. As the number of edges increases, the number of elements in the set  $\lambda_p$  increases as the geometric progression. Using this method is appropriate and a perfect solution to the problem is found in the presence of a small number of graph edges in the traffic route.

The most important part of the optimization problem in determining the above-mentioned traffic routes is to complete  $\Lambda^p$  set. This set creates a base of traffic routes. That is why our main task is to complete this set.

Let us make the following definition:  $c^j = \frac{a_j}{b_j}$ .

1) As  $c^j \in R, j = \overline{1, N}$  ( $R$  is a set of concrete numbers)  $c = (c^1, c^2, c^3, \dots, c^N)$  vector components can be arranged in ascending order (because  $R$  is a sequential set).

2) Thus,  $(c^1, c^2, \dots, c^N) \rightarrow (c_1, c_2, \dots, c_N)$  is,  $\forall i (i = \overline{1, N-1})$  is for  $c_i \leq c_{i+1}$ .

3)  $c = (c_1, c_2, \dots, c_N)$  Using vector components, we create the following sequences:

$$f_1 = \sum_{i=1}^{\ell} c_i, \quad f_2 = \sum_{i=2}^{\ell+1} c_i, \dots, \quad f_k = \sum_{i=k}^{\ell+k-1} c_i,$$

$$\ell+k-1=N \Rightarrow k=N-\ell+1. \text{Is.}$$

$$\text{Thus if } z \geq 2 \text{ is } f_z = f_1 + \sum_{i=1}^{z-1} (c_{\ell+i} - c_i).$$

If we consider  $f$  as a function of  $k$ , that is, if we consider as  $f_k = f(k)$ , the following confirmation will be appropriate.

Confirmation1.  $f(k)$  Growth function.

Proof:

In  $k \geq 3$  that is enough to show that  $f(k-1) \leq f(k)$

$$f(k-1) \leq f(k) \Leftrightarrow f(k) - f(k-1) \geq 0,$$

$$f(k) - f(k-1) = f_1 + \sum_{i=1}^{k-1} (c_{\ell+i} - c_i) - \left[ f_1 + \sum_{i=1}^{k-2} (c_{\ell+i} - c_i) \right] = c_{\ell+k-1} - c_{k-1}.$$

As it is known, that  $\forall i \text{ for } c_{i+1} \geq c_i \Rightarrow c_{\ell+k-1} - c_{k-1} \geq 0 \Rightarrow f(k-1) \leq f(k)$ .

Confirmation 1 has been proven.

Property1.  $\forall \lambda \in \Lambda^\ell$  is for  $f_1 = \min(c, \lambda)$ .

Confirmation 2.  $\Lambda^\ell(c) \neq \emptyset$  if only if  $f_1 \leq c_0$  is.

Proof:

$\Rightarrow$  )  $\Lambda^\ell(c) \neq \emptyset \Rightarrow \exists \lambda \in \Lambda^\ell(c)$  is available  $(c, \lambda) \leq c_0$ . According to the above property  $\forall \lambda \in \Lambda^\ell$  for  $f_1 = \min(c, \lambda)$  and  $\Lambda^\ell(c) \subset \Lambda^\ell$  as  $f_1 \leq (c, \lambda) \leq c_0$ .

If it is  $\Leftarrow$  )  $f_1 \leq c_0$ , i.e.  $f_1 = \sum_{i=1}^{\ell} c_i = c_1 + c_2 + \dots + c_\ell \leq c_0$ , then

$\lambda = (\lambda_1, \lambda_2, \dots, \lambda_\ell, \lambda_{\ell+1}, \dots, \lambda_N)$  The initial  $\ell$  number components of the vector  $(\lambda_1 = \lambda_2 = \dots = \lambda_\ell = 1)$  is one, let suppose the rest of them  $(\lambda_{\ell+1} = \lambda_{\ell+2} = \dots = \lambda_N = 0)$  are equal to zero,  $\lambda \in \Lambda^\ell$  and  $(c, \lambda) = f_1 \leq c_0$ . From that we get  $\Lambda^\ell(c) \neq \emptyset$ .

Confirmation2 has been proven.

3) now we will find k which will be  $c_0 - f_k \geq 0$ .

Note. If  $f_{N-\ell+1} \leq c_0$  is, then it will be  $\Lambda^\ell(c) \equiv \Lambda^\ell$ .

Property 2. If  $c_0 - f_1 \geq 0$  and  $c_0 - f_{N-\ell+1} < 0$  is,  $\exists p \in \overline{1, N-\ell+1}$  will be found as

$$\begin{cases} c_0 - f_p \geq 0 \\ c_0 - f_{p+1} < 0 \end{cases}.$$

Proof:

Let's imagine the opposite, then for the optional  $p \in \overline{1, N-\ell+1}$  will be

$$\begin{cases} c_0 - f_p < 0 \\ c_0 - f_{p+1} < 0 \end{cases} \text{ or } \begin{cases} c_0 - f_p \geq 0 \\ c_0 - f_{p+1} \geq 0 \end{cases}$$

Consequently, when  $p=1$  or  $p=N-\ell+1$  this indicates that the property condition is corrupted. We come across a conflict.

It means that our assumption is not right. From this, we come to the conclusion that there is where the property above is appropriate.

Now, let's see how to find this p. To do this, we use  $(\{1, 2, \dots, N-\ell+1\})$  the bisection scaling method, i.e.  $p_1 = \left\lfloor \frac{N-\ell+1+1}{2} \right\rfloor$ , that is where  $[*]$  is the integer. Then  $c_0 - f_{p_1}$  value

is checked, if  $c_0 - f_{p_1} < 0$  is  $p_2 = \left\lfloor \frac{p_1+1}{2} \right\rfloor$  otherwise we take it as  $p_2 = \left\lfloor \frac{N-\ell+1+p_1}{2} \right\rfloor$ .

$\exists p_m$  is produced after doing this work several times repeatedly, and there will be

$$\begin{cases} c_0 - f_{p_m} \geq 0 \\ c_0 - f_{p_m+1} < 0 \end{cases}. \text{ We proof property completely if we take it as } p_m = p.$$

Property 2 has been proven.

If we take  $S = \{c_1, c_2, \dots, c_\ell, \dots, c_{\ell+p-1}\}$  as a set, the sum of the optional  $\ell$  number elements of this set is smaller than  $c_0$ , according to the proven property.

4) At this  $(c_1, c_2, \dots, c_N)$  stage, we define the largest component of the vector that can be involved in the problem.

To do this, we'll consider the following system:

$$\begin{cases} f_0 + c_j \leq c_0 \\ f_0 + c_{j+1} > c_0 \end{cases}, j = \overline{\ell, N-1}$$

here  $f_0 = \sum_{i=1}^{\ell-1} c_i$ .

If  $c_q$  ( $q < N$ ) is a solution of the system, then we deny  $c_{q+1}, c_{q+2}, \dots, c_N$  values corresponding to the quantities and decrease the starting point space measuring to  $q$ , i.e. we go to the space  $R^N \rightarrow R^q$ .

$c \in R^q, a \in R^q, b \in R^q$  ( $q \geq \ell$ ) and

$$\Lambda^\ell = \left\{ \lambda \in R^q : \lambda^i \in \{0;1\} \sum_{i=1}^q \lambda^i = \ell \right\}.$$

5) Now, we divide  $\Lambda^\ell$  set in such a section so that the resulting optional part is  $(c, \lambda) \leq c_0$  for  $\lambda \in \Lambda_i^\ell(C) \subseteq \Lambda^\ell$  vector derived from the set. Such partitions are generated as follows.

Through  $f_k^j$  function, we define that only the last member ( $j \leq \ell-1$ ) of  $f_k$  is not present.

$$\begin{cases} f_{p-i}^j + \sum_{z=1}^j c_{t_z} \leq c_0 \\ f_{p-i}^j + \sum_{z=1}^{j-1} c_{t_z} + c_{t_{j+1}} > c_0 \end{cases} \quad i = \overline{0, p-1}; \quad j = \overline{1, \ell-1},$$

here  $t_z \geq p - i + \ell - j - 1$ ;  $t_z < t_{z+1} \leq k$ .

Note: If  $t_z = k$  in the above system, then we will stop increasing the value of  $i$  for the fixed  $j$ .

Let's consider all  $c_i$  that can be involved in solving the problem as an element of the  $S^*$  set.

In this case, if we solve the system above separately for each pair of  $i$  and  $j$ , then  $S^*$  will be divided into such partitions (the number of elements is not less than  $\ell$ ), where the sum of any  $\ell$  optional from these sections will be smaller than  $s_0$ .

In line with these partitions, we create  $\Lambda_h^\ell(c)$  ( $\bigcup_h \Lambda_h^\ell(c) = \Lambda^\ell(c)$ ) and we form  $R^q$  dimensional

character space as a new sectional space corresponding to each  $\Lambda_i^\ell(c)$  of the character space.

The equivalent of the task(1) given above will be produced from it.



$$\begin{cases} J_i(\lambda) = \frac{(a, \lambda)}{(b + c, \lambda)} \rightarrow \max \\ \lambda \in \Lambda_h^\ell(c). \end{cases} \quad (2)$$

Here(\*,\*) is scalar multiplication of the vectors, if we find a perfect solution of (2)  $\lambda_h^*$  for each  $h$ , then the solution of the task(2) will be defined as  $J(\lambda) = \max_h J_h(\lambda)$  and graphs edges corresponding to components of  $\lambda$  vector which differ from zero forms the most informative graph edges.

### Separation algorithm for the amount used in the solution of problems.

StepI. Given values:  $\ell$  - number of required characters;  $N$  - number of all characters;  $s$  -  $N$ -dimensional vector;  $c_0$  -  $s_0$  is the quantity of the amount with limited resource.

StepII.  $\sum_{i=1}^{\ell} c_i$  the value is calculated and compared to  $s_0$ . If  $\sum_{i=1}^{\ell} c_i \geq c_0$  the case is not solved, the process will be completed.

StepIII. Let's take it as  $q = \ell$ .

StepIV. Checking of the term  $\sum_{i=1}^{\ell-1} c_i + c_q \leq c_0$

StepV. If the above term is performed,  $q = q + 1$  will be retrieved and return to step IV.

StepVI.  $S^* = \{c_1, c_2, \dots, c_\ell, \dots, c_q\}$  set off all funds, which will participate. We go to  $R^N \rightarrow R^q$ .

StepVII.

$$\begin{cases} f_{p-i}^j + \sum_{z=1}^j c_{t_z} \leq c_0 \\ f_{p-i}^j + \sum_{z=1}^{j-1} c_{t_z} + c_{t_{j+1}} > c_0 \end{cases} \quad i = \overline{0, p-1}; \quad j = \overline{1, \ell-1}, \quad t_z \geq p - i + \ell - j - 1; \quad t_z < t_{z+1} \leq k.$$

The system above will be solved for each  $i$  and  $j$  and defined sections of  $S^*$ .

StepVIII  $\Lambda_h^\ell(c) (\bigcup_h \Lambda_h^\ell(c) = \Lambda^\ell(c))$  is produced.

The problem-solving algorithm

StepI. Given values:  $\ell$  is required traffic routes;  $N$  is a number of all traffic routes;  $a$ ,  $b$ ,  $c$  are dimensional vectors;  $c_0$  is the amount of allocated resources;  $\Lambda_i^\ell(c)$  is a set of vectors.

StepII.

$$\begin{cases} I_i(\lambda) = \frac{(a, \lambda)}{(b, \lambda)} \rightarrow \max \\ \lambda \in \Lambda_i^\ell(c). \end{cases}$$

is calculated.

StepIII. taken as  $I(\lambda) = I_1(\lambda)$ .

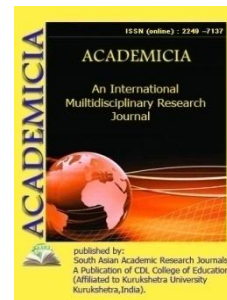
StepIV .we take it as  $i = i + 1$ .

StepIV .  $I(\lambda)$  is compared to  $I_i(\lambda)$ . If  $I(\lambda) < I_i(\lambda)$ , it is considered as  $I(\lambda) = I_i(\lambda)$  and return to StepIV .

StepV .  $I(\lambda)$  exit parameter.

## LITERATURE

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## THE IMPORTANCE OF INFORMATIZATION OF EDUCATION SYSTEM

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### ABSTRACT

*The article describes the process of informatization in the education system. It also outlines the challenges of computerizing education and the benefits of the learning process. The creation of methodological guidelines, multimedia tools, directories and dictionaries, hypertext, electronic tests and tasks in the educational system using modern software, as well as the creation of interesting resources for students to study independently, poses important tasks for teachers. It becomes not only the professional activity of a person but also the main tool of everyday life. In this regard, the use of a promising direction of information and communication technologies is being established - the use of the media in the educational process. Information globalization in the educational process provides the basis for a new outlook.*

**KEYWORDS:** Education, Information, Informatization, Computer, System, Technology, Communication, Multimedia.

### INTRODUCTION

Reforming and improving the education system in our country is one of the priorities of the modern information age. This requires highly qualified specialists to update textbooks in specialized disciplines taking into account the requirements of our time and the latest achievements of science, the introduction of creativity, innovations and educational technologies into the educational process.

Every year, the education leadership develops curricula and creates new textbooks to achieve high efficiency in educational institutions. This will help both students and teachers to grow professionally. The practical actions taken will create a certain level of need for students to

achieve success, to move forward, to help them to develop their learning skills to a certain extent.[1,2]

The rejection of preliminary planning of lessons, the formation and development of critical, creative thinking in students, forcing them to think creatively, come up with new ideas, change their attitude to learning, will be a key factor in their motivation for success.

## **MATERIALS AND METHODS**

Today, it is difficult to imagine the activities of any industry without information and communication technologies. Newspapers, magazines, radio, television, photography, documentaries and feature films, news agencies, the Internet are growing at an unprecedented pace, and there are significant changes in quality. Technical miracles such as computers, faxes, cell phones, parabolic antennas and e-mail have had a major impact on media development.[3]

In this regard, the use of a promising direction of information and communication technologies is being established - the use of the media in the educational process. Information globalization in the educational process provides the basis for a new outlook. As modern knowledge improves, the problem arises of the correct and effective use of information.

The process of informatization of the education system, aimed at meeting the needs of the development of the community, is aimed at improving its quality. The process of informatization of the education system is to prepare mature people for the conditions of a rapidly developing, informed society and future life, to change the content of education, teaching methods and forms of learning, to form skills and skills for building a successful and independent life.[4]

Informatization of the education system is the use of computer technologies and information technologies in lessons, reaching a new level of learning quality. This requires the teacher to conduct a lesson based on new innovative pedagogical technologies. The basis of pedagogical technology is information technology. The fundamental changes that are taking place in the education system today require a review of the role of computer technology in the educational process, its pedagogical and psychological characteristics, the level of attention and the need for the use of computer tools.

For this: the role of computer technology in the education system; changing the thinking and worldview of a student using a computer, the role of computer efficiency in memory formation; It is necessary to identify ways of development of the creative activity of students in the process of learning. In the field of computerization of education, the following tasks are set:

- The use of computers in curricula, lectures and small didactic materials;
- to adjust the use of the existing electronic textbooks and educational programs for an increase in the visual quality of science, scope, illustrative and animation opportunities of an object of training;
- Efficient use of standard programs and software resources such as Microsoft PowerPoint, Microsoft Publisher, Adobe Photoshop, Movie Maker, as well as the Internet when sharing information and data when creating presentation tools.

Today, electronic textbooks and multimedia tools are created in many disciplines, and now the emphasis is on organizing the educational process in a computerized environment. The

introduction of computers in educational work can be compared with the appearance of a book in the history of mankind, with its place and meaning.

After all, when the book is used to store and distribute information, the computer is used to teach students during the lesson. The role of the computer in learning is not limited to the learning process. Students can work with him independently and even study him at home. The use of computer networks, distance learning has become a dream today.

This is the only educational opportunity for children with disabilities, a means of independent education for gifted, very inquisitive students. Computer training has the following advantages:

- As a result of the need for active computer management, the student becomes a subject of education;
- Students have the opportunity to model and demonstrate processes that are difficult to observe, observe;
- It is possible to provide the lesson with remote resources using the means of communication;
- - Communication with the computer becomes a didactic game, which increases students' motivation for educational activities, etc.

Therefore, in order to solve the problem of computerization of education, research is being carried out in various areas in all economically developed countries, as well as in our country.

The creation of methodological guidelines, multimedia tools, directories and dictionaries, hypertext, electronic tests and tasks in the educational system using modern software, as well as the creation of interesting resources for students to study independently, poses important tasks for teachers. It becomes not only the professional activity of a person but also the main tool of everyday life. The main directions of pedagogical and ICT technologies today are the improvement of education in various fields.

It is important for teachers of different disciplines to correctly choose the empirical, cognitive, heuristic, creative, inversion, adaptive, inclusive and other areas of the most suitable pedagogical technologies in accordance with the relationship of the main characteristics, substantive, practical, theoretical parts of each subject.

## CONCLUSION

In general, the technology is universal, it needs to be implemented by each specialist and achieve the goal, and it can be said that computerized learning processes not only positively affect the development of students' knowledge and skills, but also the research and tireless work of teachers, creates a wide range of opportunities.

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## PREVENTION OF ACCIDENTS DUE TO CHANGE OF SPEED WHEN USING VEHICLES

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### ABSTRACT

*This article recommends the prevention of road accidents by changing the speed of road transport. Currently, road users are characterized by high-speed traffic. Equipped with powerful engines, cars allow them to move at high speeds. Vehicles with high speed and mass become a source of increased risk to others. In conditions of high intensity and density of traffic, the driver lacks perfect knowledge of the rules of the road and driving skills on the roads, the driver must have high moral and physical qualities.*

**KEYWORDS:** *Transport, Transport Vehicle, Automobile, Road, Traffic Accident, Traffic, Speed.*

### INTRODUCTION

The transport sector plays an important role in the development of our country's economic sector, which requires strengthening the production sector and economic independence, active penetration of the Republic of Uzbekistan into the world community, and the development of transport communications [1].

This requires, above all, the priority development of road transport.

Uzbekistan carries out targeted measures to form transport corridors for entering the world market and carries out a number of work on the integration and cooperation of roads of the Republic and near and far abroad.

These include the following modes of transport:

- - Toshkent – Andijon – O’sh – Irkishtim – Qashqar – Lyanyungan – Shanxay;
- - Toshkent – Samarqand – Buxoro – Chorjuy – Ashgabat – Mashxad – Bender – Abbos;
- - Termez – Shibirg’on – Moymona – Hirot – Qondoxor – Chaman – Kvetta – Karachi;
- - QizilUrda – Uchquduq – Nukus – Toshhovuz – Ashgabad – Mashxad – Bender – Abbas.

A person becomes a “driver” by driving a vehicle, which means that he or she bears a high level of responsibility as his or her trivial mistake can pose a serious danger not only to himself but also to the life or health of the passenger.

The difference between drivers and other road users is that they must fully comply with the requirements for driving a vehicle.

But no matter how strict the requirements for vehicle drivers are, unfortunately, some drivers do not know how to behave properly in difficult road conditions. In conditions of high intensity and density of traffic, the driver lacks perfect knowledge of the rules of the road and driving skills on the roads, the driver must have high moral and physical qualities.

## MATERIALS AND METHODS

It is almost impossible to form such traits in a short time, in the process of training drivers. Consequently, drivers must be screened prior to being sent for training. Traffic is the interaction of pedestrians and passengers with many moving vehicles. Currently, road users are characterized by high-speed traffic. Equipped with powerful engines, cars allow them to move at high speeds. Vehicles with high speed and mass become a source of increased risk to others. Therefore, a number of requirements are imposed on vehicles and drivers, passengers and pedestrians, failure to comply with any of these requirements leads to disruption of the rhythm of movement and, as a consequence, the occurrence of a road traffic accident. Thus, traffic safety is one of the key factors in traffic regulation. Discipline in the system of movement of drivers, pedestrians and passengers, it is important that they fulfil their duties.

Accidents on roads, city streets and squares as a result of a violation of the traffic regime of vehicles, resulting in death, bodily injury, as well as damage to vehicles and their cargo, damage to artificial structures or other material damage is called [2].

The following 3 cases are typical for road traffic accidents:

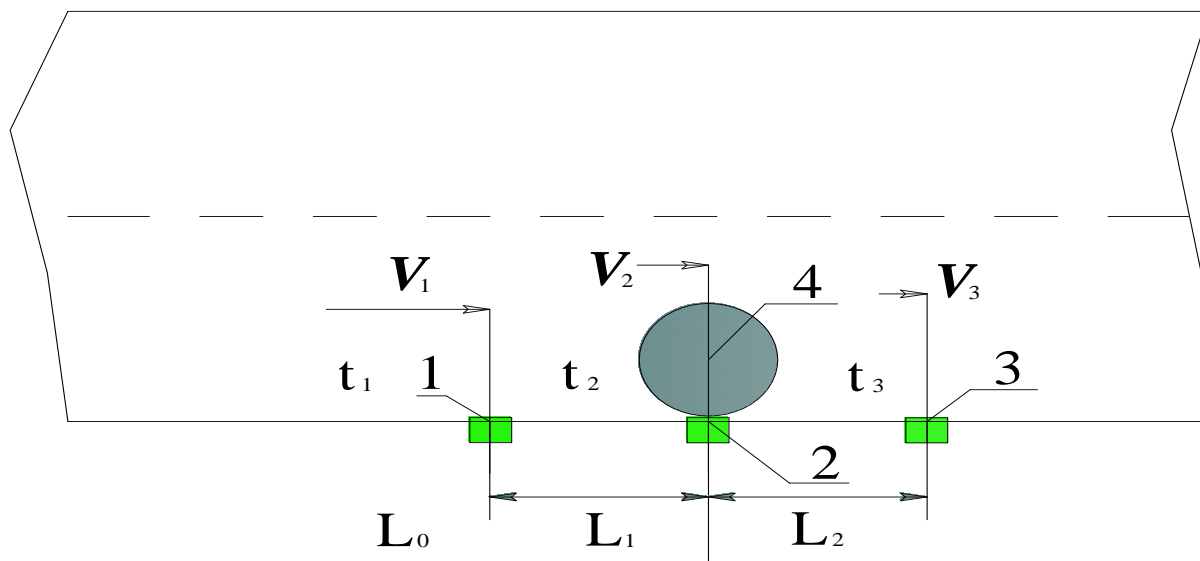
- At least one car was involved in an accident. Any tragic accident that occurs on the road is not considered a road traffic accident if the vehicle is not involved;
- The vehicle involved in an accident must be in motion. For example, if a car caught fire as a result of repairs in a parking lot, it does not get into an accident;
- -People were killed, injured or damaged in the accident.

According to the current rules, there are 9 types of road accidents: 1) collision; 2) flipping; 3) hitting a parked car; 4) hitting obstacles; 5) trampling (beating) pedestrians; 6) pressing (hitting) the cyclist; 7) hit (knockdown) the car; 8) beating (catching) animals; 9) other (remaining) road traffic accidents [4].

When using road transport, speed is one of the main indicators of road congestion, which manifests itself as the main purpose of traffic on the road. The most objective indicator on the road is a graph showing the change in speed along the entire route (Figure 2) [3].

But the construction of such a speed curve must be done using a laboratory vehicle along the route. Therefore, when organizing traffic, the ability to conclude by measuring the instantaneous speed of vehicles on characteristic road sections has received practical development. The maximum design vehicle speed  $V_{max}$  depends on the power of its engine. Observations show that drivers with a high  $V_{max}$  speed only move for short periods. In good road conditions, the speed of vehicles is 0.7-0.85  $V_{max}$ .

In practice, road conditions consist of ups and downs, slight horizontal turns, below normal visibility, vertical turns, and the fact that the amount and composition of traffic are different will affect the instantaneous speed. In real road conditions, the speed of vehicles moving alone can vary from 150-120 km/h to 40-30 km/h. On motorways, speed is measured using a simple stopwatch, speedometers such as "Headlight", "Barrier", "Pistol" and various automatic sensors, as well as by filming (Figure 1) [4].



**Figure 1. Analysis of the speed of movement in dangerous road sections.**

$$V_1 = \frac{L_0}{t_1}; V_2 = \frac{L_1}{t_2}; V_3 = \frac{L_2}{t_3};$$

Here:-*speed at the entrance to the dangerous plot,*

$V_2$ - *speed on a dangerous section,*

$V_3$ - *speed when exiting a dangerous section.*

$L_0=L_1=L_2$  – the distances at the entrance to the hazardous area and the exit from the hazardous area ( $L_0=L_1=L_2 \approx 100 \text{ m}$ ) are selected up to the impact range of the hazardous area.

$t_1$ -is the time taken to reach the danger zone,

$t_2$ -is the time taken to enter the dangerous area,

$t_3$ -is the time taken to exit the dangerous area.

Based on the above formulas, the speeds determined for hazardous areas were determined and calculated as follows (Figure 2) [3]:  $V_1$ - the speed at the hazardous area,  $V_2$ - the speed at the hazardous area,  $V_3$ - the speed at the exit from the hazardous area.

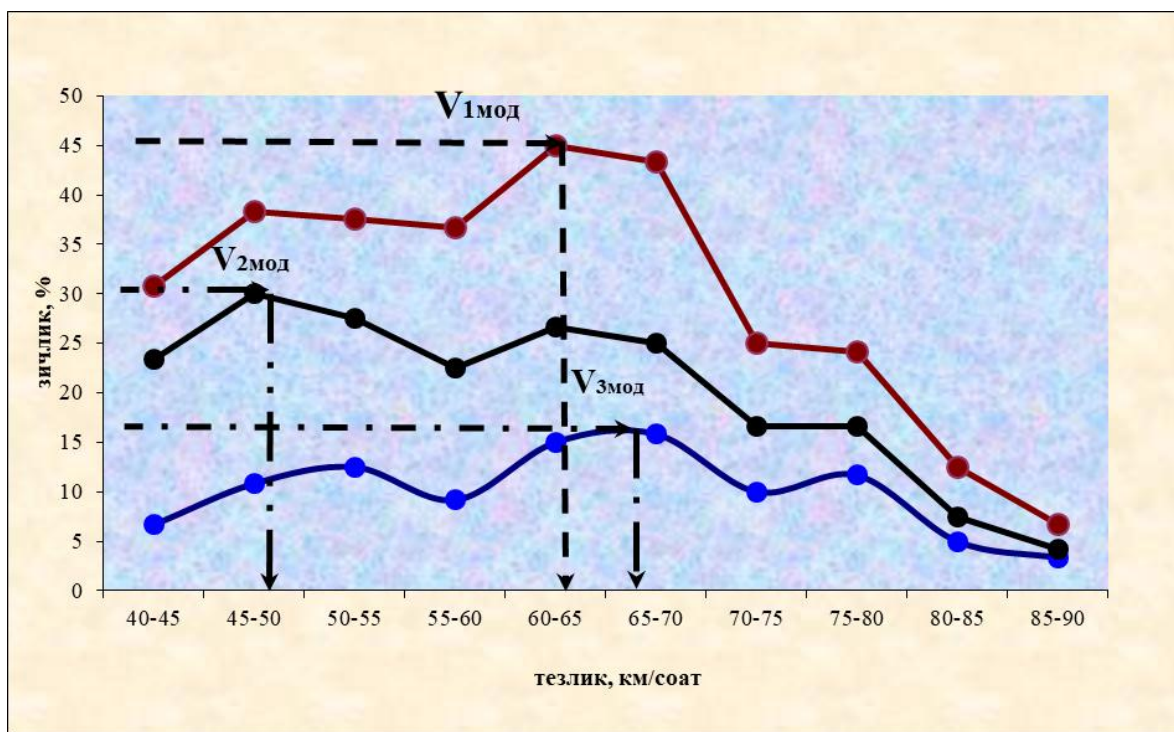


Figure 2. Graph of the velocity distribution curve.

The modal speed of vehicles at the entrance to the hazardous area is 60-65 km / h, i.e. at a distance of 100 m, the modal speed of vehicles in the dangerous section is 45-50 km/h and 65-70 km/h at the exit from 100 m.

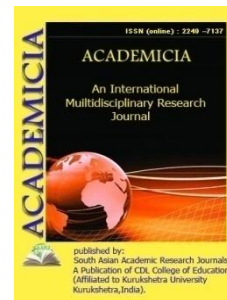
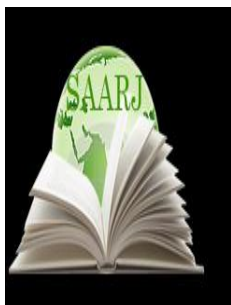
## CONCLUSION

The practical significance of our research lies in the fact that, as a result of these studies, taking into account the culture and psychological, physiological and biological capabilities of drivers in the organization of traffic, to prevent road accidents as a result of changes in the speed of traffic, Ensuring safety on dangerous sections of the road, regular maintenance of each dangerous road section, mutual exchange of experience and close cooperation, increasing the responsibility of road users, reducing and preventing road accidents and achieving the expected results will be possible.

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## FROM IMAGE TO SPEECH

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### ABSTRACT

*The relevance of the issue raised in the article lies in the fact that it discusses images in human thought and their flow, their interaction and the emergence of the process of imagery, the expression of figurative thinking in children's speech. The reason for this is that the development of any society is determined by its attitude towards the younger generation and its maturity. The following goals are set: a) describe the image and its character; b) specification in examples of figurativeness and figurative thinking in relation to the nature of images; c) to study the mechanisms of occurrence of figurative thinking in children's speech. The article uses inductive, deductive, component, transformation methods. **Thus**, the study emphasizes that if children develop imaginative thinking and their speech using certain methods, the next generation will develop creative thinking, an interest in various discoveries and are not afraid to set huge goals for themselves.*

**KEYWORDS:** Image, Flow Of Images, Figurativeness, Figurative Thinking, Perception, Imagination, Understanding, Analysis, Synthesis, Comparison, Abstraction.

### INTRODUCTION

A person perceives being, that is, a thing-event, a characteristic feature, an action-situation in reality, based on the images in his mind and their flow.

The word "image" in the Old Slavic language means "around", "next to", "in the footsteps" of the prefix *opi-* (*ob-*) and "cut", "to be" (*разить-резать, отделять, разрезать*), (*ordh-раз*) - gives an idea of the main core. It is well known that each term is etymologically derived from a generalization of the meaning of self-organizing parts and is used as a clear and stable expression of the concept it implies. More than that, appearance, appearance, image, picture; thought, imagination; sample; The term image, which expresses meanings such as style, method, is the



expression of the existing reality in the human being through the sensory organs, the highest manifestation and result of the reflection of things in the human mind, and the form and style of assimilation of reality in art [ 8].

The term *image* is interpreted in philosophy as the restoration of reality in human thought, generalization of clarity and abstraction, the productive result of imaginary activity, the process of creating various patterns and structures, conducting imaginary experiments [9], and sometimes the perceived state of this reality [10].

In modern psychology, there are three different approaches to the concept of an image:

1. “According to the clear-perceptual approach, an image is a product of cognitive activity, memory, thinking and imagination. This approach is useful in the study of child development: for example, children are characterized by visual-figurative thinking, in which mental tasks are solved through visual perceptions.
2. The image is valued as a conscious view of the world or its individual components, as well as the person himself and the people around him.
3. The image is interpreted as an idea of the objects and events specific to a particular society (including the subject’s method of self-perception). This approach is now leading the way.”[3]

Consequently, in psychology, an image is a representation of reality, including a person, as a whole in the human psyche of the time sequence of the world and events [3]. It is a key component of human behavior.

The image itself is very mobile, changeable, and infinite throughout the activity of the subject concerned (6).

So how is the image different from the perception, the imagination, the perception that is considered adjacent to it?

“Perception is a holistic emotional image of objects and events. It has the ability to summarize and express images in the form of feelings and perceptions.

Imagination is a processed and reconstructed emotional image in the human brain of previously perceived, but not directly perceived objects and events. The peculiarity of the imagination is that it is reconstructed on the basis of their pre-existing images, without being in direct contact with the objects and events in existence at the same time. However, a person can also create emotional images of new objects and events in his imagination, similar to a previously perceived object or event.

A concept is a generalized, abstracted and at the same time a definite intellectual image of objects and events, their important and necessary features and properties[11. 170].

Images create mind, mindimagination, and through imaginations we gain conception. Because mind and imagination are forms of emotional cognition, and conception is a form of mental cognition.



Thus, “image psychology is the precise scientific knowledge that individuals create a worldview in which they live, move, and rebuild during their activities. It is also the knowledge of how the image of the universe moves through the activities of the individual in real life [5].

This means that through the activity of emotional cognition, a person first reflects in his consciousness the appearance and image of things, and then begins to distinguish between their properties. It's like a mirror. That is, things are also reflected in the mirror. But this process in the brain is very lively and impressive. How is this going? The brain first perceives the event through the senses and quickly processes it. In this case, the new image that appears in the mind is analyzed through other similar images in memory. As a result, he falls into the nest of images close to him. If we turn to this thing-phenomenon in a certain period of time, then it is embodied in our thinking not only, but through the stream of images adjacent to it. For example, the image of a traffic light moves in our minds along with the flow of images of the road, the car, the passengers, and so on. This is the usual working mechanism of thinking.

It should be noted that man cannot think fully without images. Images are used in science to express even the most abstract concepts. For example, the term *sinus* in Latin means *curvature*, *the arc of the rainbow*, and as a mathematical unit refers to the trigonometric function of the catheter with respect to the hypotenuse opposite the acute angle of a right triangle. That is, the curvature of the original meaning of the word *sinus* was also the basis for its use as a term. Hence, scientific terms also rely on images that form in our minds the notions of the meanings that words convey. Images cannot live outside the human mind, inside the being, but are considered a vehicle between reality and the mind. Image is a product of memory and thinking. According to Democritus, the concepts formed by human beings through the five senses are the image of things in the material world [11. 46].

The process of understanding the world through the movement of images is figurative thinking, which has existed from the primitive social order of mankind to the present day, as well as in the minds of children, as a form of creative process. In fact, no matter what form of thinking it exists, it cannot exist without an image. *The approach to the term figurative thinking* also depends on how one understands the concept of image. That is, the image is the perception of the being in the mind. This is the first approach. The concept of image that we have mentioned above has also been interpreted as a means of knowing the universe in this broadest sense.

The second aspect is the manifestation of an emotionally-colored nature as a result of the application of an image instead of the perception of several things-events, actions, characters-features. At the same time, this image acquires an unusual and emotional effect because it can reflect the living thing as inanimate and the inanimate as alive, and because such phenomena usually do not exist in existence. For example, *cold* treatment, *sad* feelings, *revealing* a secret, like tying a pencil around your waist and getting to work. There are mechanisms inherent in thinking, such as analysis, synthesis, comparison, abstraction, generalization, concretization, classification, systematization, which are the usual types of activity in the brain. In particular, the process of comparison “reveals the similarities and differences between things and events in the objective world” [12: 267]. A person sees something else with his own eyes, but calls it differently. Then the thing is two or more, and the name is one -common. For example, a person saw through his eyes, which are considered a sensory organ, a component of a chair that acts as a support, but because this function is similar to a human foot, he also begins to call it a

foot. Through this process, the words that occur in speech through images show the coloring feature and attract the listener's attention. Such a situation in the images gradually began to show a nominative character in the development of language. We can now use such a multifaceted property of images that arises from the process of comparison, even in the names of things. For example, a man's lips - the lip of the bowl, the hem of the shirt - like the foot of a mountain. Such coloring in images is mainly observed in art and literature, in children's speech. "The image in art and literature is the reflection, the revitalization of reality through the prism of the concrete personality (creative) thinking, through the prism of the emotional world" [13. 206]. Indeed, art and literature are also understood through the images created by his creator. Consequently, the word *image* in the term *figurative thinking* should be understood in this sense.

The psycholinguistic state that arises through the emotional-expressive nature of images is figurative. It occurs not as a result of the flow of ordinary images in thought, but as a result of their migration to each other. Imagery is the ability of the word to create visual-emotional images of things and events in the world around it. "We understand imagery as a result of metaphorical migration. As a linguistic category, it has a spiritual basis, that is, a figurative image that reflects the "twin sense" of reality. In this case, what is expressed is imagined through something else like it, or a metaphorical connection is established through the units of language" (1:16). Imagery is not a constant and unchanging feature of a word. It is a major aspect of fiction designed to create artistic images. Imagery is a methodological aspect of artistic discourse that depends on the use of the word through metaphor, epithet, analogy, hyperbole, etc. in a figurative sense [6; 4: 226].

The fact that images in consciousness remain common to several things - events and features, actions-states, can be clearly observed in the thinking and speech of children, especially those who begin to perceive existence, if this is done using the mechanisms of analogy and differentiation, generalization and privatization. For example, when a mother asks her daughter to give her plastic, the girl says: "It's a phone, don't you see, it's my phone," he protested, and said, "Alyo, Daddy, why are you calling me? Should I shout?" (Dilrozbegim Rakhimova, 2.5 years old, Chirchik city). Although the size of the plastic is smaller than that of the phone, it is very girl-friendly and, most importantly, the rectangularity of both body shapes is similar. It is this property of things that gives them a name. Or in the verbal creativity observed in children, the influence of images on each other in thinking is also obvious. For example, 3-year-old Islam *bee is a dangerous fly*, 2.5-year-old Sadulla *eggplant is a black tomato*, 1.5-year-old Azizbek is wearing sneakers, 4-year-old Islombek Sobirov is a *mosque*, and 1.5-year-old *honey is pure*. with names such as. In such cases, the reason why children do not have complete information about bees, eggplants, sneakers, mosques, juices in their minds is that they are similar to it in their memory (bee-fly, eggplant-tomato, sneaker-sock) or related to it (mosque-ilaha Amin, juice — Pokko) tries to recreate things and name them.

The following examples show the breadth of the imaginary world in children's thinking and how it manifests itself in pragmatic relationships. For example:

*From a 4-year-old Ghayrat mother who saw a lot of stars:*

*—Mother, Did the moon nail the stars to the sky? [7. 8].*

The reason for this resemblance in a child is in his mind, "Why don't the stars fall to the ground?:" is the question that arises. He asserts with an inner judgment that the things that hang

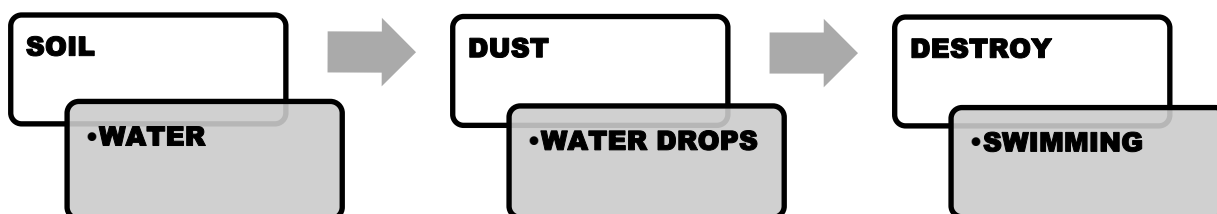
or stumble in his life do not fall to the ground, attributes the images that appear in his mind to the stars and expresses them through verbal units.

Or:

*The “Zoo” and the animals in it were shown on TV. Sadbar, 3.5, looked at his mother and said, “Look, there is a snake in the elephant’s nose.”[7:11]*

In this example, the image of an elephant, a nose, a snake, which appeared in the child's mind, served to perceive reality instead of the image of a snake khartoum. Since the image of Khartoum is not present in the child’s memory, the thought quickly becomes present in itself and triggers a flow of images similar to it. The reason for choosing the exact image of the snake is, firstly, its length, and secondly, its tip is reminiscent of the head of a snake when lifting the hose upwards.

In the following example, we observe the state of migration of images: *When Samug saw the chickens rolling on the ground and scattering the dust, he said to his brother:—Brother, are the chickens learning to swim in the ground?.[7. 11]*



At first glance, the change in these images in the child's mind seems disproportionate. But if you look closely, you really find that they were the right choice in that situation. It should be noted that the imagination of children, when it comes down to it, is broader than that of the most famous artist. After all, all children are born creators.

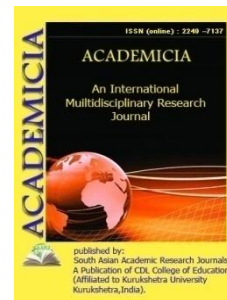
## CONCLUSION

As adults, we often ask ourselves: “What is this?” we are used to clarifying the question. Although a stream of images adjacent to that unknown has been set in motion in our minds, our minds require a definite definition of it. This process is different in children. That is, a child makes quicker conclusions about what he sees for the first time than an adult. He even names the event through the images that are already in his memory. Because in adult thinking, firm denial and affirmation has become a lifelong habit. It is more important for children to learn something faster than a clear sentence. For this reason, children find solutions to such problems by renaming images, and it does not matter for them whether such a name exists or not in the language treasury to which they belong.

Until a person can imagine a creature without images, these images lose their meaning if they no longer occur in a being in a verbal or non-verbal form. Because in the world of communications, we are driven by our thoughts and ideas. They are based on images and image streams. Therefore, the further development of figurative thinking in children, assistance in its implementation through language units is one of the urgent problems of our time. After all, only a generation that has formed a balance of thought and speech can have its say on the world stage.

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## THE FIRST STAGE OF THE CONQUEST OF CENTRAL ASIA BY THE ARAB CALIPHATE - THE AUTHORITY OF THE OASIS AND THE COALITION OF TURKS

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### ABSTRACT

*Establishment of the Arab Caliphate, the spread of the New Islam, the activities of the Caliphs, the conquest of the Sassanids of Iran, the military campaigns of the Arab Caliphate to Movarounnahr, the conquest of Bukhara, the activities of Said ibn Usman, the Viceroy of Khorasan, the formation of a coalition between the Western and Eastern Turkic Khanates with oasis authorities, the appointment of Qutayba ibn Muslim as the viceroy of Khurasan*

**KEYWORDS:** *Muhammad (S.A.V), Islam, The Battle Of Nehovand, The Battle Of Cadiz, Yazdigerd III, Marv, Maymurg, Chaghaniyan, Kabaj Khatun, Said Ibn Usman, Khurasan, Movarounnahr, Tugshoda, Western Turkish Khanate, Eastern Turkish Khanate, Turkash Khanate, Tarhun, Musa, Qutayba Ibn Muslim*

### INTRODUCTION

Originally a new state, the Arab Caliphate, which united the Arabian Peninsula and adjacent territories around Islam, was established in 630. The founder of this religion, Muhammad (s.a.v. 570-632), played an important role in the formation of this state. After his death, his close companion. Abu Bakr (632-634) was elected caliph ("deputy"). During his rule, the people of the Arabian Peninsula fully embraced Islam. During the reign of Caliph Umar (634-644), who was known in the Islamic world for his generosity, justice, and determination in matters of religion, the Arabs conquered Palestine, Syria, Egypt, Libya, and much of Iran.

### Main Part

During the reign of the next caliph, Usman (644-656), the caliphate's armies occupied Dagestan and marched to the banks of the Amu Darya. The Sassanid state of Iran was conquered by the Arab Caliphate and the invaders made their way to Movarounnahr. In particular, the clashes in



Cadiz in 636 and in Nakhovand in 642 [Большаков О.Г. История халифата. Кн 1. – С. 216] ended the five-century reign of the Sassanids. For ten years, Iranian territory was occupied. The last Sassanid Yazdigerd III's call for the population to fight the invasion went to waste [Гафуров Б.Г. Таджики. Кн. 2. – С. 8]. The Iranian people were fed up with the Sassanid struggles, the Hephthalites, the Byzantines, and the Turks. The local rulers also refused to help the center in the fight against the Arabs and as a result the Sassanid state collapsed. When Khorasan fell to the Arabs in 642-644, they hurried to the other side of the Amu Darya, Movarounnahr, in search of large booty.

As for the situation in Movarounnahr during this period, in the V-VII centuries it was divided into several khokimiyats. These khokimiyats consisted of the province and its major cities, numbering more than 15. The khokimiyats of this region were first subordinated to the Hephthalites and then to the Turkish Khanate, but neither the Hephthalites nor the Turkish Naqqans had much influence in their internal affairs. The governors of the oasis pay a certain amount of duty and retain their independence [А. Отахўжаев. Илк ўрта асрлар Марказий Осиё цивилизациясида турк-суғд муносабатлари. Тошкент – 2010. В. 108.]. Territories of Movarounnahr Western Turkic Khanate (Turkish Khanate was divided into two parts in 581-603 - Eastern and Western parts [А. Отахўжаев. Илк ўрта асрлар Марказий Осиё цивилизациясида турк-суғд муносабатлари. Тошкент – 2010. В. 88.]) though a vassal, had the privilege of pursuing an independent domestic policy. There was no strong centralized government, and the country was united into a multi-property confederation. In particular, Sughd and Tokharistan were divided into confederate estates, the Chach and Ilaq into semi-independent estates under the vassals of the khanates, and Fergana into northern and southern khokimiyats. [Бичурин Н.Я. Собрание сведений. Т. II. – С. 281; Beal S. Buddhist records of the Western World. – S. 37–38.]. Provinces such as Ustrushana, Chaghaniyon, Kabodiyon, Khuttalon, Rasht, Darvaz, Badakhshan (Vakhon, Shugnan, Rushan) were also ruled by their governors as semi-independent properties.[Ахмедов Б. Тарихдан сабоқлар. – Тошкент: Ўқитувчи, 1994. – Б. 154.]. Because each property ruler was internally independent, they did not consider themselves largely dependent on the center. This was an obstacle to the unification of the peoples of Movarounnahr against the Arab invasion. Only the military supremacy of the Western and Eastern Turkic khanates could organize the peoples of Central Asia in their struggle against the Arab invasion. In addition, during this period, the majority of the population of Balkh, Badghis, Khuttalan, Chaghaniyan, Chach, Ustrushna and Sughd were the Turks. . Naturally, in the process, the governorates of the oasis entered into an alliance with the Western Turkic Khanate in the struggle against the Caliphate's armies. The coalition forces against the Caliphate included not only the governorates of the oasis and the Western Turkic Khanate, but also the military forces of the Eastern and later formed Turkash Khanate.

After the victory of Nakhovand in 642, in 644 the Arab armies crossed the borders of Tokharistan, ruled by the Turkic dynasty [Gibb N. A. R. The Arab conquests in Central Asia. – London, 1923. – P. 15.]. Initially, the Arab Caliphate did not intend to invade Central Asia, particularly Movarounnahr, but to gain military booty and the potential of the rulers. This was the position of the Caliphate in relation to Movarounnahr during the reigns of Caliph Umar and Usman. In 651, Yazdigerd III was pursued by the Arab general al-Ahnad to Marv. According to Tabari, Yazdigerd III sent a letter to the Hakan (Tabari does not indicate that a letter was sent to the Western Turkic Khagan or the Eastern Turkic Khagan, although the Turkish Khanate was

divided into two parts during this period) and to the Sogdian Pasha. Sources say the ambassadors delivered the letter. At the time, the Eastern Turkic Khanate was a vassal of the Uighurs and the Tang Empire (618-907), which ruled in China. Auxiliary forces for Yazdigerd III could have come from the king of Sughd and the khan of Western Turkey. Because the Western Turkic Khagan Ashina Alp (651-658) united the western ruks by attacking the Great Ishbara Khagan. [Тургун Алмас. Уйгуры. Кн. 1. – С. 100.]. However, there was not enough help from Ashina Alp, only after he crossed the Amu Darya, the armies of Fergana and Sughd under the leadership of the Turkish khan went to Khorasan (Balkh) to act together with Yazdigerd III. An alliance of Persian, Turkish and Sogdian armies moved against the Arabs and recaptured Balkh. Hakan's army remained in Balkh. Yazdigerd returned to Marv ush-Shohijon. When the treasure was seized, Sassanid officials opposed Yazdigerd's plan to unite with the Turks, preferring to reach an agreement with the Arabs on the grounds that the Turks were "primordial rivals." [История ат-Табари. – С. 20–21.]. The treasure was bereaved from Yazdigerd and they began negotiations with the Arab general al-Ahnaf. Upon learning of this, Hakan, who had lost his ally, was forced to leave Balkh. [История ат-Табарий. – С. 8.]. Yazdigerd III, who had lost his allies in the struggle against the Arabs, was killed in 651. [История ат-Табарий. – С. 8.]. Marv was thus conquered, and Movarounnahr was now in the direction of the Caliphate's army. The Arabs, refined in the ongoing military campaigns to the east, began their military campaigns in Movarounnahr. He did not immediately form an alliance with the rulers of the oasis in Movarounnahr, either the Western and Eastern Turkic Khanates, or the later Turkic Khanate, [Л. Гумилев. Древние тюрки. С. 210., Бобоёров. Ғарбий Турк хоқонлигининг давлат тузуми. Тошкент-2018. Б. 41.] and even if they did, it would not put an end to the Caliphate's forces in Movarounnahr. And that helped the Arabs. The Caliphate's military campaigns in Movarounnahr were also directly in the interests of the Western Turkish Khanate in the region. Because Movarounnahr was politically a vassal of the Turkish khanate, it also had good relations with the local governors, especially with the major khokimiyats such as Sughd. The reason for the lack of rapid enough reaction to the Arab march to Movarounnahr began in 640. [Тургун Алмас. Уйгуры Кн. 2. – С. 168.]. The Tan Empire's attacks on the Western Turkic Khanate forced the Western Turks to fight on two fronts. The deteriorating political situation in Central Asia and the Western Turkic Khanate accelerated the Arab military campaigns. In 654, Arab troops attacked Maymurg [two places in Movarounnahr were named after Maymurg. The Maymurg in question was not the residence of the Sogdian rulers (Mi in Chinese), but the village of Maymurg near Nasaf. See: : Смирнова О.И. Очерки из истории Согда. – С. 199] and learn internal situation in Movarounnahr. In 659, attacking of the armies of the Tang Empire and the Uyghur Khanate to the Western Turkic Khan Yinchu Yabgu (Ashina Hulu) in Barotol

further weakened the Western Turks [Шониёзов К. Ўзбек халқининг шаклланиш жараёни. – Тошкент:Шарқ, 2000. – Б. 154.]. In 53 (672/673), Ubaydullah ibn Ziyad was sent to Khorasan as a deputy [История ат-Табари. – С. 40–42.]. In 674, he led the Arab armies to Movarounnahr. The main focus was on the city and oasis of Bukhara. Romiton and Poykent occupied half [6 История ат-Табари. – С. 44]. At that time, Tugsha was young, so his mother, Princess Qabaj, was in power in Bukhara. The Kabaj khatun sent for the Turkish king for help [9 Наршахий. Бухоро тарихи. – Б. 115]. According to Narshakhi, when the first aid was requested, the Turks did not give notice for a week, but the aid forces arrived in the second week. Auxiliary forces from the Turkish Khanate and Samarkand fought alongside the Bukhara people against the Arabs. When it became clear that the Arabs were not ready for a long battle, a truce was made,

but it was made in the interests of the Arabs, which meant that the Arabs had the upper hand in this conflict.

In 56 (675/676), instead of Aslam ibn Zur, the viceroy of Khurasan, who was not active in military campaigns, [the first of the years given in this form is the Hijri date according to the Muslim calendar, followed by the AD in parentheses.] Said ibn 'Usman crossed the Amudarya, captured Poykent and marched back to Bukhara in the same year [Тургун Алмас. Уйгуры. Кн. 2. – С. 169.]. Kabaj khatun informed Sa'id ibn 'Usman that a truce had been reached during the time of Salim ibn Ziyad and that he had sent a certain amount of payment, according to Narshahi. It was intended only for auxiliary forces expected to arrive from the Allies - Samarkand, Kesh and Nakhshab. Together with the auxiliary forces that arrived, the number of defensive troops in Bukhara reached 120,000 [researcher A. Otahojayev is sceptical of the 120,000-strong army cited by Narshakhi. See: [А. Отахўжаев. Илк ўрта асрлар Марказий Осиё цивилизациясида турк-суғд муносабатлари. Тошкент – 2010. Б. 111]. The Arabs also won the conflict. According to the truce, fifty noble teenagers were taken hostage by the Arabs [История ат-Табарий. – С. 47; ] according to Narshakhi, this number is 80. See:[ Наршахий. Бухоро тарихи. – Б. 116.] and 300,000 dirhams were paid[Гафуров Б.Г. Таджики. Кн. 2. – С. 11.] . According to Narshahi, the captured noble teenagers were to be returned to Kabaj khatun by Said ibn 'Usman, but this condition was not met, and they were taken to Madinah and sent to work in agriculture. They invaded Sa'id ibn 'Usman's palace and killed him, then committed suicide qiladilar [ Qarang: Наршахий. Бухоро тарихи. – Б. 116-118.].

Salim ibn Ziyad ibn Abihi [those whose fathers are unknown are called "Abihi - the son of his father". See: . [ ал-Балозурий. Футуҳ ал-Булдон Хуросоннинг фатҳ этилиши. Тошкент – 2017. Б. 82.] No significant offensive was carried out in Movarounnahr during his tenure [История ат-Табари. – С. 47–48]. According to Narshakhi, the queen of Bukhara asked Tarhun, the king of Sughd, for help against the Arab invasion in 64 (683/684) [Наршахий. Бухоро тарихи. – Б.118; Вамбери Х. Бухоро ёхуд Мовароуннахр тарихи. – Б. 9.]. Al-Muhallab ibn Abu Sufra al-Azdi, who was appointed viceroy of Khurasan in 78 (697/698), reached Marv in 79 (698/699) and crossed the Amu Darya the following year and besieged Kesh. [История ат-Табари. – С. 72–78.]. At that time, one of the local rulers, the king of Khuttal, al-Sabl (Turkish Ishbara), invited him to march on Khuttal. This was exactly what Al-Muhallab meant. He did not miss the opportunity and sent his son Yazid to al-Sabl to Khuttal. Al-Sabl, who seized power from his cousin with the help of the Arabs, made a major political mistake. He later realized his mistake and took part in the struggle against the Arabs [Кадырова Т. Из истории крестьянских движений. – С. 94; История ат-Табари. – С. 237–238.]. But it was too late because the Arabs had strengthened their position. At the same time, the Turkish khanates could not interfere in the affairs of Central Asia, because in 698 there was a clash between Chinese and Turkish troops in Idukbashi, and the Turks withdrew the Chinese at great cost. In addition, the rise of [Шониёзов К. Ўзбек халқининг шаклланиш жараёни. – Б. 154–155.] the Turkic leader Uchcila to power weakened the Western Turkic khanate.

Al-Muhallab sent his son Habib Rabinjan to plunder Movarounnahr. He faced resistance from the local army of 40,000 men, attacked and set fire to the village where the Bukhara army was stationed, and called the village al-Mukhtarika ("Fire") [История ат-Табари. – С. 237–238.]. Yazid, the second son of al-Muhallab, barely survived when he was attacked by about 500 Turks in the desert on his way to Nasaf with 60-70 cavalry. Al-Muhallab then made peace with the

people of Kesh [История ат-Табари. – С. 81–89.]. It was a relative victory for the Allies over the invaders. After al-Muhallab's death, his son Yazid was appointed viceroy of Khorasan. He was actively involved in looting marches. In 84 (703/704) he captured the fortress of Nizek in Badgis. His invasion of Khorezm without the permission of the Caliph al-Hajjaj ibn Yusuf forced him to hand over the viceroyship of Khorasan to his brother al-Mufaddal in 85 (704/705). Al-Mufaddal, on behalf of the caliph, marched on Badgis, Akharun and Shuman, where the Turkish army had gathered [История ат-Табари. – С. 98–99.]. While the Khorasan deputies were conducting military operations in the southern provinces and Khorezm, the Sughd king Tarhun demanded that the rebel Musa, the son of Abdullah ibn Hazim, the Khorasan deputy in 64-72 (683-692), leave Sughd. Tarhun allowed him to leave Movarounnahr. But Muso came to Termez and took the city from Termez Shah. Although aware of this, the Turkish ruler chose not to fight Muso [История ат-Табари. – С. 99–102.]. This allowed Musa to plunder around Termez in 689-704. His disobedience was not to the liking of the Khorasan deputies. So in 704 they succeeded in defeating the rebel Musa with the help of Tarhun [Бартольд В.В. К истории арабских завоеваний в Средней Азии / Соч. – М.: Наука, 1964. – Т. II (2). – С. 242.]. In this way, the Arabs got rid of the rebel Musa and got a chance for the next march, while Tarhun's goal was to use the inter-Arab conflict to keep them out of Sughd.

In 86 (705), al-Valid I ibn Abdulmalik (86-705–96-714 \ 715) appointed Qutayba ibn Muslim al-Bahili as the viceroy of Khorasan [История ат-Табари. – С.96; Наршахий. Бухоро тарихи. – Б. 120.] and turned the looting marches on Movarounnahr into conquest campaigns. [Кадырова Т. Из истории крестьянских движений. – С. 33; Вамбери Х. Бухоро ёхуд Мовароуннахр тарихи. – Б. 11]. In particular, Qutayba's period of nobility is distinguished by this aspect.

With the appointment of Qutayba as the viceroy of Khurasan, the first phase of the conquest of Movarounnahr by the Arab Caliphate (until 705) came to an end. Historians mark the beginning of Qutayba's nobility as the beginning of the second phase (705-715) of the conquest of Movarounnahr by the Arab Caliphate. As we have seen above, the political situation in Movarounnahr did not allow the forces to concentrate and resist. There are a number of reasons for this:

-Even the Turkish khanate, which gained political power in Movarounnahr after the Hephthalites, had no real power, and the basis of the existing power was connected with tribal tradition.

- In the 80s of the VI century, the Turkish khanate was divided into two parts, but loyalty to the union was a concept ingrained in the blood of the Turks. Probably for this reason, neither of the above khanates - the Western and Eastern Turkic khanates - were in a position of silent observation in the fight against the Arabs. Inadequate assistance was the direct result of clashes with eastern enemies, particularly China.

- Rulers in Mawarounnahr, such as the Khuttal ruler al-Sabl-Ishbara, were unable to pursue long-term policies. They succumbed to their desires and conspired with the enemy against their own blood. As a result, when they realized their mistake, the situation got out of hand.

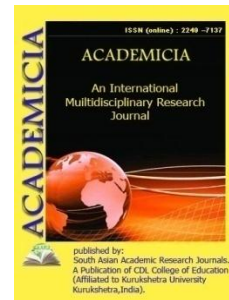
- "The armies of the Arab Caliphate conquered many countries, such as Egypt, Syria, Palestine, Iraq, Iran, and had military tactics and innumerable looters in their military campaigns up to Movarounnahr." It was a financial and cultural support for them.

All of the above reasons paved the way for the rapid conquest of Movarounnahr by the Arabs in 705-715. This is not to say that the local people gave up their freedom easily. They resisted the caliphate for a long time and continued their religion and beliefs, albeit secretly. Now the Arabs were facing the third great period (715-751) for the complete conquest of Movarounnahr.

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## THE ROLE AND IMPORTANCE OF SOUND DEVICES IN THEATER AND CINEMA

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### ABSTRACT

*This article analyzes the role and importance of microphones in sound equipment in theaters and cinema, the current need for modern types of remote controls and recommendations in this regard. Also in the article you will get acquainted with the author's views on modern types of sound microphones today, opening their place to young specialists in the field of knowledge about the rich history of the emergence and improvement of microphones.*

**KEYWORDS:** Theater, Cinema, Sound, Culture, Microphone, Future, National, Traditional, Source, Knowledge, Method, Studio, Cinema, Device, Multimedia.

### INTRODUCTION

Contemporary technologies play a significant role in the art and culture of our country. In recent years, our country has gone through a period of major reforms in all areas. In particular, the reforms will improve the standard of living of our people, study our rich national values, customs and traditions, conduct scientific and practical research, preserve our tangible and intangible cultural heritage, pass it on to the next generation and, of course, will promote it among the peoples of the world. a number of works are in progress. In order to develop the sphere of culture and art at the level of state policy, the President adopted important decrees and resolutions, and the Government sends the necessary documents.

Decree of the President of the Republic of Uzbekistan No. PF-6000 of May 26, 2020 "On measures to increase the role and influence of culture and art in society" and Resolution No. PD-4730 "On measures to improve the activities of the Ministry of Culture of the Republic of Uzbekistan" The adoption will serve as a programmatic application for the field of culture and art.



These important documents were greeted with great impressions by the staff of the regional department of culture, as well as representatives of all spheres of culture and art in the region, as well as creative people. The tasks set out in these documents cover all areas of culture and the arts.

Deeply understanding the meaning of the words of President Sh.M.Mirziyoev, “We must never forget one truth, if culture and art do not develop in our country, society will not develop”, the involvement of the population in cultural institutions, especially our youth, is the most important and one of the functions today.

### **The Main Findings and Results**

We will talk about the importance of microphones now, one of the modern devices in cinema and theater, an area that serves the prosperity of our art. The level of the electrical signal generated by the microphone and microphones, which passes through the amplifier and mixer controllers. The level is usually expressed in decibels and the standard is compared to the “zero” level. The term “level adjustment” means to check the compatibility of the controllers in order to provide the required level of access to the radio transmitter or recording equipment. Microphones are a device used in a recording studio to record all sounds in an acoustic room. The analog sound in the studio is recorded on the hard disk of the computer. In this case, analog audio is converted to a digital signal. This process is carried out using sound cards. As we know, the incoming analog sound is converted into electrical current through the microphone, which plays an important role through the maximum device (“audio interface”) when the signal enters the sound card.

At the same time, let’s think about the fact that digitally programmed consoles on the basis of modern technologies are an integral part of music computer programs. Each computer music program has its own separate mixer console, we call these mixer consoles virtual mixers. This is an opinion. The virtual mixer console works in the same way as analog mixing consoles. It also has access to the Gain, Fader, Insert, AUX, Master, Monitor and headset parts. Sound enters the program through the sound card. We can receive this signal in a virtual mixer and process it.

The experience of most sound directors using modern digital technologies shows that the insert channel of a virtual mixer mainly processes the dynamic range of sound. This is done by means of devices that process sound into the insert channel: Compressor, Limiter, Gater, Desser, Expander, Maximizer. The sound is then processed by an acoustic frequency description using an equalizer. It then uses a variety of decorative programs (“rever”, “flanger”, “chorus”, “delay”, etc.) to the AUX channel for artistic processing of the sound. That is, artistic processing is added to the processed sound and transmitted to the master channel.

Music recording programs also have AUX channels. Analog mixers are distinguished by the large number of AUX channels in different digital mixers and the lack of access to an external device. The organization and use of AUX channels in some applications provides new innovative opportunities in the field.

Such modern technologies can be seen in theatrical performances. The voice director writes about the play in his program booklet: “Our research on shape, plasticity, color, images was inspired by the work of Alexander Nikolaev (Master Mumin), who combined beauty, mystery, freedom, depth, simplicity and skill.”

In the last decade of the performing arts, the show has been led by finding solutions in a combination of music, scenography and plasticity. The emphasis on plastic expression has given rise to performances in plastic form. At the same time, plastic expressions began to take shape from the essence of the poems. The theater and the audience began to speak plastic on stage. The play “Boz clown” directed by Olimjon Salimov at the Republican Theater of Young Spectators is a vivid example of this. Today’s directorial practice is based on “plastic solution”, “plastic image”, “plastic image”, “plastic style”, “plastic imagination”, “plastic space”, “light plastic”, “plasticity of clothes”, “plastic account” ... a number of concepts. If we look at the theatrical practice of our country, then the process of development of professional pantomime is a bit complicated. This is due to the lack of coaches who train mime-actors. However, for pantomime directors, “many people” need to be involved in the work process. A director of a plastic theater has a greater pedagogical potential and pedagogical activity than a director of a drama theater, striving to develop not only his acting abilities, but also his purely plastic skills in the education of pantomime actors. At the same time, the director uses plastic media in the play and also authors its text. Such a dramatic direction can be called “plastic drama” or “dramatic pantomime”.

In general, the direction of modern Uzbek theaters is the search for colorful, new means of artistic expression. Stage effects that amaze the audience and the use of new means of performance are becoming more widespread. Today, the practical experience and direction of the Uzbek Theater is mainly characterized by the following factors:

- Addition of folk theater traditions, clown and hobby traditions to the environment of Uzbek theaters of European type;
- Oriental classical literature, the understanding of Sufi philosophical creation through traditional methods;
- Following the theatrical traditions that emerged in the 30s and 50s of the last century;
- Mastering the complex stage language and tools of modern western theater.

Relying on traditions has played an important role in understanding the changes that have taken place in Uzbek theatrical art over the past two centuries. It is known that the new artistic trend that emerged in the early twentieth century - modernism - denies tradition. This mood continued until another ring in art history in the 1970s - postmodernism - emerged and traditions were preserved. Art critics have viewed postmodernism as the most fundamental aspect of contemporary art, related to spirituality, reflecting truth. They had a deep understanding of what the purpose and function of art was the concepts of tradition and the attitudes towards it.

One of the most pressing problems of information and television technologies today is the functioning of high-quality digital high-definition television. Accordingly, HD needs high quality documentaries. Their voices should be of the same quality. However, to date, there is no clear recommendation to record and set digital documentaries in Uzbek. The creation of a work is proof of the relevance of the work. The purpose of this dissertation is to vote for a documentary film in Uzbek. It is necessary to indicate that the documentary film in the Uzbek language was selected for the goal. In this case, you will need to complete the following tasks:

- create a documentary film in Uzbek and vote for it;

- cite the basic concepts used in voting for this film;
- demonstrate the principle of digital voting;

The process of direct recording of actors' voices is carried out using modern recording devices. Each actor is recorded separately from the other actors, for 3-5 hours during each shift, depending on the workload. At the end of the work, the actor's work should come out equivalent to the original. The voting process takes an average of a week or two, but in most dubbing processes, customers cut studio hours to reduce the voting process to one day in order to save money. This is often the case with television. But sometimes it also happens in movie theaters. The technical side of the issue is the sound director's job and re-recording the sound. Alternative sounds are recorded ahead to match the movie. Later, the recording and editing of the actors in the film is important is the process of creating the final version of a film, television or radio phonogram, which is the result of combining (rewriting) all the original elements that make up a sound line on one medium - magnetic or photographic medium.

Nowadays, a new direction in our art through sound recording technologies is widely used in phonograms. Phonogram elements are divided into three main types: musical interactions speech Any of these elements can be phonetic, i.e. derived from the phonetic library available in each studio, or original, i.e. written specifically for this film or show.

There are three main technologies for making sound films in cinema: Under the phonogram; Synchronous; Written with the next vote. The first technology involves preparing the phonogram before shooting. During filming, the phonogram is played through loudspeakers and the actors speak according to the moving sound. Then the soundtrack and image are combined. Conversational voting, during synchronized shooting, sound is recorded directly with the image, but in reality, it is rarely possible to obtain 20 usable phonograms due to the large amount of noise in nature, poor pronunciation of the actors or poor acoustics. In the next voting mode, the phonogram is recorded after the image is taken in a special studio. In real practice, most of the appearances are based on technologies that combine two or even three methods. A synchronous phonogram recorded during the filming process is a sketch, and is used by the actors to know the ups and downs of the text during the next voting process by recording natural noises and listening to the sketch on headphones. Therefore, if the synchronous sound recording does not satisfy the director or sound director, the voting for the film will take place in a ton-studio.

The tone-studio is a special sound-insulated room, the walls of which are made of soundproof glass, through which the film projection of the stage positive attached to the ring is carried out. Players look at the screen, speak into the microphone, and try to synchronize with on-screen articulation. Attaching the tape to the ring allows an unlimited number of takes until the soundtrack becomes fully compatible with the image. Often the synchronous phonogram is recorded in the studio, and sometimes the scene is mixed with a pre-recorded phonogram. Comments behind the scenes and Sukhandon's notes are made after the montage.

Recording the final step in the production of a film phonogram is the process of re-recording, that is, the transfer of different elements from several films to a single film by sound decoration. Often dozens of initial recordings are used when creating a soundtrack of a film, and they are brought to a single view by the sound director using a mixer remote. All phonograms are synchronized with the mounted positive, the nature and quality of the sound is checked, sound and musical accents are set, and then the sound is recorded on film.

It establishes the relationship of speech, music and interactions that is consistent with the artistic content and ensures the intelligibility of speech as well as the quality of hearing. The dubbing process, which requires the creation of a stereo or multi-channel soundtrack, is especially difficult. This rewriting is done by a large team of technical and creative professionals. The magnetic phonogram formed after re-recording is the main source material and is saved together with the negative of the image. When creating a film with an optical phonogram, a copy of the magnetic phonogram, obtained as a result of re-recording, is converted into an optical phonogram of the film, which is necessary to obtain combined copies of the film. The magnetic phonogram formed after re-recording is the main source material and is saved together with the negative of the image. When creating a film with an optical phonogram, a copy of the magnetic phonogram, obtained as a result of re-recording, is converted into an optical phonogram of the film, which is necessary to obtain combined copies of the film.

Currently, optical phonograms are not used in filmmaking. When both films (working copy of the image and general soundtrack) are ready, the film is submitted to the selection committee in the form of two films. In modern cinematography, based on digital technologies, most of the stages of creating a soundtrack mentioned above are not used, since the editing and processing of the image is performed using a computer. However, the basic principles of voting remained the same as in classical tape technologies.

In the process of voting for television programs and television films, voting technology goes through the same basic stages as in cinema, but usually from a technological point of view, this work is performed by simpler methods, because creating a magnetic soundtrack is much easier than creating an optical soundtrack.

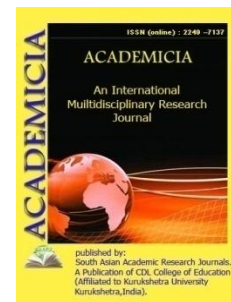
## CONCLUSION

In short, the role of sound devices in theater and cinema is very important. The comments noted that without the modernization of individual recording devices, there is no development in the theater. The significant of modern digital voice recorders is determined by how events actually happen and people's voices are displayed as desired. We realized that recreating real events is impossible without digital audio technology. If we draw the necessary conclusions from the above comments, there is no doubt that in the future our theater and cinema will occupy high positions in the world arena.

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## GIANT OF NON-FERROUS METALLURGY OF UZBEKISTAN AT THE THRESHOLD OF INDUSTRIAL PROCESSING OF RARE AND RARE METALS AND PRODUCTION OF COMPOSITE NANO MATERIALS

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### ABSTRACT

*The article describes the development programs of JSC "Almalyk MMC", provides information about the mineral deposits, types of products and the prospects for the development of the enterprise's industry. The work performed on the development of the mining and processing industry in Uzbekistan is described on the example of JSC "Almalyk MMC" and the issues of industrial processing of noble and rare metals, as well as the production of composite nano materials at the scientific and technological center of rare metals and hard alloys of JSC "Almalyk MMC" are considered.*

**KEYWORDS:** JSC Almalyk MMC, Mining And Processing Industry, Deposit, Geology, Software Package, JORC Code, Quarry, Copper Smelter, Cathode Copper, Lead-Zinc, Gold, Tungsten, Innovative Technology, Palladium, Platinum, Platinoids, Catalyst, Industrial Waste, Tungsten Nano-Powder, Ecology.





## INTRODUCTION

The sunrise on the horizons of open-pit mines at Almalyk Mining and Metallurgical Plant JSC really precedes the implementation of projects for the development of new innovative projects and new peaks in the economic development of the mining and metallurgical industry in Uzbekistan as a whole.

JSC "Almalyk MMC" is a unique mining complex, a giant of nonferrous metallurgy and one of the largest enterprises specializing in the extraction and processing of rocks not only in the republic, but throughout the entire Central Asian region. And it is one of the leading enterprises of the mining and metallurgical industry of the Republic and one of the largest mining and metallurgical enterprises in the CIS countries. Almalyk MMC focuses its foreign economic activity on establishing the status of an enterprise in the world market as a manufacturer of quality products and a reliable business partner. More than 36 thousand people work in 45 structural divisions located in the Tashkent, Namangan, Jizzakh and Surkhandarya regions of Uzbekistan. The plant exports more than 17 types of products to 16 countries of the world.

## Main part

In order to improve the quality and efficiency of exploration and production works, the modern international quality control methodology (QA / QC) is being introduced at the facilities of the plant. According to the definition of the International Organization for Standardization, ISO 9000 is a set of activities, the purpose of which is to visually demonstrate compliance with quality requirements. The QA / QC methodology is transparent and independent, which allows for correct assessment and guarantees high product quality.

The plant is creating and updating an electronic database that meets all international standards. The DataShed software package allows you to conduct geological documentation in electronic form directly in the field, using special electronic tablets. All data are automatically fed into a centralized database and are ready for operational use by resource geologists.

Evaluation of mineral resources in accordance with the JORC Code will be carried out at all the fields of the combine, geological and survey personnel.

To prepare samples in Almalyk, modular sample preparation complexes by ALS and Rocklab have been installed and are constantly operating. All works are supervised by geologists of JSC "Almalyk MMC" and foreign specialists from SRK Consulting and meet high international standards.

Work continues on the revaluation of reserves for precious metals and on the assessment of verification, geotechnical and hydrogeological wells for the optimal choice of the angles of the sides of the Kalmakyr and Yoshlik-I quarries for the next 30 years.

In addition to copper, in terms of total reserves of gold, Uzbekistan is in fourth place in the world, in terms of its production - in ninth, one of the largest enterprises is JSC "Almalyk MMC".

After the implementation of the project to increase ore production at the Kyzyl-Alma deposit and the modernization of the gold processing plant, the productivity will increase to 1200 thousand tons per year and 200 thousand tons per year for flux ore. In the process of modernization, the process of gravity concentration will be restored in the Mill's technological process, on modern Falcon-SB gravity concentrators, which will increase the recovery of valuable minerals from 3-5%.

FALCON SB is used for the recovery of precious metals in free metal form, and the content of which is usually very low.



Fig. 1. Mining and stripping works at the open pit of the Almalyk MMC.

According to the Resolution of the President of the Republic of Uzbekistan dated January 3, 2017 No. PP-2713, the project "Expansion of production capacities for the extraction and processing of raw materials (Kalmakyr, Sary-Cheku, Road transport management, Copper processing plant)" provides for additional commissioning and replacement of the physically worn out and obsolete main technological equipment [1]. This will make it possible to increase the volume of mining and processing of ore with an increase in the output of marketable products, as well as to increase the inflow of foreign exchange funds of the enterprise due to the

export of additionally manufactured products and the payback of the envisaged investments will be no more than 6 years.

In accordance with the Resolution of the President of the Republic of Uzbekistan dated March 1, 2017 "On measures to expand the production capacity of JSC Almalyk MMC based on the Dalneye deposit", the plant is implementing an investment project "Development of the Dalneye deposit" [1].

According to the protocol of the State Commission on Mineral Reserves under the Cabinet of Ministers of the Republic of Uzbekistan, the field was renamed Yoshlik-I.

In 2018, a new concept for the development of the plant was developed, where the task was set to increase the production of ore from the Yoshlik-I deposit to 60 million tons per year. In general, the plant is 100 million tons per year by 2030.

The large investment project "Development of the Yoshlik-I" deposit provides for the construction of a new complex consisting of a smelting unit with a capacity of 120 thousand tons per year for blister copper, facilities for cleaning, cooling off exhaust gases and utilizing aspiration gases. With the further development of the new complex, the specialists of the plant face the following main tasks: development of the technology for converting rich mattes in the Vanyukov furnace (PV); slow cooling of waste slag PV with further production of concentrate from them and involvement in melting; improvement of individual units and parts in order to increase the reliability and durability of the units. The transfer of the plant technology to the process in the Vanyukov furnace will radically solve the problem of eliminating the emission of sulfur-containing gases, ensure the economical processing of poorer raw materials, reduce the cost of production and improve the environmental situation in the region [2].

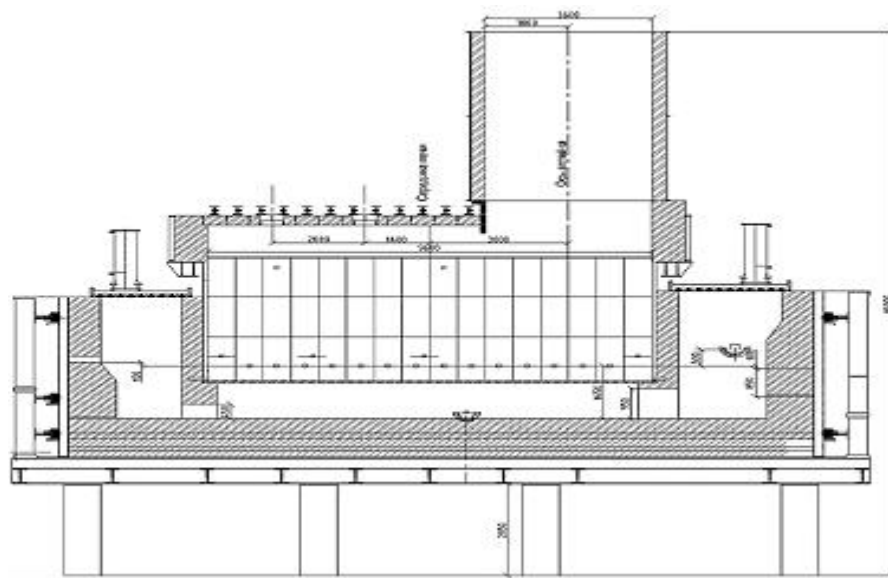


Figure: 2. Scheme of the Vanyukov furnace.

The development of the Yoshlik-1 deposit is carried out with the participation of foreign capital; for the processing of ore, it is proposed to build a new concentration plant, Copper processing plant-3. At the same time, the provision of the factory with ore raw materials is designed for 200

years. The Yoshlik-I field is unique in terms of explored reserves, production costs, and the degree of diversion of minerals and has no similar analogues in the CIS countries.

Lead-zinc deposits are mainly concentrated in the Uchkulach deposits in the Jizzakh region and Khandiza in the Surkhandarya region. At the Khandiza deposit, along with lead and zinc, there are copper, silver, cadmium, selenium, gold and indium [3].

According to the decree of the President of the Republic of Uzbekistan dated September 30, 2018, No. PP-3954 "On measures to reconstruct and stabilize the production facilities of Almalyk Mining and Metallurgical Combine" JSC and the program of priority measures for the reconstruction and stabilization of the main production facilities, measures were approved. On the basis of which, the "Reconstruction of the MOF" project is being developed for the development and implementation of the technological scheme of the concentrating plant, which allows to increase the qualitative and quantitative indicators of ore processing at the enterprise and replace the old physically worn out and obsolete equipment of the crushing, grinding, beneficiation, thickening and filtration departments. This will reduce operating costs, increase the utilization of equipment and improve the technological performance of the plant, including the recovery of copper from ore will be at least 85%, gold 66% against the existing 78% and 59%, respectively.



Fig. 3. Installation diagram of a new cone crusher at the copper-processing plant of Almalyk MMC.

The concept of reconstruction of Copper processing plant-1 was adopted, according to which the total productivity of the enterprise will be 35 million tons / year, while at DC-1, UDI and DOK-2 ore will be processed - 20 million tons / year, 6 million tons / year and 9 million tons / year, respectively. Achieving the required technological parameters in the ore preparation cycle (productivity, granulometric composition of the crushed product, density, etc.) is an important condition for the subsequent effective enrichment of ore. All the measures recommended to improve the performance of the crushing and grinding departments are interconnected and carried out in a complex.



The government set the task for the team of Almalyk MMC to increase the output of cathode copper at the copper smelter to 400 thousand tons per year by 2028.

At the zinc plant of the Almalyk MMC, large-scale work has begun on the reconstruction and stabilization of production capacities, which provide for an increase in the capacity of the zinc plant to 120 thousand tons per year. In this regard, it is planned to build a new sulfuric acid shop, reconstruct the 2nd and 3rd series of the electrolysis hall, reconstruct the power shop, the leaching shop, the Waelz shop, the cadmium and roasting shops.

The central place in the Strategy of Action of the Republic of Uzbekistan for 2017-2021, developed under the leadership of the President of Uzbekistan Sh.M. Mirziyoyev, is occupied by the issue of development and liberalization of the economy, which provides for the provision of modern-minded, technically trained personnel-specialists.

As part of the implementation of the instructions of the Address of the President of the Republic of Uzbekistan to the Oliy Majlis of the Republic of Uzbekistan dated December 28, 2019, Almalyk MMC is carrying out targeted work to form and implement an innovative model for the development of production based on the latest achievements of science and technology.

The innovative model of the development of the plant provides for the establishment of close interaction between the services of the enterprise and scientific institutions, the planning of scientific research in accordance with the priorities of the scientific and technical needs of the plant, the active introduction of scientific results into industrial practice, as well as targeted training of specialists capable of ensuring the implementation of scientific achievements.

For many years, the teams of Almalyk MMC and the Academy of Sciences of the Republic of Uzbekistan have been linked by close scientific and partnership relations, which are based on cooperation of specialists and scientists in the development and implementation of advanced technologies, mutual support of each other in many issues.

To improve the efficiency of the plant's work, leading foreign and national scientists and experts were involved, who, together with the plant's specialists, developed a program to modernize the production facilities of the main structural divisions of the plant.

Almalyk MMC has a high scientific potential, strong ties have been established with the largest industry design institutes, research and higher educational institutions, including the National Research Technological University "MISIS", a branch of which began operating in the city of Almalyk in 2018 and the Almalyk branch of the Tashkent State Technical University.

## **RESULTS AND DISCUSSIONS**

In cooperation with them, modern technologies are improved and implemented, labor productivity is increased, technical re-equipment is underway, state programs for the modernization and localization of production and investment projects are being successfully implemented, as well as the training of specialists in the mining and metallurgical industry in close coordination of educational processes with production processes.

In conditions of tough competition on the world stage, our most important task is to modernize and renew the plant based on the most advanced achievements of science and high technologies, and to find internal reserves. Within the framework of international cooperation between Uzbekistan and the Republic of Korea, on the basis of a research and production association for

the production of rare metals and hard alloys, the Uzbek-Korean scientific and technological center for rare metals and hard alloys was opened. Among his tasks, including research activities on the development of new products, materials, development of technology for obtaining high-purity metals - molybdenum, rhenium, tungsten and others.

In addition to the development of new raw material reserves, we are solving the problems of processing technogenic deposits. This is what the international conference held in April 2019 was dedicated to, which was attended by scientists and specialists, research institutes, large companies from 10 countries. Today, the conclusions and suggestions made at the conference are the basis for design solutions for processing off-balance ores of the plant.

At present, at the Almalyk MMC, of the variety of rare and noble metals present in the ores of the Almalyk ore field, molybdenum, rhenium, selenium, tellurium, indium, osmium, tungsten, palladium and platinum are of industrial importance. In addition to tungsten extracted from our own ores, these rare metals are extracted along the way from the products of metallurgical production, in which they are concentrated.

Copper and zinc polymetallic ores processed by JSC "Almalyk MMC" contain precious and rare metals such as gold, silver, indium, selenium, tellurium, rhenium, platinum, palladium, molybdenum, cobalt, lithium, osmium, bismuth and others ... Gold, silver, pure molybdenum, technical selenium and tellurium, rhenium in the form of ammonium perrhenate, and palladium in powder are extracted from them in the Almalyk MMC JSC along the way. In 2019, it is planned to conduct research on the associated production of noble metals from the platinoid group: osmium from the products of the rare metals production workshop of the copper smelter and platinum from the spent electrolyte of the gold and silver refining workshop [4,5].

In 2019, the deficit in the palladium market will remain, the metal price will grow by 14% to \$ 1120 per ounce (forecast "Investments in precious metals 2018/19", Metals Focus and Institute of Geotechnology). This trend is explained by the record demand for metal in industry, primarily in the automotive industry [6]. A known method of obtaining refined palladium from platinum-palladium chloride solutions includes the precipitation of the ammonium hexachloroplatinate salt at room temperature, the separation of the salt by filtration and a set of known operations for refining palladium [7].

In the Republic of Uzbekistan, palladium is received by the state enterprise "NMMC" in the form of refined powder. Since 1991, JSC "Almalyk MMC" also began to partially extract palladium with a mass fraction of 70-98% in powder. The previously proposed technological scheme consisted of 52 operations with a process duration of 54-60 hours. A positive economic effect was achieved for solutions with a palladium content of more than 100 mg / l. As a result of additional research in January - February 2019, a completely new innovative technological scheme was developed, consisting of 18 operations and a cycle duration of 24-26 hours. In this case, cost-effective recovery is obtained from solutions with a palladium content of 50 mg / L with a palladium recovery of more than 80%. [8].

## CONCLUSION

Investigations on aquaculture leaching of palladium, selective precipitation of impurities and development of a method for purifying palladium from impurities were successful and refined palladium in powder with a metal content of 99.9% was obtained [9].



In subsequent years, an increase in the extraction of rare and noble metals is expected with the improvement of production:

- indium from waste and semi-finished products of zinc production;
- selenium and tellurium from the anode slimes of the copper electrolysis shop and washing acid of the sulfuric acid shop of the copper smelter;
- platinum and palladium from anode slimes of the copper electrolysis shop;
- vanadium from the spent vanadium catalysts of the sulfuric acid shop of the copper smelter and the zinc plant;
- rhenium from molybdenum concentrates of the MOF and washing acid of the sulfuric acid shop of the copper smelter;
- osmium from washing acids of the rare metals production workshop of the copper smelter.

The increase in output is expected by 2023 in the amount of more than \$ 37 million.

A benchmark for the production of high-tech, demanded metal grades.

Assessment of reserves of AMMK for rare metals shows that the development of the planned activities will increase the output of rare metal products by 1.5-2 times and more in the coming years.

In the Uzbek-Korean scientific and technical center of the scientific and production association JSC "Almalyk MMC" in the city of Chirchik, mathematical modeling on a unique hot vacuum press and plasma sintering equipment obtained a sample of a new product, as tungsten nano-powder by the process of separation, baking and heat treatment of composite materials, nano-materials and nano-particles from man-made wastes of tungsten production. A number of import-substituting products have been experimentally obtained from tungsten nano-powder on the above equipment, which are the only ones in Central Asia - tungsten targets for deposition of thin films in electronics, copper-tungsten braking targets for spectrometers, strong and more wear-resistant teeth for drill bits in the mining industry, tungsten copper contacts for resistance welding of car bodies. And also from the waste of the sludge field of man-made waste on these equipment of the center, the extraction and cleaning of refined copper ingots was carried out. If these obtained products successfully pass industry experiments, they will be allowed for production and improve the ecological state of the region [10].



Figure: 4. Products of the research and production association JSC "Almalyk MMC" in Chirchik.

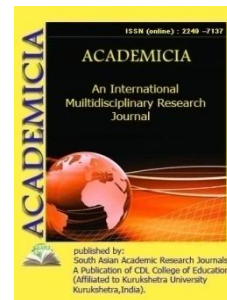
And from rare metals and hard alloys, new types of products are being mastered, which are in demand not only in the Republic as well as abroad. Hard alloys of molybdenum and tungsten are used to manufacture working parts of cutting tools, highly wear-resistant and hard rolled products, roller cone bits with hard alloy inserts.

And in 2020, we began production of dies for pulling pipes for our own copper pipe plant, turning tools for large and small machines, lances for cleaning equipment of a copper smelter, blades for cutting metal wire for the division of metal structures, high flame crucibles, drill bits and much more.

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## MARKETING METRICS AN ESTIMATION OF COMPETITIVENESS OF THE MARKET OF RESTAURANT SERVICES OF UZBEKISTAN

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### ABSTRACT

*This article provides a comprehensive assessment of the competitiveness of enterprises based on market behavior, applied strategies and market opportunities and the application of competitiveness assessment of the restaurant services market.*

**KEYWORDS:** *The Market Of Restaurant Services Of Uzbekistan, Competitiveness Of Restaurant Services, Ready Meals Production, After Selling Service, "Road Map".*

### INTRODUCTION

#### The degree to which the problem has been studied

Competitiveness, competitive advantage, and cluster theory in economics are extensively covered in the scientific work of M.E. Porter (Porter, M.E) [1]. Issues of strategic management of restaurants V. Anthony [2], research in the field of catering in the field of services in the scientific work of Russian scientists M.V. Borodina [3], O.V. Pashkina [4], catering and restaurant services and marketing issues are reflected in the scientific works of foreign scholars K. Weinreich [5], O.Amofax (Ofosu Amofah) [6], Arafat Rahman (Arafat Rahman) [7]. Uzbek scientists BA Abdulkarimov [8], TS Sharipov [9], II Iyatov [10] reflected the issues of efficiency and management of public catering enterprises. The author's scientific and methodological work also reflects the competitiveness of the enterprise and its evaluation [11], the competitiveness of the restaurant services market, theoretical issues of marketing in restaurants [12], methods of statistical analysis in marketing research [13].

At the current stage of economic development, new global economies are being formed at the local level, with the globalization of the world economy. the increasing role of the subjects is leading to a more intense nature of the competitive struggle. The development of science and

technology with rapid images is also being tested and implemented as innovations directly in the activities of enterprises. Therefore, the definition of competitiveness through various economic and financial and production indicators does not allow for an objective and reliable assessment of this indicator.

This, in turn, requires the application of new approaches to the assessment of competitiveness. Therefore, it is advisable for enterprises to assess their competitiveness not on the basis of internal indicators and static indicators, but on the basis of activity, position, strategy and tactics in the market of goods (products, works, services), as well as the planned "road map".

### **RESEARCH PROBLEM**

There is no single methodology for assessing competitiveness in the scientific and economic literature, nor is there a generally accepted approach. There are also many indicators formed on the basis of different criteria and factors, which allows this process to be evaluated from different perspectives. In our opinion, in assessing competitiveness, it is advisable to use a system of indicators that express competitiveness, rather than indicators that shape it. In the process of using these indicators, we need to be able to clearly state how important the identified competitiveness indicator is for the enterprise and how important it is to achieve the final result in the future. To do this, it is advisable to group each indicator by a specific character and evaluate it in a separate group section.

In the scientific literature, the most important indicators of competitiveness are based on efficiency indicators, financial condition of economic activity, marketing activities and technical and economic parameters of the product.

Performance indicators allow to express competitiveness in terms of production costs, level of use of fixed assets, profitability of production, labor productivity and so on.

Financial position indicators allow to express competitiveness through indicators such as working capital, availability of financial resources and the degree of dependence on them, such as solvency.

Marketing activities involve the assessment of competitiveness in the enterprise on the basis of the organization of sales, the efficiency of sales channels and the efficiency of promotion.

In assessing the competitiveness of the product on the basis of technical and economic indicators, the characteristics of the product that are beneficial to consumers are taken into account.

In our opinion, in assessing the competitiveness of the enterprise in the context of market relations, it is expedient to evaluate it on the basis of its specific behavior in the commodity market, the results achieved and the available opportunities. Because any enterprise that operates effectively directs all available resources to stimulate economic activity and gain additional profits, and the success of the enterprise in this direction is high.

### **RESEARCH METHODOLOGY**

In our opinion, it is advisable to determine the impact of the above indicators in assessing the competitiveness of the restaurant services market, using the method of multivariate correlation-regression analysis.

It is therefore an indicator of the competitiveness of the restaurant services market ( $y$ ) a group of factors influencing it ( $x_1, x_2, x_3, \dots, x_n$ ) are analyzed depending on In this case, the multivariate regression equation has the following form:

$$\bar{y}(x_1, x_2, x_3, \dots, x_n) = b + a_1x_1 + a_2x_2 + a_3x_3, \dots, a_nx_n$$

Here  $b, a_1, a_2, \dots, a_n$ , – are the parameters of the model, which are determined by the method of least squares on the minimum condition of the sum of the standard deviations:

$$Q = \sum_{i=1}^n (y_i - \bar{y}_i)^2 \rightarrow \min$$

One way to effectively assess the adequacy of a regression model is to measure the quality of the regression equation (or the conformity of the regression model to the observed value) and the determination coefficient that reveals the prognostic properties of the regression model being analyzed. This is determined by the following formula:

$$R^2 = \frac{Q_R}{Q} = 1 - \frac{Q_e}{Q}$$

$R^2$  the magnitude indicates which percentage of the variation of the arbitrary variables is based on the variation of the variable X. That is  $0 \leq Q_R \leq Q$ , in that case  $0 \leq R^2 \leq 1$

The closer these magnitudes are together, the more the regression line is based on empirical data, and the more the observations serve to cover the regression line. As  $R^2=1$  then the empirical points are located on the regression line and there is a linear functional relationship between Y and X.  $R^2=0$  the variation of the variables is explained by unknown factors that are not fully considered, while the regression line is parallel to the abscissa axis. It should be noted that  $R^2$  is only valid when there is a free limit in the regression equation.

In the study, a system of indicators for assessing competitiveness was developed based on the specific behavior of the commodity market, the results achieved and the available opportunities, and applied in the assessment of the competitiveness of the restaurant services market (Table 1).

#### The system of indicators for assessing the competitiveness of the restaurant services market

Indicator	Calculation formula	Symbols	Results that can be resolved with the application of the indicator
Indicators of the restaurant services market:			
1. The share of the restaurant services market in the gross regional product $D_{p.x}$ ,	$D_{r.x} = \frac{RP_{rx}}{GRP_x}$	<i>GRP<sub>x</sub> - gross regional product created in the field of services during the reporting period; RP<sub>rx</sub> is a restaurant service created during the reporting period</i>	Relevant decisions on the regulation and increase of the market share of the restaurant services market



%			will allow to ensure the proportionality of the regional market of services.
2. Profitability level of restaurant services, thousand soums, $k_{a.ж}$	$K_{r.x} = \frac{GRP_{rx}}{A_x}$	<i>GRP<sub>x</sub> - gross regional product created in the field of restaurant services during the reporting period;</i> <i>A<sub>x</sub> is the number of people engaged in restaurant services during the reporting period</i>	Assess the impact of human resources in improving the competitiveness of the restaurant services market, make decisions to further increase efficiency
3. Return on fixed assets in the market of restaurant services, (Kof), soums.	$K_{a.f} = \frac{GRP_{rx}}{C_{a.f}}$	<i>GRP<sub>x</sub> - gross regional product created in the field of services during the reporting period;</i> <i>C<sub>of</sub> is the value of fixed assets in the restaurant services market</i>	Allows you to decide on the efficient use of fixed assets in restaurants
4. Profitability of the restaurant services market, Re	$R_{r.x} = \frac{P_{rx}}{RP_x}$	P - financial result of the restaurant services market (income and expenses); RP <sub>x</sub> is a restaurant service created during the reporting period.	Allows you to make decisions on optimizing costs and increasing the efficiency of business activities in restaurants
5. Volume of restaurant services per capita, (RT), soums.	$K_{r.x} = \frac{GRP_{rx}}{A_x}$	<i>GRP<sub>x</sub> - restaurant services created during the reporting period;</i> <i>A<sub>x</sub> is the population in the area during the reporting period</i>	Ensuring the popularity of restaurant products and services will allow to meet the needs of the population more fully
A system of indicators that represent the consistency of competition in			

the market of restaurant services:			
6. Restaurant services market change picture, Uuzg	$U_{uzg} = \frac{140 - T_i}{70}$	Ti is a picture of change in the restaurant services market	Forecasting the development of the restaurant services market allows you to make decisions to determine the prospects
7. The level of concentration of the restaurant services market, (SR), mln. sum	$CR = \frac{RP_{r.x}}{C_r}$	<i>RP<sub>rx</sub> - restaurant services created during the reporting period;</i> <i>CH - number of restaurants. (taking into account the number of entities specializing in restaurant services)</i>	Allows you to assess the level of competition consistency and specialization of activities in the market of restaurant services
8. Concentration Coefficient (CR)	$G = x_1^2 + x_2^2 + x_3^2 + x_4^2 + \dots + x_n^2$	$x_i - i (i = 1, 2, \dots, n)$ enterprise market share, %.	Allows you to assess the concentration of activity and the competitive environment in the market
9. Linda coefficient (L)	$L = \frac{1}{3} \left[ \frac{3k_1}{k_2 + k_3 + k_4} + \frac{k_1 + k_2}{k_3 + k_4} + \frac{(k_1 + k_2 + k_3) \div 3}{k_4} \right] * 100\%$	For Lk = 2, k = 3, the relation Lk + 1 > Lk is checked for appropriateness	It allows to determine the level of inequality between the leading enterprises in the market of restaurant services
Indicators of market innovation and investment efficiency:			
10. Share of fixed capital investments in the restaurant services market, Din	$D_{in} = \frac{IN_{res}}{IN_j}$	IN <sub>res</sub> - volume of investments in fixed assets, thous. sum., IN - total investment in the restaurant services market	Allows you to assess the investment attractiveness of the restaurant services market
11. Innovative	$D_{in.f} = \frac{N_{in}}{N_{j.r}}$	N <sub>in</sub> - the number of restaurants that have	Allows you to assess the level

activity of the market, (Din.f),		<i>introduced technological, organizational and marketing innovations; Nj.r is the total number of restaurants</i>	of competitive advantage of the restaurant services market on the basis of innovative activity
An indicator of market independence			
12. Level of market openness, ( $K_{or}$ ),	$K_{och} = \frac{I + E}{GRP_x}$	I - import volume; E - export volume; GRP <sub>x</sub> is a gross regional product created in the services sector during the reporting period	Assessing the consistency of competition in the market of restaurant services, identifying barriers to market entry, localization, saturation of the market through neighboring regions
13. Coefficient of dependence of the market on imports, ( $I_{zav}$ ),	$I_q = \frac{V_{im}}{E_{rx}}$	V <sub>im</sub> - volume of imported products; E <sub>rx</sub> is the size of the restaurant services market	Allows you to assess the degree of dependence of the restaurant services market on foreign markets or suppliers
14. Coefficient of food self-sufficiency of the region, ( $K_s$ ),	$K_{ta'm} = \frac{O}{T_{is.n}}$	O - the amount of food produced or prepared in itself; R <sub>p</sub> is the norm of consumption or consumption of food produced or prepared in a given period	It allows forecasting the dynamics of demand for restaurant services, reducing food security and dependence on imports
Indicators of socio-economic dynamics of the market			
15. Population dynamics in the region	$D_a = \frac{A_1}{A_0}$	Z1 - population in the current year; Z0 is the population in the	It allows predicting the dynamics of

		same period last year.	demand for restaurant services
16. Dynamics of food production	$J_{03.06\kappa} = \frac{\sum O_1}{\sum O_0}$	Z1 - food production in the reporting year; Z0 - production of agricultural products for the base period.	Allows you to assess the dynamics of the expansion of the range of restaurant products and services
17. Dynamics of agricultural production	$J_{q/x} = \frac{\sum Z_1}{\sum Z_0}$	Z1 - food production in the reporting year; Z0 - production of agricultural products for the base period.	Allows you to assess the dynamics of the expansion of the range of restaurant products and services
18. Increase in monetary income of the population	$J_d = \frac{\sum D_1}{\sum D_0}$	D1 - the amount of income of the population in the reporting year; D0 is the amount of income of the population for the base period.	Allows you to estimate the amount of demand you can afford for restaurant services
19. Dynamics of hotel and other accommodation services	$J_m = \frac{\sum MX_1}{\sum MX_0}$	MX1 - the amount of hotel and other accommodation services in the reporting year; MX0 is the amount of hotel and other accommodation services for the base period.	Provides an assessment of synergistic effectiveness in the restaurant services market
20. Population migration (mechanical population growth)	$MK_a = \frac{KK}{A_{ypm}}$	KK - number of migrants; A <sub>ort</sub> is the average population	Allows you to make effective decisions regarding the organization of restaurant services

The factors influencing the data in Table 1 are systematized in the following order:

$x_1, x_2, x_3, x_4, x_5$  – An integral indicator of the performance of the restaurant services market.

$x_6, x_7, x_8, x_9, x_{10}$  – an integral indicator of indicators that represent the consistency of competition in the market of restaurant services.

$x_{11}, x_{12}, x_{13}$  – An integral indicator of market innovation and investment efficiency.

$x_{14}, x_{15}, x_{16}$ , – An integral indicator of market independence.

$x_{17}, x_{18}, x_{19}, x_{20}, x_{21}$  – An integral indicator of socio-economic indicators of the market.

For the research process, the statistics of the restaurant services market in Samarkand region for 2017-2019 were used as a basis and the following econometric models were calculated:

1. According to the indicators of the restaurant services market:

$$\bar{y}_b = 125,6 + 17x_1 - 42,3x_2 + 14x_3 - 41x_4 - 12x_5 \quad (1)$$

2. On the indicators of competitiveness in the market of restaurant services:

$$\bar{y}_{r.izch} = 15,6 + 11x_6 - 4,3x_7 + 47x_8 - 29x_9 \quad (2)$$

3. On the indicators of innovation and investment efficiency of the market:

$$\bar{y} = 161 + 42,3x_{10} + 14x_{11} \quad (3)$$

4. According to the indicator of market independence:

$$\bar{y}_{b.mus} = 125,6 + 97x_{12} - 142,3x_{13} + 17x_{14} \quad (4)$$

5. On socio-economic indicators of the market

$$\bar{y}_{i-ijt} = 156 + 12x_{15} - 44x_{16} + 57x_{17} - 32x_{18} + 12x_{19} + 17x_{19} \quad (5)$$

It should be noted that in the process of evaluating the results of regression analysis  $\bar{y}_b$  ( $r=0.19$ ),  $\bar{y}_{r.izch}$  ( $r=0.17$ ),  $\bar{y}_{b.mus}$  ( $r=0.22$ ),  $\bar{y}_{i-ijt}$  ( $r=0.11$ ) in which case it will be possible to draw scientific conclusions.

## CONCLUSIONS AND RECOMMENDATIONS

- The developed model allows to assess the impact of a group of factors on the competitiveness of the restaurant services market;
- On the basis of modeling it will be possible to assess the attractiveness and competitiveness of the market of restaurant services;
- Allows to determine scientifically based forecast indicators for the marketing strategy for the development of restaurant business in Samarkand region ("road map - food sector program");
- The high level of market concentration will allow in the future to increase competition between participants, the effective use of various marketing strategies to increase competitiveness;

- The high level of concentration in large populations allows the population to expand a wide range of restaurant services and after-sales service (processing of orders, delivery services, the establishment of services on the basis of commercial loans, etc.);

- Increasing the level of independence of the market of restaurant services will allow in the future to stimulate local producers, the development of factory-kitchens for the direct sale of finished products, mini shops for the preparation of various salads and semi-finished products (Ready meals production).

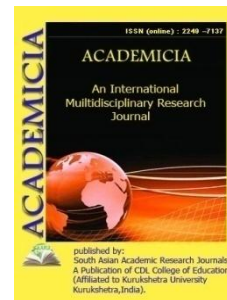
In our opinion, the implementation of scientific proposals and recommendations will help to increase the competitiveness of the restaurant business in the future, serve as a guide in the development of effective marketing strategies, the development of science-based forecasting indicators for restaurant business development.

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## REWARD SYSTEM AND EMPLOYEE MOTIVATION IN CEYLON ELECTRICITY BOARD JAFFNA

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### ABSTRACT

*In the competitive world, employees are very important factors in order to achieve the organizational goals and objectives. So that nowadays firms need employees who are committed to their firms. Intrinsic and extrinsic reward systems are used by the organization to make desirable changes in employee performance. Reward system is an important tool that management can use to channel employee motivation in desired ways. In every organization motivation is most important to achieve their goals and objectives, increase the productivity and maximize their profit margin towards the employees of the organizations are well motivated. If any organizations have a good motivation policy, the workers do their work with effectiveness and commitment. The researcher analyzed the relationship between reward system and employee motivation. This present study selected the Ceylon Electricity Board of Jaffna district. Out of 314 employees, 90 employees were selected and surveyed on a random basis. There were four hypotheses drafted and tested through correlation and regression models. Study found that there is a positive relationship between reward system and employee motivation, extrinsic rewards have better relationship with motivation of the employees than intrinsic rewards. Therefore Ceylon Electricity Board should give its consideration mostly on extrinsic rewards to achieve high performance from its employees. Otherwise it cannot reach the level of output expected in the standard. Both rewards are important, but extrinsic rewards play a major role in the process of motivation of employees.*

**KEYWORDS:** Reward System, Employee Motivation, Extrinsic and Intrinsic Rewards

## INTRODUCTION

Reward system is an important tool that management can use to channel employee motivation in desired ways. In other words, reward systems seek to attract people to join the organization to keep them coming to work, and to motivate them to perform of high levels.

The reward system consists of all organization components – including people, processes, rules and decision making activities involved in the allocate compensation and benefits to employees in exchange for their contribution to the organization.

In every organization motivation is most important to achieve its goals and objectives, increase the productivity and maximize its profit margin towards the employees of the organizations are well motivated. If any organizations have a good motivation policy, the workers do their work with effectiveness and commitment.

This research analyses “Reward system and employee motivation in Ceylon Electricity board in Jaffna”. Reward system is an important tool that management can use to channel employee motivation in desired ways. Motivation is the force that makes us do thing; this is a result of our individual needs being satisfied so that we have inspiration to complete the task. Ceylon Electricity Board is a government organization which supplies electricity as a service to the public. The mission of the Electricity Board is. “Ceylon electricity board committed to a sustainable Environment and development process” In Jaffna district this organization supplies electricity by using generators.

### Research Question

- Is there any relationship between reward system and employee motivation?
- Does the reward system have impact on employee motivation?

### Objectives of the research

This research is intended to achieve the following objectives.

- To find out, the present reward system of Ceylon electricity board (CEB), Jaffna.
- To evaluate what extent reward system has the direct impact on employee motivation in Ceylon electricity board, Jaffna.
- To suggest improvements to CEB in Jaffna.

### Significance of the research

This study will try to identify the factors that influence the employee motivation of the Ceylon Electricity Board in Jaffna and evaluate the impact of reward system on employee motivation. Firms need employees who commit to their firm’s development. The employees have to identify the firm’s values and goods and treat them like their own property, because of the intense global competition and the need for more responsiveness require employee commitment.

People in a service business firm, especially employee in an organization have the feelings of commitment to service will treat the customers in a delightful way. If the employees are treated badly or have the bad feeling about the organization then all the efforts to deliver customer their employees to obtain their efficiency and to increase their effectiveness through job satisfaction, performance, and employee commitment. Electricity Board has and significant role in an economy of a country and it is major auxiliary service to all kind of firms in a country.

So that employees in Ceylon Electricity Board should be able to manage more transactions and to produce high margin to their organization and eventually reach organization's goals as their own goals. Therefore create high level of job satisfaction, performance and employee commitment to their organization they should be motivated. Therefore understanding reward system and employee motivation of Ceylon Electricity is also important.

## **LITERATURE REVIEW**

It is discussed under the following subheadings.

### **Reward System**

An employee reward system consist of an Organization's integrated Policies Process and Practices for rewarding its employees in accordance with their Contribution skill and competence and their market worth. It is developed within the frame work of the Organization's reward philosophy, Strategies, and policies and contains management in the form of processes, Practices, Structures and procedures which will provide and maintain appropriate types and laved of pay benefits and other forms of reward. A reward system consists of financial rewards (fixed and variable pay) and employee benefits, which together comprise total remuneration. The system also incorporates non financial rewards (recognition, praise, achievement, responsibility and personal growth)

The reward system should be a function of the amount of time to plan and execute it and the money you have to spend to be effective reward system need to be given as soon as possible after the desired behaviour Or achievement. If the employees fail to earn a bonus the company will not reach its profit objectives. Thomas Wilson in his book, reward system a compensation plan within the context of a total reward system to provide a method for reinforcing the value – added contributions of each individual through the application of their talents the growth of their capabilities and the performance of their actions consistent with key success factors of the organization. Use reward system can also and to attract skilled employees to the organization add heads object Employees are motivated to appropriate behaviours by appropriate rewards.

### **Motivation**

Motivation is the force that makes us do thing this is result of our individual needs being satisfied (or met) so that we have inspiration to complete the task. These needs vary from person to person as everybody has their individual needs to motivate themselves. Depending on how motivated we are, it may further determine the effort we put into our work and therefore increase the standard of the output.'

The underlying concept of motivation is some driving force within individual by which they attempt to achieve some goal in order to fulfil some need/ expectation. When we suggest factor (or needs) that determine the motivation of employees in the work place, almost everyone would immediately think of a high salary. This answer is correct for the reason that some employees will be motivated by money, but mostly wrong for the reason that it does not satisfy other (to a lasting degree). This supports the statement and not a one fits all option.

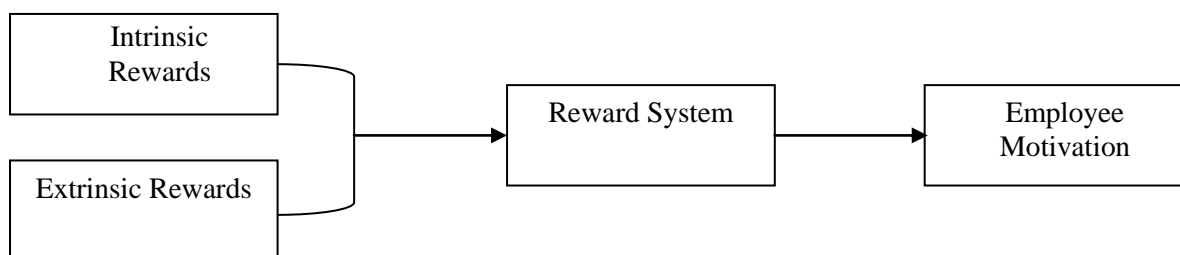
In other wards motivation represents the forces acting on or within a person to behave in a specific, goal directed manner. The specific work motives of employees affect their performance at work. One job of management is to channel employee motivation effectively towards achieving organization goals.

## Methodology

Reward system is a major determinant of employee motivation. Employee motivation level is mainly created by reward system such as wages Salary, Bonus, Commission, Status, Promotion, Opportunities to completion, Responsibility, meaningful and work kind condition. Does it really affect the employee motivation once?

These factors lead to have other methodology criteria to make this research practically reliable and approachable. We have to depend on methodology to collect data by interviews, and prepared questionnaires. The research based on those above data. It is indeed necessary to study about the inter-relationship among different kind of variables used in this research.

## Conceptual Framework



## Hypotheses

**H<sub>1</sub>**:- The higher the presence reward system the higher will be employees' motivation

**H<sub>2</sub>**:- The intrinsic reward system has an impact on employees' motivation

**H<sub>3</sub>**:- The extrinsic reward system has an impact on employees' motivation

## Operationalization

Concept	Variable		Indicator	Measure
Reward System	Extrinsic reward	1 Wages & salary	Salary scale Rs.	Questionnaire 1,11,20
		2 Bonus	Rupees.	Questionnaire 2,4
		3 Commission	Rupees.	Questionnaire 16.
		4 Status	Increase or decrease.	Questionnaire 7,3
	Intrinsic reward	5 Promotion	No. of promotion with in a period	Questionnaire 12,13
		6 Opportunities to Completion	High or low	Questionnaire 8,17
		7 Responsibility	High or low	Questionnaire 14,15,5
		8 Meaning full work	High or low	Questionnaire 10,18.
		9 Work Kind Condition	High or low	Questionnaire

				6,9,19
Employee motivation.	1	Higher performance consistency achieved.	Increase or decrease	Questionnaire 4,5,7,8,9,13,14,18
	2	Co – operation.	High or low	Questionnaire 2,10,15,17
	3	Willingness of responsibility	High or low	Questionnaire 11,20
	4	Challenging work	High or low	Questionnaire 3,16,6
	5	Growth in job.	Increase or decrease.	Questionnaire 1,12,19

### Method of data analysis

SPSS used to analysis the data to test the hypotheses. The correlation and regression analyses were used to testable hypothesis and find the reliability.

### RESULTS AND DISCUSSION

#### Correlation Analysis

The correlation analysis is used to identify the relationship between two variables (Independent and dependent variables). Here Employee Motivation is correlated with extrinsic reward and intrinsic reward of Ceylon Electricity board.

	R	R <sup>2</sup>
Extrinsic reward	0.73	0.53
Intrinsic reward	0.58	0.34
Total	0.756	0.57

When employee motivation is correlated with extrinsic reward, the correlation is 0.73, since the correlation is positive. That means when reward system increases the level of employee motivation all will increase. R square is 0.53 this means that only 53% of variance of employee motivation is accounted for by Extrinsic reward system of the organization.

When employee motivation is correlated with intrinsic reward, the correlation is 0.58. Since the correlation is positive. There is a positive relationship between two variables. That is the organization (CEB) have reasonable level of intrinsic rewards, the employee motivation will also be average high. R square is 0.34 this means that only 33% of variance of employee motivation is accounted for by intrinsic reward system of the organization.

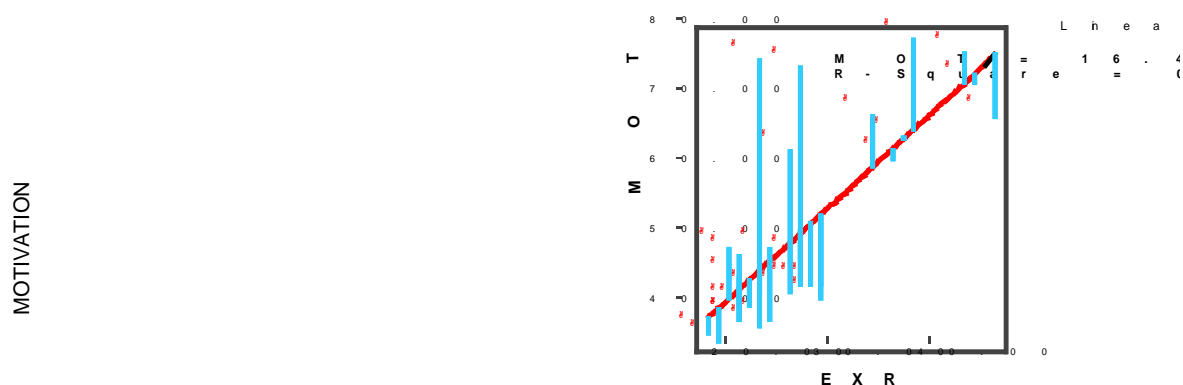
When employee motivation is correlated with Total reward system (Extrinsic reward and intrinsic reward), the correlation is 0.756. Since the correlation is higher positive. There is appositve relationship between two variables that is rewards system and employee motivation. That is the organization (CEB) have provide high level of reward system, the employee motivation will also be high. R square is 0.57 this means that only 57% of variance of employee motivation is accounted for by Total reward system of the organization.



### Scatter diagram and Regression analysis

In order to identify the relationship between two variables scatter diagram can be also used.

**The relationship between extrinsic rewards and employee motivation can be shown in the following scatter diagram**



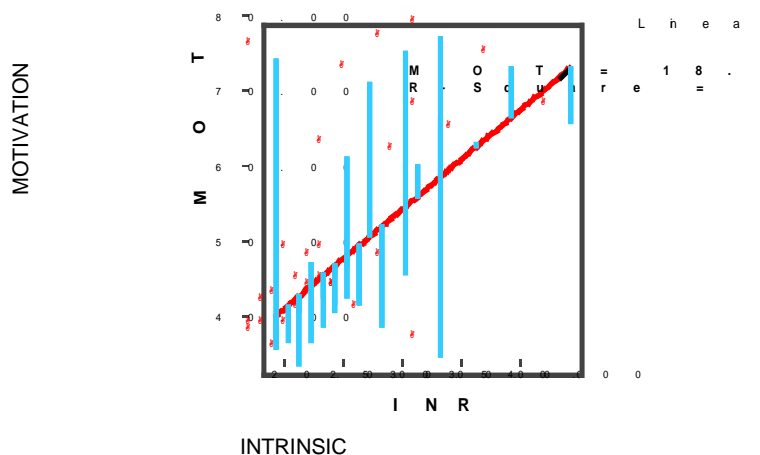
### Extrinsic rewards Vs employee motivation

EXTRINSIC

In above scatter diagram, extrinsic reward is indicated in “X” axis and employee motivation is indicated in the “Y” axis. The regression equation  $Y = 1.34x + 16.45$  exhibited the relationship between extrinsic reward and employee motivation. (Equation is shown on the scatter diagram) if the extrinsic is  $X = 0$ , the employee motivation is to be 16.45, further the extrinsic reward is increased by one of the employee motivation will be increased by 1.34, so there is a positive relationship between two variables that are extrinsic rewards and employee motivation.

The relationship between intrinsic reward and employee motivation can be shown in the following scatter diagram

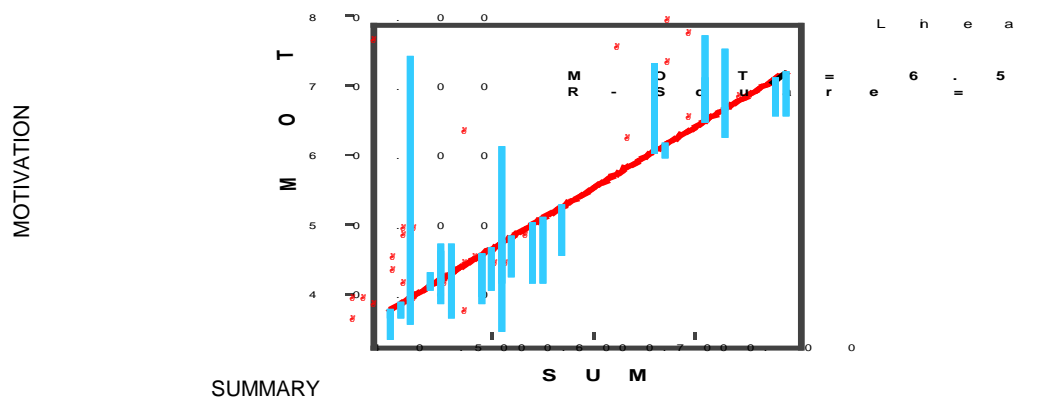
### Intrinsic rewards Vs employee motivation



In above scatter diagram, Intrinsic reward is indicated in “X” axis and employee motivation is indicated in the “Y” axis. The regression equation  $Y = 1.32x + 18.57$  exhibited the relationship between extrinsic reward and employee motivation. (Equation is shown on the scatter diagram) if the extrinsic is  $X = 0$ , the employee motivation is to be 18.57, further the intrinsic reward is increased by one of the employee motivation will be increased by 1.32, so there is a positive relationship between two variables that are intrinsic rewards and employee motivation.

The relationship between Reward system and employee motivation can be shown in the following scatter diagram

Total reward system Vs employee motivation



In the above scatter diagram, Reward system (SUM) is indicated in “X” axis and employee motivation (MOT) is indicated in the “Y” axis. The regression equation  $Y = 0.88x + 6.52$  exhibited the relationship between extrinsic reward and employee motivation. (Equation is shown on the scatter diagram) if the extrinsic is  $X = 0$ , the employee motivation is to be 6.52, further the extrinsic reward is increased by one of the employee motivation will be increased by 0.88, so there is a positive relationship between two variables that are extrinsic rewards and employee motivation.

### Hypotheses testing

**H<sub>1</sub>**:- The higher the presence reward system the higher will be employees’ motivation

When viewed on correlation basis, employee motivation is correlation with total reward system, the correlation is 0.756182. Since the correlation is higher positive. There is a strong positive relationship between two variables that is reward system and employee motivation. That is the organization (CEB) has provides high level of reward system, the employee motivation will be also be high. That is high level of reward system will lead to high level if employee motivation.

Therefore the above hypothesis is accepted.

**H<sub>2</sub>**:- The intrinsic reward system has an impact on employees’ motivation

When employee motivation is correlated with intrinsic reward, the correlation is 0.58. Since the correlation is positive. There is a positive relationship between two variables. That is the

organization (CEB) have reasonable level of intrinsic rewards, the employee motivation will also be average high. Therefore the above hypothesis is accepted.

**H<sub>3</sub>**:- The extrinsic reward system has an impact on employees' motivation

When employee motivation is correlated with extrinsic reward, the correlation is 0.73, since the correlation is positive. That means when reward system increases the level of employee motivation all will increase. Therefore the above hypothesis is also accepted.

## CONCLUSION

Organization could enhance their employee motivation through reward system. Reward system is one if the key role in creating employee motivation. Finding of this research suggest that Ceylon electricity board should provide proper reward system to increase employee motivation. Therefore the reward system creates employee motivation.

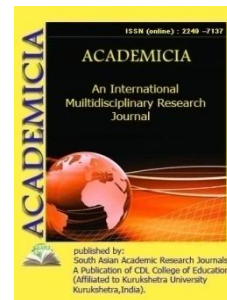
From the findings, we can conclude that the extrinsic reward has greater impact on employees' motivation than intrinsic rewards. Therefore CEB tries to give both intrinsic and extrinsic rewards to its employees. The better way is the CEB mostly concentrate in its extrinsic reward system. However, both are important to motivate the employees of an organization.

## LIMITATIONS OF THE RESEARCH

- There are so many branches in Ceylon electrify board in Sri Lanka. But only Jaffna branch is taken into consideration for this research
- Even though there are 550 employees work in the Ceylon Electricity Board, Jaffna. 30 employees were selected to carry out this research.
- All data presented in this research based on the data derived by using questionnaire and by interviews.
- To get the information from the employee, but some employee submit the answer which will not be true.

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## ROLE AND SIGNIFICANCE OF FOLKLER MUSIC IN THE UPBRINGING OF CHILDREN OF PRESCHOOL AGE

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### ABSTRACT

*The article analyzes the need to refer to the origins of folk art, traditions, customs of the people, to oral folk art. The importance of musical and pedagogical activity in kindergarten through folklore by introducing children to folk culture, its originality, spiritual wealth is indicated. This educational-methodical complex was developed for 4-year full-time students in the specialty of music education. The discipline "music in a preschool educational institution" is included in the national-regional (university) component.*

**KEYWORDS:** Educational-Methodical, Traditions,

### INTRODUCTION

The word folklore is an English word composed of two words "folk" - people, "lor" - teaching. So, folklore is folk wisdom. Folklore has no author. This is a special art - folk songs, dances, legends and fairy tales, rituals, beliefs, etc. People who once created them were passed on to others by word of mouth, so folklore has survived to this day without leaving the names of its creators. Folklore accompanies a person from birth, taking care of in childhood, right up to the transition to youth.

One of the first to pay serious attention to children's folklore was the famous teacher of Uzbekistan, the teacher of the Department of Music Education Kholikov K.B. At the same time, a systematic collection of folk works for children in Uzbekistan began.

Musical and pedagogical activity in kindergarten is determined by the idea of teaching a child to sing well, clearly, with love and mood, with great dedication, to express himself most vividly in a song. Musicality is a complex concept characterized by a different combination of individual abilities that are manifested either weaker or brighter. It is important to know the potential of each child. Academician Y. Razhabiy, summarizing his observations of children, noted the unevenness of their development; some have a good musical memory, others have a responsiveness to music; the presence of absolute hearing and, conversely, undeveloped hearing. Ability does not exist except in movement, in development ... Musicality of a person depends on his innate individual inclinations, but it is the result of development, the result of education and training.

The musical director has a responsible task - to teach children to love a song, to give singing skills. To this end, it is advisable to carefully think over the entire vocal repertoire that will be used in working with children both for listening and for learning.

Older preschool children can already be introduced to Uzbek folk songs. Songs are the most massive and popular genre of folklore. They are sung by all the people, young and old. Truly, the song is the soul of the people. The eternal national aspirations for goodness and beauty found in her a deeply emotional and highly artistic expression. Songs spiritually unite people, educate whole generations in the spirit of folk moral and aesthetic ideals. Thanks to its exceptional sincerity and sincerity, folk songwriting has the most direct and deep impact on the emotional world of children.

Over the centuries, the people have developed special songs for children: lullabies, play, dance, etc. Pedagogical instincts told their nameless creators what children need, what can be interesting, to please them.

For a long time, people have attached great educational value to their songwriting. The songs not only entertain, but also enrich them with new impressions, give them vivid images of the surrounding reality, teach them to rejoice in the good, sympathize with other people's misfortunes, and foster a sensitive attitude towards all living things.

The figurative and poetic thinking of the people is close to children and corresponds to their ideas about the life of nature and man. Therefore, the children are interested in and accessible to many folk songs that were not created especially for them.

The emotional richness of the song vocabulary, the abundance of affectionate and diminutive words, constant epithets, the sincerity of the tone, the melodiousness make the children want to speak fluently, beautifully, and develop a sense of rhythm.

Singing folk songs acquaints children with the national traditions of the people, with its singing past. Their systematic performance contributes to aesthetic education, develops an artistic taste in children, awakens a feeling of love for their native land, nature familiar from childhood.

The folk song enriches the speech of children, improves diction and articulation, favorably affects the expressiveness of speech, and evokes positive emotions. Folk music, the song is

understandable, close to our children. There is so much affection, kindness, admiration, beauty, grace, significance in her. An increase in interest in their national culture fosters patriotic feelings in children, love for everything that is native to them: for the Motherland, for art, and a sense of national pride grows.

#### Folk games

“Studying children's folklore, one can understand a lot in the psychology of children of a particular age, as well as reveal their artistic preferences and the level of creative possibilities. Many genres are associated with the game, in which the life and work of elders are reproduced, therefore, economic activity is reflected here . ”

Most of the games are based on folk texts. They are especially convenient for singing expressive pronunciation (intonation). Melodic and rhythmic beginning allows you to move along the content of the text at the desired rhythm and tempo. At the same time, motor skills are improved in children: jumping, spring and fractional stomping, gallop, stride with high leg lifts, light dashing running. Games provide an opportunity to make the process of raising children interesting and joyful.

The main feature of the game is its amateur character, it is here, as nowhere else, that the child's creative potential is revealed and realized.

The most favorite games for children are those where you need to catch each other. A child in such games must show speed of movement, dexterity, intelligence ( "O k terakmi - kŷk terak " , "Ha - yu - chittigul", "Kovushim", "Eshik ochik - men bor - hey" and Russian folk songs "Cat and sparrows ", " Liska-fox ", " Sun ", etc.). In Japan there is a game called "Kio - kio san", children whirl around the chair and sing this song when the teacher prompts to stop, and then sit on the chair. Who did not sit out of the game. No less interesting are games that require children to react quickly, endurance (for example, the game "Freeze", in which children take various poses and do not move for some moments). There are games that require creativity, imagination, and good coordination of movements from children. The text of any game can be specially used to develop a child's rhythm. It can be easily reproduced in claps.

#### Calendar Holidays

The Uzbek calendar holidays are a unique opportunity for children to immerse themselves in the world of the same folk songs, dances, and ceremonies every year. Holidays help preschoolers to easily master a large repertoire of folk songs, and, thanks to this, the quality of their performance improves from year to year, which means that children get great pleasure from meeting wonderful original folk art. Autumn holidays - a harvest festival, a holiday of bread, vegetables, fruits, nuts. And all her songs will sing and dance.

It is necessary to start teaching how to play folk musical instruments as early as possible. In folk pedagogy, sounding toys - whistles, buzzers, rattles - were used as the first musical instruments for children.

In addition, there was a number of so-called "one day" instruments - whistling from acacias and dandelions, pipes from reeds, straw, birch bark, which children made themselves.



Older children mastered playing the balalaika, harp, horn, flute, accordion. Household items - a scythe, a washboard, a grip, a stove damper, a samovar pipe, a hairbrush - were also successfully used as musical instruments.

## CONCLUSIONS

The society is interested in preserving and passing on to future generations spiritual values, including musical culture. Children should develop through the knowledge of cultural heritage, be brought up to be able to multiply it.

Folklore is precisely that, accessible to all, variable, improvisational form of expressing one's worldview, combining the collective and individual principles.

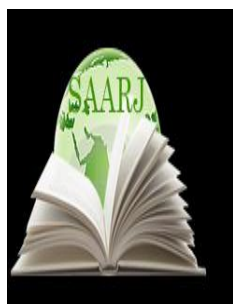
At present, many children know little about folk songs and are not very familiar with Russian folklore. This problem is very important, because children must necessarily know the culture of their homeland and everything that is directly related to it.

Musical folklore is a syncretic phenomenon. Music, word and movement are inextricably linked in it. In the combination of these elements, there is a great power of pedagogical influence, which allows a comprehensive approach to the problem of the complex development of various types of arts by a child.

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## FORMATION OF STUDENTS 'COMPETENCE IN ART AND CULTURE

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### ABSTRACT

*In school education, special attention should be paid to the competence in training personnel with these characteristics. The concept of "competence" entered the field of education as a result of psychological research. Consequently, competence means having a plan of action in unusual situations, how to behave in unexpected situations, how to communicate, how to interact with competitors, how to perform undefined tasks, how to use conflicting information, how to deal with developing and complex processes.*

**KEYWORDS:** *Competence, Creative Competence, Innovative Competence, Communicative Competence, Methodological Competence, Special Competence.*

### INTRODUCTION

Priorities of modernization of the general secondary education system. The rapid development of science, technology, production and technology has opened up new development prospects in all spheres of society. The centuries-old experience of mankind in building a state and society has led to the development of advanced approaches to the regulation of social relations based on new approaches.

One of the important tasks of the system of specialized education is the development of teachers' creative abilities, strengthening their need for knowledge, art and culture, creativity, training teachers who are able to solve problems through the formation of independent thinking skills. In education, teachers must be able to make independent decisions, have competitive professional training, organize their work on a scientific basis and independently develop their knowledge and skills. noted that there is.

It should be especially noted the competence in training personnel with these characteristics in school education. The concept of "competence" entered the field of education as a result of psychological research. Consequently, competence means having a plan of action in unusual situations, how to behave in unexpected situations, how to communicate, how to interact with competitors, how to perform undefined tasks, how to use conflicting information, how to deal with developing and complex processes.

Competence is the acquisition by a specialist of the knowledge, skills and competencies necessary to perform professional activities, and their application in practice at a high level. Competence is shown in the following cases. A competent professional reflects the following qualities. Below is a brief description of the nature of the qualities reflected on the basis of professional competence.

The formation of competence in the field of art and culture should include the ability to be active in public relations, the acquisition of skills, the ability to communicate with subjects in professional activities. The following competence qualities for the formation of artistic and cultural competence of students:

- Creative competence - a critical, creative approach to teaching, the ability to demonstrate their creative abilities;
- Innovative competence - the promotion of new ideas to improve the pedagogical process, improve the quality of teaching, increase the effectiveness of the educational process, their effective implementation in practice;
- Communicative competence - the ability to sincerely communicate with all participants in the educational process, including students, listen to them, and have a positive impact on them.
- Methodological competence - methodologically rational organization of the pedagogical process, correct definition of the forms of educational or pedagogical activity, appropriate choice of methods and means, effective use of methods, successful use of means;
- Special competence - preparation for organizing professional and pedagogical activities, rational solution of professional and pedagogical tasks, consistent development of a realistic assessment of the results of activities, based on this competence, psychological, methodological, informational, creative, innovative and communicative competence.

Modern methods, forms and means of teaching, game technologies, problem-based learning and creative independent forms of education play an important role in improving the quality and effectiveness of teaching. This requires in-depth scientific and pedagogical research to develop the content of independent creative education of teachers in school education and improve the methods of its organization and implementation.

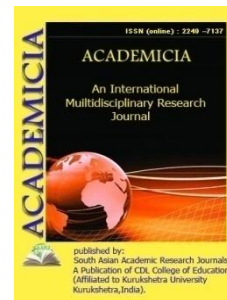
Teachers have excellent opportunities to gain theoretical, practical and creative self-study at school. When developing competencies in the field of art and culture in school work, it is necessary to look for knowledge related to the profession and specialization of a teacher outside the curriculum and textbooks, which, in turn, contributes to the formation of proactive, creative and creative personnel. The main thing is to create a comfortable innovative environment at the school.

The formation of competencies in the field of art and culture creates positive competition among students in the field of education. Following each other's example, students channel their brains, creativity, energy, and time into rewarding pursuits. Certain aspects of students' talents are revealed through preparation for various competitions, participation in scientific olympiads and the desire to win, participation in scientific and creative exhibitions.

The formation of the artistic and cultural competence of students also has a positive effect on the development of youth as a person. Character traits in it.

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## MODERN METHODS OF CONTRACEPTION

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### ABSTRACT

*We know that a healthy lifestyle is becoming a global problem today. In this article, we will focus on contraception, its occurrence, and what it involves during sexual intercourse, which is part of a healthy lifestyle. The lubricant may also contain spermicidal, which kill sperm. Condoms are safe and have no side effects. When used properly, condoms are the most effective way to prevent pregnancy. The expiration date on the condom box should be checked and used only once. Expired condoms should not be used, nor should they be used if the package is dirty, greasy or torn. Some women believe that birth control pills cause infertility. That's not true: the ability to conceive returns to normal as soon as you stop taking the pill. Other women believe that hormonal pills accelerate the growth of hair on the body.*

**KEYWORDS:** *Intrauterine Devices Combined Oral Contraceptives, Condoms, Healthy Lifestyle.*

### INTRODUCTION

Intrauterine devices (IUDs). The IUD is a small plastic or metal structure that is inserted into the uterus. IUD makes it harder for sperm to move and prevents fertilization. There are many types of IUD today: one of the most common is a model that contains copper, silver, or an artificial progestin hormone. IUD is the most effective way to prevent pregnancy. IUD - is performed by specialists (obstetrician-gynecologist or midwife) who have received special training in women's clinics, rural medical centers (RPCs). This is a simple procedure that does not require anesthesia. Properly inserted into the uterus, IUD is safe and does not cause discomfort. IUD can be given on any day of the menstrual cycle if you are sure that the woman is not pregnant and that there are no other obstacles. Can be used for up to 12 years depending on the type of IUD. The woman can have sex at will at any time. IUD is not recommended for women who have sex with more than one



person. HIV does not protect against sexually transmitted diseases and the human immunodeficiency virus. All women who use contraception should have an annual medical examination. Some women think that HIV causes infertility. This is not true: after the removal of the IVF, a woman's ability to give birth is restored quickly. If a woman has an untreated pelvic inflammatory disease, she may be infertile, whether or not she uses HIV.

Combination oral contraceptives (COCs). Combined oral contraceptives contain hormones produced by the female body. When taken properly, these hormones suppress ovulation and effectively protect against pregnancy. The tablets are very effective and safe, they can be used for many years. Currently, the pill contains very few hormones, which reduces side effects.

The COC pack contains 21 and 28 tablets. If a 21-pack is used, you should take a break for a week before taking the tablet in the second pack.

If a 28-pack is used, there is no need to take a break, the first can start as soon as the second is over. Some women taking COCs may experience nausea, headaches, less obesity, breast tenderness, and pain, but these symptoms usually go away within 3 months. Contraceptive pills are not recommended for everyone. COCs are not recommended if a woman is over 35 years old, has high blood pressure, smokes, has severe cardiovascular or liver disease, or migraine. If a woman is breastfeeding, she should consult her doctor first about which type of contraceptive pill to use and when to start it. Some women believe that birth control pills cause infertility. That's not true: the ability to conceive returns to normal as soon as you stop taking the pill. Other women believe that hormonal pills accelerate the growth of hair on the body. This is also incorrect: on the contrary, some low-dose hormonal pills are used to slow down the growth of hair on the body. Rigevidon, Anteovin, Ovidon, Marvelon, Mikrogenon and others are used as hormonal contraceptive pills.

Condoms are one of the most common contraceptives because they reduce the risk of contracting sexually transmitted diseases and the acquired immunodeficiency virus (HIV). Condoms prevent sperm from entering the vagina. Therefore, it protects not only against pregnancy, but also against sexually transmitted diseases. Condoms are made of latex and come in a variety of colors and sizes. The lubricant may also contain spermicidal, which kill sperm. Condoms are safe and have no side effects. When used properly, condoms are the most effective way to prevent pregnancy. The expiration date on the condom box should be checked and used only once. Expired condoms should not be used, nor should they be used if the package is dirty, greasy or torn. Oily ointments (Vaseline) should not be used during sex, as they can damage the latex and make the condom ineffective. Before using a condom, open the package slowly and do not tear it. It is important not to open until worn. When the penis is tight, put the condom on the tip of the penis, hold the sperm collector in the condom with one hand, turn the condom over with the other hand and put it all the way to the bottom of the penis. Make sure there is a gap between the sperm collector and the tip of the penis.

Make sure there is a gap between the sperm collector and the tip of the penis. After ejaculation, hold the condom in your hand, remove the penis from the vagina, and remove it while it is still tight. Some people think that one condom can be used more than once. This is incorrect and all condoms are disposable.

**Spermicides.** Spermicides are chemicals that damage sperm before they reach the cervical canal. They are sold in pharmacies in the form of creams, gels, ointments (ointments), tablets or aerosols. All types of spermicides are injected into the vagina before sexual intercourse.

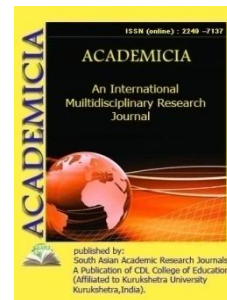
Some spermicides take effect within 15 minutes. One dose of spermicide is effective for only one hour. Before each sexual intercourse, of course, a new dose of spermicide must be used, as it has fewer side effects and can be partially irritating in both men and women. Spermicides do not contain hormones and are less effective than other methods of contraception. It is advisable to use it in combination with other methods (for example, condoms) to increase its effectiveness. If a woman is anxious and does not want to conceive or is preventing pregnancy according to a medical prescription, it is better for such women to use other methods of contraception than spermicides. Some women feel the need to rinse their vagina after using a spermicide. This is incorrect: washing the vagina after spermicides can damage the normal microflora of the vagina, which can lead to the spread of infection. You can wash your soles with clean water, but it is recommended to rinse the vagina 8 hours after sexual intercourse.

**Rapid contraceptive pills.** When can I use emergency contraceptive pills? How long does an emergency contraceptive pill take to take effect? Emergency contraceptive pills are a great option for women who have unprotected sex, have failed contraceptives, or do not want to become pregnant. Emergency contraceptive pills are safe and effective, but they cannot be used permanently. It can be obtained from a pharmacy without a doctor's prescription. You should consult a doctor before using the tablet. The emergency contraceptive pill package contains one (Escapel R) or two (Pestiner R) tablets. They work best for the first 120 hours after unprotected sex, and are more effective if taken within 48 hours. If there are 2 tablets in the package, one should be taken immediately and the other should be taken after 12 hours. Side effects include headache, abdominal pain, fatigue, nausea, vomiting, dizziness, breast tenderness, and irregular vaginal bleeding. Emergency contraceptive pills do not protect against sexually transmitted diseases and HIV. When using emergency contraception, consult a doctor immediately in the following cases: if menstrual bleeding is less than normal, if menstrual bleeding does not occur 4 weeks after the previous menstruation; if there is a sharp pain in the lower abdomen. Some women find that taking birth control pills is effective even if they are pregnant. This is incorrect, if the woman is pregnant and the egg is implanted in the uterus, the rapid pill will not work. Rapid contraception suppresses ovulation and makes it difficult for sperm to move and prevents insemination. If the ovum is inoculated, rapid contraception will not be effective and will not abort the baby.

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## **SOLVING APPLIED PROBLEMS INCREASES PROFESSIONAL COMPETENCE OF FUTURE CONSTRUCTION ENGINEER**

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### **ABSTRACT**

*The importance of the pedagogical competence of a teacher of graphic disciplines in the formation of students' skills of perception and display of the environment of the subject-spatial environment, which is the object of their future professional activity. Determine the components of the professional competence of the future specialist, in the development of which graphic disciplines are involved.*

**KEYWORDS:** *Space, Axonometry, Detail, Sketch, Drawing, Technical Drawing, Section, Chamfer, Standard.*

### **INTRODUCTION**

A modern university teacher needs a conscious appeal to the psychological aspects of his own activity, as a condition for self-development and characteristics of activity. Psychological readiness for professional activity is manifested in the self-organization of the personality. A feature of the process of teaching a complex of graphic disciplines studied in the architectural and construction specialties of universities is, firstly, the need to achieve a high level of development of spatial representations of students, since it involves the operation of future specialists with various methods of displaying the environment of the subject-spatial environment. Secondly, cultural-historical and socio-cultural aspects are very important in the teacher's work, because the object of activity of future specialists is such a significant element of the human environment as the architectural environment. Therefore, the complexity and scale of the tasks solved by the teacher of graphic disciplines are sufficiently characterized by the very duration of the process of graphic training of architects and civil engineers.

Solving the problems of professional formation and development of a teacher and achieving the required level of graphic training of students involves a systematic approach, including (among

other aspects) and psychological training (i.e., defining goals, objectives, principles, methods and forms, methods psychological training, organizing and conducting this training, developing and implementing measures for psychological training in the course of the educational process, assessing the level of psychological preparedness according to certain criteria). Therefore, the focus is on the factor of the teacher's psychological competence and a wide range of tasks arising from the above set of measures to prepare students for professional activities.

Drawings of building structures are the result of the design of a structure and are among the main documents in the construction of bridges, therefore it is difficult to overestimate the importance of graphic disciplines in the development of the competence of a future specialist in the builder of bridges and tunnels. Success in mastering these subjects serves as an indicator of his future professional competence, since it is impossible to imagine a bridge builder specialist who does not know the graphic language. Therefore, studying the problem of teaching graphic disciplines, focused on the development of the professional competence of a civil engineer, it is necessary:

- to identify what components of professional competence a qualified and competitive specialist in this area should have;
- to determine the components of the professional competence of the future specialist, in the development of which graphic disciplines are involved: descriptive geometry, engineering and computer graphics and construction drawing;
- having chosen the optimal methodological approach to solving this problem, to develop a learning technology focused on the development of these components of professional competence.

To study construction drawing, you need to know projection drawing. In projection drafting, he studies the details of projection and axonometry. In space, all details and objects a rise axonometric imagination. At the same time, it includes all objects and parts that we use in everyday life or mechanical engineering. Thus, sketches or technical drawings of such objects are used. In such moments, he is helped by the spatial imagination of a person. Because human imagination is endless!

With the help of spatial imagination, people can create as many technical drawings as they want, or see details and represent them perfectly. But drawing on paper requires a few rules. What is a technical drawing? A technical drawing is a hand-drawn drawing in accordance with the rules of axonometry, more precisely, a drawing of an object without using drawing tools. Isometry is often used in technical drawings. This means that you can draw the technical drawing correctly. The section view can also be used to show hidden openings of a part. When drawing technical drawings, it is necessary to use mainly angles and parallel lines. The advantage of technical drawing is the ability to quickly draw the details of the human spatial imagination. It is also very useful for drawing on different parts.

The working drawing is a production document, therefore it contains the specification, those responsible for the accuracy of the drawing, and all instructions. All technical requirements and instructions for the finished part in the working drawings must be unambiguously stated, and no other interpretation is allowed. Therefore, when drawing up working drawings, as well as when reading them, it is necessary to follow certain rules established by the state standard. Drawings,

which are the only binding rules and regulations for drawings in the standard, are drawn based on these rules and regulations.

When working in drawings of items, the following basic requirements must be observed.

Standard parts and product acquisitions, as well as widespread adoption of previously manufactured products that meet the development of modern technology. Limited dimensional tolerances are proper use of threaded parts and other similar components. Targeted use of material grades as well as various coatings and heat treatments.

Sketching a job begins with analyzing the sketches. Technical terms in detail are very often fixed on the correct description of some of the most common features, such as grooves, grooves, bevels, chamfers, and bulges. Fillet - radius of curvature in the transition from one cylindrical or conical shaft element to another, groove - groove or screw for screwing in the screw head, groove - oil ring in cylindrical or conical parts (couplings) Cut edge of a shaft, bolt, screw, pin, nut etc. In front of the torsion bars, the shaft is easily inserted into the hole using chamfers, ends - for standing in an upright position, for standing in an upright position. The butt is the plane that is usually perpendicular to the axis of the part or to the grain of the wood.

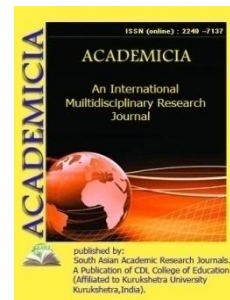
Stages are drawn, such as sketches of shop drawings of parts. Some corrections made to parts are also taken into account in working drawings. The working drawings of the part should contain the dimensions and final deviations necessary for its preparation and verification, surface roughness, material and other technical requirements before assembling the finished part. It is permissible to depict drawings of parts with a very simple design in one basic view.

Inscriptions and symbols on flat surfaces of objects are shown in full in the drawings. They are written and posted in accordance with the requirements of the finished product. If inscriptions and symbols are made on cylindrical or conical surfaces of objects, in the drawings these surfaces are presented as a spread, and the corresponding inscriptions and symbols are written. Here's how to do it (engraving, stamping, photography, casting, etc.).

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## THE TRANSFORMATION OF GEOPOLITICAL CHALLENGE AND PROPAGANDA INTO THE MEANS OF GEOPOLITICAL INFLUENCE IN THE EARLY 21ST CENTURY

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### ABSTRACT

*The article analyses the modern system of propaganda. Identifies the structure and main tasks the system of propaganda in developed countries. According to authors opinion, nowadays the system of propaganda transformed in mechanism, which serves for geopolitical aims and interests.*

**KEYWORDS:** *Propaganda, Subject Of Propaganda, Financial Bases Of Propaganda, Propaganda Tasks* **Language:** English

### INTRODUCTION

Until the new century, the peculiarities of all types of propaganda had changed radically. Its social significance has increased, its goals have acquired a new content, and the scope of its application has expanded. Propaganda has become a powerful tool used on a global scale to achieve the goals of various social groups and political forces. It didn't happen by itself, of course. Changes in the propaganda system have taken place under the influence of a number of social processes, trends, factors. Among them, the geopolitical competition, which intensified at the beginning of the XXI century, has become crucial. Therefore, in order to identify changes in the system of propaganda, especially spiritual propaganda, it will be necessary to analyze it in the context of geopolitical competition in the early XXI century. To accomplish this, first of all,

it is necessary to study the causes and consequences of the intensification of competition between geopolitical forces.

Geopolitical forces are the centers of power that try to influence the processes taking place in the world, to divert them to their own interests, to increase their position in different regions. Such forces have existed in all periods of the development of human society. In this sense, human history is a process of gradual change of geopolitical periods dominated by different geopolitical forces. In particular, in the Ancient World, Rome and Carthage emerged as geopolitical forces, while in the Middle Ages they were replaced by powerful empires that emerged in the East and West. In modern times, Spain, Portugal and the Netherlands, and later England, France and Sweden, have joined such forces. By the twentieth century, the unification of geopolitical forces into one bloc had become a tradition. For example, at the turn of the century, Germany, Austria-Hungary and Italy merged into the Trinity to form a powerful geopolitical bloc, while the Entente, formed with the participation of France, Britain and Russia, emerged as an opposition geopolitical bloc. On the eve of World War II, Germany and its allies united into one geopolitical bloc, the USSR, the United States, Britain, and their allies into a second geopolitical bloc. For almost half a century after World War II, the so-called "bipolar world" reigned. This period was marked by geopolitical competition between the USSR and the USA.

## **MATERIAL AND METHOD**

At all times, geopolitical forces have tried to "divide the world", to clearly define the regions under their influence, to promote their development models and value systems in different regions. The spheres of influence of geopolitical forces in the world, the fundamental rules of interaction have been noted in various documents. For example, the ratio of geopolitical forces, the rules of interaction between them were recorded in the Congress of Vienna in 1814-1815, in the Treaty of Versailles in 1919, in the Treaty of Potsdam in 1945. However, each time these documents were violated by the will of one of the parties, and ultimately the geopolitical balance in the world was disturbed.

In the second half of the twentieth century, the geopolitical situation in the world changed again. Under the influence of the decision of the European Union, the collapse of the USSR, the change in the nature of social development in China, and a number of similar events, a new configuration of geopolitical forces emerged. Today, there are three main geopolitical blocs:

- a) the United States and the United Kingdom;
- b) the European Union;
- c) Russian-Chinese alliance.

In addition, in recent years, the leading countries in Latin America, the so-called "Asian Tigers" are emerging as independent geopolitical forces.

The main goals of these geopolitical forces remain: a) to change world processes in accordance with their interests and to create a favorable situation; b) control the socio-economic development of other geopolitical forces.

In regions where the interests of geopolitical blocs collide, the pace of economic development is declining, the social situation is deteriorating, and people's living conditions are deteriorating. Over the next eight years, a similar situation was observed in Tunisia, Libya, Egypt, Jordan,

Syria, Iraq, Lebanon, Yemen, Afghanistan, Ukraine, Moldova and other countries. The issue of preserving the real independence of countries, preventing them from falling under the influence of geopolitical forces is becoming a strategic task of all countries.

The imbalance between geopolitical forces is caused by one or another social event that has the power of global influence each time. Such a series of events may include a social revolution, a change in the hierarchy in society, world wars. In our time, the task of such a process begins with the global financial and economic crisis, which began in 2008 in the United States and then spread across the world.

In general, in the history of human society, social crises have occurred extremely many times. According to F. Kay, a professor at Oxford University, the first social crisis occurred in the Roman Empire in 88 BC.<sup>1</sup> Experts cite about a dozen crises that occurred in the twentieth century. For example, the socio-economic crisis of 1900-1903 in the developed countries of Europe led to a sharp decline in the level of production. The crisis, dubbed the "Great Depression" in the United States, began in 1929 and lasted for a decade, gradually affecting the industries of Canada, the United Kingdom, Germany, and France. In Russia, the crisis of 1923 caused by the imbalance between the prices of industrial and agricultural products ended in terrible consequences. The oil crisis of 1973, the Asian stock market crisis of 1997-1998, and so on, also had a serious impact on the pace of social development. However, the global financial and economic crisis, which began in 2008 and has not yet been fully resolved in some countries and sectors, has gained special significance in terms of its scale, social, economic and political consequences.

"Today," Karimov said in the early days of the financial and economic crisis, "the world economy is going through the most difficult period of development in recent decades. For the first time, the world is facing a financial and economic crisis that has affected almost all countries."<sup>1</sup> Experts point to various causes of this crisis. Naturally, the financial and economic crisis was caused by a number of social, economic, political and spiritual-cultural factors. Among them, first of all, it should be noted that consumer sentiment is rooted among U.S. citizens.

The reasons for the emergence of consumer sentiment are related to the social processes that took place in European countries in the second half of the XIX century. In these countries, the increase in public discontent during this period, the decline in living standards of citizens has led not only to a change of ruling circles, but also to a change in the hierarchy of society. The U.S. government, large companies, and concern owners have drawn appropriate conclusions from these processes. They began to pay special attention to meeting the domestic needs of citizens, providing them with the most necessary consumer products. The emergence of such an industry would, on the one hand, serve to ensure stability in the country and, on the other hand, increase the amount of revenue of companies. As a result, by the beginning of the twentieth century, products that only a handful of people had been able to use had become everyday consumer goods.<sup>1</sup>

"Moreover, in Western Europe and the United States, doctrines have been developed that justify and glorify people's hedonistic aspirations and consumer sentiments. Transforming a goal-oriented activity into a life strategy, evaluating the mind as a value that realizes the tactics of success, striving to find ways to overcome the problem and adapt to social conditions, not to

determine the basis of existence, to know the truth as a relative concept The use of rational ethics to improve social status, the recognition of the needs and interests of the individual as a primary value - these principles of such doctrines as instrumentalism, operationalism, pragmatism, positivism (later neo-positivism, post-positivism). created”<sup>2</sup>. Consumption has become the main criterion that determines the lifestyle of the Western world.

The formation of the consumer goods industry, the widespread promotion of consumer psychology, made the West accustomed to a consumerist attitude to everything, and even the mismatch between the price of the product and personal material and financial capabilities could not stop him from consuming - a system of countless loans to help him. Housing, cars, valuables, equipment, appliances, etc. were purchased on credit. The propagandists of "popular culture" in the West are the minds of the people. manipulation, i.e. “society ruled by an invisible hand In a sense, it is an important factor in the development of it is also no secret that it serves national sentiments, the disregard for human qualities of a national character.”<sup>3</sup>

Citizens' needs for housing have also been assessed and met in terms of consumer sentiment. In times of financial hardship, these needs have been met through mortgages. In response, the U.S. Federal Reserve System offered more than 500 new forms of credit to consumers in 2000-2008, lowering the number of points that can be obtained from 800 to 500, and even allowing boys and girls as young as 14 to obtain credit. Such support for housing demand has led to a steady rise in prices in the housing market. In Boston, for example, housing cost \$ 3,000 per square meter in 2002, but by 2005 it had risen to \$ 10,000. At the same time, construction companies were also adequately provided with loans by banks. Eventually, by 2008, supply had outstripped demand in the housing market. According to the Domino principle, this has led to a non-return of funds in banks, a decline in liquidity, bankruptcy of banks, the onset of a nationwide financial crisis, the transition of the crisis from the financial sector to the economy. Less than half a year later, the U.S. financial and economic crisis spread to other countries and took on a global character.<sup>4</sup>

## CONCLUSIONS AND THEIR DISCUSSIONS

The crisis has had tragic consequences. All the major banks, the investment banks that followed in their footsteps, stopped lending at all. This did not save many large banks from collapse: one by one these financial institutions began to declare themselves bankrupt. Soon the crisis shifted from the financial sector to the economy. The sharp decline in the amount of loans allocated to production, consumer goods has had a negative impact on the activities of many giants. For example, the cessation of car lending has led to a significant reduction in production at auto giants such as Opel and Ford. The financial crisis has also affected the traditional energy sources market: the price of 1 barrel of oil on the world market has fallen from \$ 147 to \$ 40.

Most importantly, the financial and economic crisis has led to a decline in global economic blindness. For example, world trade fell by 10 percent in 2008-2009.<sup>5</sup> In all developed countries, there has been a decline in gross national income. True, the situation seemed to improve in 2011, but the economic recession that began in the fall of this year allowed the negative dynamics to continue for a long time.

The crisis has led to a decline in economic performance in both developed and developing countries, followed by an escalation of social problems. Even in developed countries such as the

United States, Germany, England, Italy, France, Japan, Canada, the crisis has led to a decline in real incomes, the suspension of many social programs, increased dissatisfaction with the current situation, rising unemployment. In developing countries in Europe, Asia, Africa and Latin America, the situation has become unprecedented.

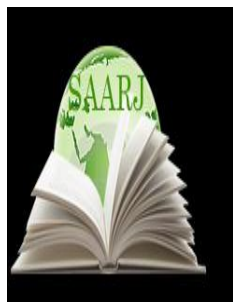
In such a situation, there is a growing tendency among developed countries to seek to use the world's economic, financial, especially energy resources to their advantage, to change the world situation to suit their own interests. The balance of power in the geopolitical field has radically changed the competition between geopolitical blocs. Today, this competition covers all spheres of public life. Interestingly, geopolitical forces are not limited to the realization of their interests, but seek to justify it using modern propaganda factors and means.

In conclusion, the financial and economic crisis of 2008 intensified the competition between different geopolitical blocs. In the new century, geopolitical forces, whose main goal is to gain world leadership and change global processes in proportion to their interests, have begun to accept propaganda as a means to achieve geopolitical goals. In particular, propaganda in economic competition is a means of justifying the position of geopolitical forces on the world economic stage, in political competition - a factor that assimilates their state symbols, forms, political regime, in social competition - a channel to promote their way of life, in ideological competition - ideas and doctrines. turned into a power that spreads traditions and values.

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## IMPROVING THE PRESENTATION OF NATIONAL ETHNOGRAPHIES IN UZBEK DICTIONARIES

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### ABSTRACT

*This article discusses the need to further improve the presentation of lexical units related to the ethno-cultural life of our people in the explanatory dictionaries of the Uzbek language. Given some shortcomings in the expression of national ethnographic lexemes and compounds in existing annotated dictionaries, certain recommendations are given for the expression of ethnolexemes in future annotated dictionaries.*

**KEYWORDS:** *National Ethnographic Lexicon, Lexicographic Principle, Themes Of Ethnographisms, Ethnographic Polysemy, Ethnographic Homonymy.*

### 1. INTRODUCTION

At almost all stages of the historical development of the Uzbek language, great attention has been paid to lexicography, and dictionaries in various fields have been created. As a result of the rich experience gained in this area, explanatory dictionaries of the Uzbek language have been created, which cover the general vocabulary of our language in use and show its linguistic potential.

“The creation of an explanatory dictionary coincides with the most advanced period of knowledge of language. For the creation of this dictionary, the norm of the literary language of the language must be clearly defined, the lexicon must be fully taken into account, the phonetic and grammatical laws must be developed. Otherwise, an annotated dictionary created in that language cannot be perfect. For example, it is impossible to create a perfect explanatory dictionary in modern Uzbek. Because the terms have not yet been considered in the narrow areas specific to a particular industry. It is possible to create only an average explanatory dictionary in Uzbek”[11; 308]. It is true that in recent years, especially in the years of independence, a large



number of dictionaries in many fields have been created in Uzbek linguistics. The scientific and theoretical foundations of our language are being improved in practice, new spelling rules have been developed and are being put into practice, various fields are becoming a source of linguistic research, innovations in modern world linguistics are being rapidly introduced. However, general and regional dialectological and ethnographic dictionaries, which embody the essence of our language, have not been created. Without the creation of these dictionaries and the complete elaboration of the scientific-theoretical foundations of the lexical units included in it, it is impossible to compile a perfectly explanatory dictionary. Two- and five-volume annotated dictionaries contain their own layer and ethno-cultural (ethnographies, dialects, etc.) lexemes coverage, words (compound, fixed units) and their semantics at the level of living language, incomplete expression of lexical units form and meaning, dictionary it is still difficult to say a perfect dictionary based on the characteristics of the components of the article, such as non-adherence to strict lexicographic principles. Because the possibilities and vocabulary of our language are very wide, there is a queue of lexicographic research that needs to be done.

As in other languages, the main part of the lexical structure of the Uzbek explanatory dictionary consists of ethno-cultural lexemes that express the way of life, present and history of our people. In particular, the presentation and interpretation of ethnographies in annotated dictionaries is not at the level of demand. The comparison of the created dictionaries shows that we lag behind other Turkic-speaking peoples in terms of ethnolinguistic study of concepts related to our national culture. So, there is still a lot to be done in this regard.

In Uzbek linguistics, the lexicographic principles of expressing ethnolexemes in explanatory dictionaries have not been scientifically developed. We will make the following suggestions on expanding the scope of ethnographic lexemes in the annotated dictionaries, their in-depth thematic study and reflection in annotated dictionaries.

## 2. MATERIALS AND METHODS

Although there are many lexemes in the Uzbek dictionaries that reflect the way of life, culture and historical development of our people, the lexical units interpreted as ethnography are quantitatively deficient. There are several reasons for this. Most importantly, the customs and traditions of our nation; areas that are important in the formation of the ethnos (professions, various industries); the subject names that represent our daily ethno-cultural life are not studied in depth in the linguistic aspect. This poses a number of difficulties in presenting and interpreting ethnolexemes in dictionaries. In particular, determining the scope of ethnographic themes is one of the most important factors. The ethnographies explained in the five-volume annotated dictionary are mainly ceremonial names (weddings, mourning and related rituals, superstitions) and concepts directly or indirectly related to religion (belief). The unit names that define our material culture are partially common.

The study of the lexical layer of the Uzbek dictionaries has shown that the concepts that are inextricably linked with ethnographic lexemes are not interpreted as ethnography. For example, the brooch-*jig'a* [6; 96] - an ornament worn on the headdress, adorned with ukpar and precious stones. Or *zarkokil*- an ornament made of women's hair, which is made by tying silver coins together like a chain [6; 138], the ornaments of our women have been interpreted as ethnography. However, the names of many national costumes and jewelry are not mentioned as the source object.

When talking about the topic of ethnography, it is necessary to pay attention to the terms in the following areas, which are included in the glossary:

1) subject and customs related to animal husbandry: do`non [5; 675], yopog`i [6; 43], jabduq [6; 60], kashar (kachar) [6; 337], kurra II [6; 435], ko`gan [6; 443], ko`ganlamoq [6; 443], no`xta [7; 69], otar [7; 153], og`il [7; 187], sovliq [7; 539], taka [7; 643], taqa [8; 33], toy [8; 134], tuvcha [8; 174], tushov [8; 220], to`l [8; 233], chalma [8; 450], shirboz [8; 578], shishak [8; 584], yugan (jugan) [9; 73], echki [9; 63], egar [9; 19], o`tov [9; 183], qatiq [9; 260], qirqim [9; 302], qo`zi [9; 396], qo`ra [9; 412], qo`chqor [9; 417], go`non [9; 464] as;

2) terms related to agriculture: bo`yinturuq [5; 403], zo`g`ota [6; 168], kapsan [6; 317], omoch [7; 124], shudgor [8; 606], o`ra [9; 159], qo`shchi [9; 423], g`alvir [9; 432] as;

3) national games: darrasoldi [5; 569], innana [6; 212], kurash [6; 433], ko`pkari [6; 464], lanka [6; 487], mindi-mindi [6; 596], oshiq [7; 170], chillak (chillik) [8; 484], chavgon [8; 444] and b.

4) national clothes and jewelry: bibishak [5; 252], guppi [5; 527], do`ppi [5; 676], jamalak [6; 67], lachak [6; 490], mursak [6; 646], ro`mol [7; 406], tillaqosh [8; 97], chakmon [8; 448], to`n [8; 238], qalpoq [9; 229] as.

5) national dishes: ayron [5; 58], beshbarmoq [5; 245], go`ja [5; 530], zog`ora [6; 162], zirbak [6; 154], ko`mach [6; 455], mosh-guruch [6; 620], no`xatxo`rak [7; 69], norin [7; 60], palov [7; 210], piyozdog` [7; 255], somsa [7; 551], sumalak [7; 586], tolqon [8; 139], umoch [8; 284], chalpapak [8; 451], shilpildoq [8; 571], shirguruch [8; 579], qatlama [9; 261], qurtava [9; 384], qurut [9; 385], qo`g`ormoch (qovurmoch) [9; 424], hasip [9; 513], qaqanoq [9; 270], quymoq II [9; 367] as;

6) terms denoting kinship: abira (evara, avara) [5; 27], amaki [5; 76], amakivachcha [5; 76], amma [5; 79], yezna [6; 6], kelin [6; 345], kelinoyi [6; 346], kuyov [6; 419], nabira [7; 5], ovsin [7; 81], ona [7; 125], ota [7; 151], pochcha [7; 303], singil [7; 509], tog`a [8; 164], uka [8; 275], yanga [9; 112], egachi [9; 19], quda [9; 363], qudag`ay [9; 363], qaynata [9; 215], qaynana [9; 215], qaynsingil [9; 216], qaynegachi [9; 216], qaynag`a [9; 215], qayni [9; 215] as.

Also, the names of some trades (hunting, blacksmithing, ceramics, boxing, sewing, carpentry, tandoori, blacksmithing, etc.) and the subject, customs associated with them; many traditions and concepts unique to our nation; traditional medicine; household goods, housing construction; It is necessary to study and classify thematic, lexical-semantic groups of terms related to family ceremonies and relations, the character of our people, types of art (literature, music, etc.) in ethnographic terms. Defining the boundaries of ethnographic themes and ethnolinguistic analysis allows to get a more complete picture of the changes that have taken place in the development of the ethnos, the traditional daily life, the stages of cultural development, as well as the ethnic groups that make up the ethnos.

The problem of fully disclosing the polysemantic nature of a lexeme in the precise expression of ethnographic word meanings in annotated dictionaries. O. Espersen was right when he said that "if language had been freed from polysemantic words, it would have become a" linguistic hell" [1; 89].

### 3. Main part

Polysemy is a product of the development of the semantics of words, the expression of the views of each ethnos about existence, comparing their knowledge with a certain form, object. Russian linguist V.A. Zvegintsev argues that the semantic development of a word is directly reflected in language without being disconnected from the nation's past [2; 236-261]. In descriptive dictionaries, it is important to fully disclose the polysemantic nature of a lexeme in the precise expression of keyword meanings. Some semantics (semantics) of the semantics being interpreted may be related to an ethnographic process or a related subject. For example, a five-volume annotated dictionary contains more than a dozen meanings of the flower-*gul* lexeme. From these meanings, it is noted that the meaning of "a ceremony in memory of the deceased in the spring, when the flowers open"[5; 516] has an ethnographic character. Or there are several meanings of the lexeme of *fatiha*, including "a ceremony held before marriage in order to inform the relatives, the people of the neighborhood, after the bride and groom have agreed to marry; "engagement", "the first three days of death in the house of the deceased and the days of Eid in memory of the deceased"[8; 361] have an ethnographic meaning.

In general, although the Uzbek dictionaries focus on the full expression of the polysemantic meanings of the main word, more significant results can be achieved in this regard. The ethnographic lexemes encountered in the speech of the people of Surkhandarya show that not all the meanings of the headline in the annotated dictionaries are given in full. In particular, the ethnographic meaning (meanings) used by the lexeme can prove our point. For example, the lexeme of the tent is interpreted as a polysemantic word, from which "a special veil is worn in place of the "*goshanga, chimildiq*" and the women's shawl; *chodir*[8; 503] has an ethnographic meaning. However, the meaning of "hunting tent or clothing made of bird feathers or other similar means in harmony with the color of nature and the mountains, in the form of a shield to hide the hunter from the prey (sparrow, rabbit, wolf, etc.)" is not expressed. Let's look at other examples: *elchi* the inheritance is an animal given to a child by the father, the head of cattle [9; 42]. It does not mean "the fee, the share, the salary paid to the shepherd by the owner of the cattle for feeding the cattle." The dictionary gives polysemantic meanings of the *return-qaytariq* lexeme [9; 220]. However, the ethnographic meaning of "cancellation of engagement after the engagement of a girl and a boy for certain reasons" is not given. The *clock-soat* is a convenient time to look at celestial bodies (stars, moon, and sun) for the livestock population to move to a mountain or other area, mainly in the spring and fall. *Mix (mixcho'p)* - bird (sparrow, quail, etc.) fishing rod used by hunters to tie jelly (rope made of yarn or horse's mane) or similar means for bird hunting. There are many such examples. Linguist

M. Mirtojiev notes that in the language of the most advanced and civilized peoples there are many polysemantic words, and the structure of polysemantic words in this language is also rich in lexical meanings [3; 9]. It is necessary to fully express ethnographic concepts in dictionaries in the context of the meanings of Uzbek lexical units with such a rich lexical layer. This serves to make the annotated dictionaries more perfect.

In the process of lexeme lexicography, serious attention should also be paid to the phenomenon of homonymy at the language level. In the lexicon of the Uzbek language there are many lexemes with the same phonetic structure. Such a formation (homonymy) can be formed between other lexical layers and ethnographies or ethnographic units. The two- and five-volume

annotated dictionaries of the Uzbek language provide examples of ethnography in harmony with other lexemes: **anbar**[5; 82], **bandak**[5; 157], **osh**[7; 168], **sadr**[7; 419], **soliq**[7; 547], **tutatqi**[8; 206], **tuf**[8; 213], **uchoq**[8; 309], **chochiq**[8; 511], **qalin**[9; 228], **qo'shmoq**[9; 419]. In the dictionary, these lexemes are intertwined with one of the original (self-meaning) meanings or one of the polysemantic meanings.

In the annotated dictionary, one of the lexemes cited as a homonym in the transmission of ethnographic homonymy was involved in the composition of the ethnographic compound. In this case, this compound (compound verb, phrase, phrase, sentence form) is explained separately after the dictionary article. For example, *boqon solmoq* [5; 349], *is chiqarmoq* [6; 228], *oq kiymoq*, *oq o'ramoq* [7; 176], *og'iz bog'lar* [7; 186], *patir ushatmoq* [7; 237], *rasmi kushod* [7; 353], *safar qochdi* [7; 461], *quloq tishlash*[9; 371], the lexemes of *boqon*, *is*, *oq*, *og'iz*, *patir*, *rasm*, *safar*, *quloq*, which are part of ethnographic combinations such as *safar qachdi* [7; 461], *augush* [9; 371], are given with a Roman number as a homonym. The comparison of the lexical units in which the lexical article is composed shows that the compound expressing the ethnographic concept (in its entirety with the vocabulary (keyword) present in it) cannot be a mutual homonym of the lexeme cited as the vocabulary of the lexical article.

Homonymy between ethnographic lexemes is almost non-existent in both annotated dictionaries. In the five-volume annotated dictionary, only three lexemes are interpreted as ethnographic homonyms [8; 306]. Naturally, the phenomenon of formation between lexemes and compounds representing ethno-cultural concepts is common, although not as active as polysemy. In the example of Surkhandarya ethnographic lexicon one can see the homonymy between ethnographic lexemes and compounds:

**Soch olish I** - the custom of shaving the hair by children after the death of a parent or other close relative, a ritual.

**Soch olish II**- is the first hair removal ceremony for young children after birth. Not everyone gets this hair. Elderly: taken by grandparents or great-grandparents.

**Dam bermoq I** is the process of sending air to burn coal in a blacksmith or furnace in the blacksmith profession. **Dam bermoq II** - when livestock breeders feed sheep or goats or black cattle to the shepherd (fee for feeding cattle), by mutual agreement, it is time for livestock breeders to take turns to look after the cattle for rest (recreation). According to the agreement, the shepherd must rest 2-3 days a month.

The "Explanatory dictionary of homonyms of the Uzbek language" also does not pay attention to the homonymy of ethnographies. Sh.Rahmatullaev states that "homonymy should be defined separately in relation to literary speech and colloquial speech" [4; 5].

Hence, the complete giving of the homonymy of ethnolexemes in annotated dictionaries is important for lexicography. However, this again brings to the fore the urgency of creating regional and sectoral (terms related to ancient professions) ethnographic dialectal dictionaries. This shows that it is impossible to create a perfect explanatory dictionary of a certain language without a complete dictionary of lexemes related to the ethno-cultural life of the ethnos.

Interpretation of ethnographic units in the explanatory dictionaries of the Uzbek language is one of the main components of the dictionary article. In order for the dictionary to be clear and perfect, well-known definitions of the meaning (meanings) of the keyword should be given and explained. In annotated dictionaries, ethnographies of the same or similar meaning by semantic-functional feature are repeated. Seeing the bride is an example of the explanations given to

ethnographic lexemes such as *Kelin ko'rmoq – kelinko'rdi, amal, ilm-amal, isitma, isitma-sovutma, issiq-sovuq*, and the differences between them. Therefore, in interpreting ethnographies in dictionaries, it is necessary to pay attention to the following:

- 1) the same ethnographic process, close in content or form, to bring the interpretations given to them in the interpretation of the terms of the situation as rigid as possible. This avoids redundant and differentiated interpretations;
- 2) to give a more complete, detailed information about the ethnographic process being explained, the subject. This lays the groundwork for the next generation or user to have a clear idea of the past;
- 3) effective use of the method of interpretation by reference to the interpretation.

One of the distinguishing features of the explanatory dictionary of the general lexicon of a particular language from some philological dictionaries is the presence of illustrative examples given in the unit being interpreted. Because each dictionary article given in this dictionary, along with the semantics of the lexical unit published in the title, also serves to express its grammatical, methodological features. Illustrative examples are given in dictionaries as generalizers of similar meanings of the unit being interpreted. The main task of illustrative examples is to confirm the correctness of the semantic (semantic, grammatical, methodological meanings) properties of the keyword given in the dictionary article. However, in assigning ethnolexemes to explanatory dictionaries, it is not the expression of their grammatical or methodological semantic features that is important, but the meaning of the reality, process, or object that the dictionary represents. Therefore, it is not necessary to give examples of all the ethnographic units mentioned in the annotated dictionaries. With the exception of ethnographic units with polysemantic and homonymous properties. Because the semantics of such lexemes become clear in the text. In general, ethnographies are similar to scientific terms in terms of their semantic-functional nature. Doctor of Philological Sciences, Academician A.Khojiev noted that in the "Explanatory Dictionary of Linguistic Terms" an example proving the interpretation can not be found in all dictionary articles [10; 6] emphasizes. In our view, ethnographies also do not need to be proved by examples taken from a work of art, a newspaper, or other written sources as a term for concepts that reflect the ethno-cultural life of a people.

Based on the observation of illustrative examples of ethnographic units given in the two- and five-volume annotated dictionaries, we came to the following conclusion:

- 1) the need to provide ethnolexemes with examples has led to the fact that this lexical layer is limited to the literary language;
- 2) in example-quotations in the form of a phrase, it is preferable to prove the grammatical possibility of ethnographic units rather than semantic features.

#### 4. CONCLUSION

The description of ethnographic units in the Uzbek annotated dictionaries shows that there is work to be done in the field. The collection, lexicography and scientific-theoretical study of lexical units related to the ethno-cultural way of life of our people, which over time are forgotten or pass into the passive layer, is an important task of linguistics, in particular, lexicography. Despite the qualitative and quantitative changes in the five-volume Explanatory Dictionary of the



Uzbek Language (2006-2008), which is a great achievement of Uzbek lexicography, the assignment of ethnographic units showed that the study of ethnographic linguistics in Uzbek lexicography lags far behind. Therefore, one of the important tasks of lexicography is to expand the scope of research on ethnography, the creation of regional (ethnographic dialectisms) and general ethnographic dictionaries of the Uzbek language, effectively using the achievements in the field of lexicography.

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## THE USING OF MEDIA EDUCATION IN THE SPIRITUAL UPBRINGING OF PRIMARY SCHOOL STUDENTS

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### ABSTRACT

*The role and effects of people's spiritual well-being have received more attention in recent years. Knowing the factors related to spiritual well-being, especially in primary school students as the educated class and future builders of society, is too important. They are very happy to be allowed to "play" with computers and iPods in the classroom. To them, the computer is now not only a tool but also a teacher and a toy. The students particularly enjoy the free discussion in class. The "one minute news" assignment project teaches them a variety of video production skills. The students have a sense of ownership of their work and they feel empowered. They are learning by doing and exploring knowledge together.*

**KEYWORDS:** *Spiritual Upbringing, Students, Media Education, Critical Pedagogy, Theoretical Frameworks, Project.*

### INTRODUCTION

Media education means giving each youngster the ability to understand the situation in which he stands when he is the target of media-related messages.

It means making him able to be an active media reader, listener or viewer capable of appropriating a maximum of original information from all kind of media-related documents, and especially audiovisual documents.

Up to now, school education has been essentially based on writing and speaking. The part played by images is still of second importance. Yet, according to experts, the audiovisual image can really be used as a technology at the service of intellect, insofar as students had found at school the opportunity to learn about actual knowledge on sounds and images. Thanks to multimedia

informatics advancements, images are likely to be more at the service of intellect. Getting a better knowledge of image's language will allow to improve its use as an original tool serving communication, expression and thought.

Finally, by implementing the media in the classrooms, it gives an answer to teenagers' interests and strengthens the school recognition of cultural and social context. If media education concerns every child, it also concerns every subject. Indeed, it has to complement the specific objectives and learning activities required by each academic discipline.

Media education can be used in every kind of lesson and turned into a privileged moment: a workshop about media or a cooperative work with the different academic grades on a common subject, and so on. Media education is therefore the perfect tool for early learning games, artistic development, language awareness, but also for mathematics, religion or ethics.

This leaflet is punctuated with practical exemplifications in order to illustrate some model of accomplishments

Media education offer political possibilities of using religion to persuade public opinion in favor of suppression monitories, structural inequalities and the rise of an environment of intolerance. Media education can play a very important role in helping individuals question and challenge the knowledge that students are subject to through media channels. In this article, I have used a board theoretical framework of media education in order to create exercises in critical pedagogy to help primary school students to engage with unexamined beliefs about their real sharpness. After the educational intervention, the level of people's spiritual well-being increased significantly.

As a result, spirituality education causes conditions to improve the peoples' spiritual well-being.

The teacher survey echoes the student survey results. About 85% teachers agree that the media education curriculum has helped students avoid being affected by negative media messages.

All of the teachers who participated in the survey state that media education has enabled students fully enjoy the fun of the media.

Moreover, they all consider that media education is useful in assisting students in understanding the function and operation of the media.

The class observations also reveal that when the teachers are teaching these classes, they do not use the traditional top-down way of instruction. They try very hard to encourage students to take the initiative in asking and answering questions. The teachers in this project emphasize interactive pedagogy. They use IT as a tool to turn the class instruction from "teaching" into "learning."

Students are encouraged to seek meaningful answers on various controversial media issues. Students are very enthusiastic about this student-centered and inquiry-based learning mode. They find the open-ended learning environment refreshing. They are very happy to be allowed to "play" with computers and iPods in the classroom. To them, the computer is now not only a tool but also a teacher and a toy. The students particularly enjoy the free discussion in class. In traditional classes in Uzbekistan, school children seldom have opportunities to talk freely. In the media literacy class, they are permitted to chat and talk.

They like group discussion very much, because group members can exchange views and work together to seek answers to the teacher's questions. They can also compare their solutions to those presented by other groups. In this way, they can take a look at an issue from multiple perspectives.

To these schoolchildren, collaboration learning is also a kind of competition. They can see whether their views are more logical or superior to the views of others. They like this way of learning because they can explore ideas and discover answers by themselves. They have a sense of freedom in the classroom. In the class, the students are also taught to produce a short film on current affairs. They are given a free hand to choose topics and they learn how to creatively express themselves.

The "one minute news" assignment project teaches them a variety of video production skills. The students have a sense of ownership of their work and they feel empowered. They are learning by doing and exploring knowledge together. In the evaluation meeting, the teachers express that this assignment has a great value in motivating students to conduct active learning.

According to the discussion in the focus group, the students are attracted to this curriculum because it allows them to "play" on laptop computers/iPads, have free discussions in class, and watch short videos. In particular, the video watching activity made the class interesting and lively.

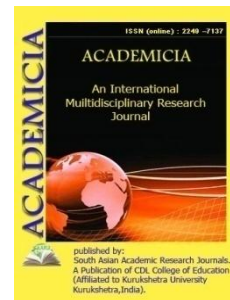
Apparently, multimedia is very appealing to these school children. As all of the primary school students participating in this project belong to the Net Generation, they are intimate with IT. After taking the course, only 8.7% of the students say they do not feel curious and excited about using IT to learn. Only 17% of them feel it is inconvenient to do homework online, and 7.3% do not enjoy watching videos in class. Most of the students are enthusiastic about learning through IT. About 70% of the students believe that it is really interesting to use new media for studying.

The project examined in this study, "21st Century Skills Learning: The Creative Information Technology Education Project," shows that teaching media literacy through IT in the classroom setting is feasible and desirable. The new pedagogic approach and the open-ended learning. The future of schooling itself will be a network-based distribution system of learning rather than a strictly routinized series of teaching tasks.

In here, schoolteachers are aware of the change. This study shows that, on the one hand, teachers are working hard to cultivate schoolchildren's mind so that they can conduct active learning. On the other hand, they are using IT to provide an open learning platform so that students can explore knowledge in a free and collaborative way.

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## THE MIRACLES OF THE EGYPTIAN TRIANGLE

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### ABSTRACT

*The article substantiates the advantages of new pedagogical technologies and their role in the development of science and society by approving only a small aspect of scientific research on the "Egyptian Triangle".*

**KEYWORDS:** *Egyptian Triangle, New Pedagogical Technologies, Inner Circle, Formula, Proportion.*

### INTRODUCTION

Modern pedagogy can achieve high results in a period of rapid development only if it can find directions devoted to the analysis of the most pressing problems of the science being taught.

As a result of my recent scientific and pedagogical observations, I personally support the results of scientific research on the Egyptian triangle. Although everyone knew that it was possible to draw a circle or a circle inside an Egyptian triangle, but many were absolutely unaware of the new interpretations of the calculation of the sizes of the circle drawn inside.

***I. Scientific and pedagogical advantages of determining the size of the Egyptian triangle and the circle drawn inside it.***

At the same time, the new method of calculating the length of the inscribed circle arouses in students the desire and aspiration not only to study the Egyptian triangle, but also to fully study the sciences of geometry and topology. According to the formula on page 12 (18) of the first book of the first book "Egyptian Triangle" by FA Mamadaliev, we can observe a very interesting result:

$$\frac{S_{\Delta n}}{P_{\Delta n}} = \frac{6n^2}{12n} = \frac{n}{2}, \quad (18)$$

This proportion provides students with a quantitative relation that is completely new to the following subject:

$$\frac{S_{\Delta n}}{P_{\Delta n}} = \frac{n}{2}, \quad (18)$$

From the above relationship we can find  $n$ .

In that case we have:

$$n = \frac{2 \cdot S_{\Delta n}}{P_{\Delta n}}, \quad (L-1)$$

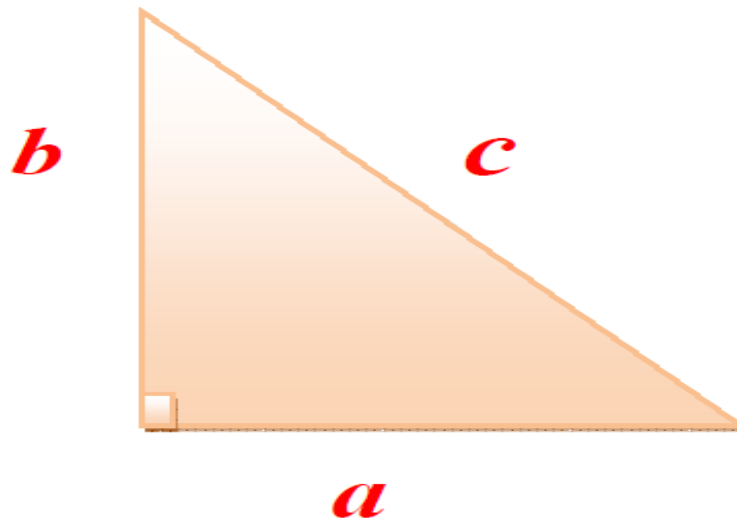
Where:

$P_{\Delta n}$  – The perimeter of the Egyptian triangle;

$S_{\Delta n}$  – The surface of the Egyptian triangle;

Found - this formula makes us witness another small discovery. This shows that the right part of the formula is the radius of the circle drawn inside the triangle. Because of my interest in math, I eagerly watched for new results to be obtained after making the substitutions. I found it necessary to emphasize that it is not difficult to understand that this situation is a pedagogical choice that directly increases the interest of students in geometry and topology.

This new formula will be another confirmation of future scientific research on the Egyptian triangle and will serve to improve pedagogical processes.



**Figure 1.**

It is no secret that to this day, through the dimensions of the triangle, there was a mechanism to find the radius of the circle drawn inside it. AV Pogorelov's book "Geometry: uchebnoe posobie dlya sredney shkoly" (M. "Enlightenment", 1989) also contains a formula for calculating the radius of the inscribed circle of a triangle.

$$r = \frac{2 \cdot S_{\Delta}}{a + b + c}$$

Then it is possible to write this formula in a different way:

$$r_n = \frac{2 \cdot S_{\Delta_n}}{P_{\Delta_n}}, \quad (L-2)$$

If we compare this result with the above (L-1) -formula, it will not be difficult to see that their right part is the same. (These rules are taken from the results of F.A. Mamadaliev's research). It is also reasonable to conclude from the results of our work that we have the right to call it Rule 4.2.

Rule 4.2: The radius of a circle drawn inside an Egyptian triangle of any order and the ordinal number of that triangle are mutually equal.

The formula is written as follows (Figure 1):

$$n = r_n, \quad (L-3)$$

Where:

$n$  – The ordinal number of the Egyptian triangle;

$r_n$  – the radius of the circles drawn inside;

(L-3) – The discovery of the relation opens up the possibility that it is possible to find a very easy answer in solving many problems in this direction, even without knowing the radius of the inner circle.

## ***II. Formulas for the dependence of the radius (diameter) of the circle drawn inside the Egyptian triangle on the legs of this triangle.***

Rule 5.1: The radius of a circle drawn inside an Egyptian triangle of any order is modulus equal to the difference between the legs of that triangle.

The formula is written as follows (Appendix 1):

$$|b_n - a_n| = |r_n|, \quad (L-4)$$

Or it is absolutely correct to write this equation as follows:

$$|a_n - b_n| = |r_n|, \quad (L-5)$$

Where:

$n$  – The ordinal number of the Egyptian triangle;

$r_n$  – the radius of the circles drawn inside;

$a_n$  – A small catheter of the Egyptian triangle;

$b_n$  – A large catheter of the Egyptian triangle;



The diameter of the inner circle (circle) is equal to the double value of the modulus of separation of the Egyptian triangular legs.

Our opinion is written in the form of equality as follows:

$$/d_n/ = 2 \cdot /b_n - a_n/ , (L-6)$$

Or it is absolutely correct to write this equation as follows:

$$/d_n/ = 2 \cdot /a_n - b_n/ , (L-7)$$

### ***III. Formulas for the surface of a circle drawn inside an Egyptian triangle and the ordinal number of the length of the circle (circle) - "n".***

The surface boundary of a circle drawn inside an Egyptian triangle depends on the size of that triangle. An increase in the sides of a triangle causes an increase in its surface area, or conversely, a decrease in the sides of a triangle causes its surface to become smaller at the same time.

$$l_n = 2 \cdot \pi \cdot r_n , (L-8)$$

$l_n$  – the length of the surface of the inner drawn circle;

$$S\partial_n = \pi \cdot r_n^2 , (L-9)$$

$S\partial_n$  – the size of the inner drawn circle surface;

$$\pi = 3,14$$

$\pi$  is a constant quantity representing the ratio of the length of a circle to its diameter.

We can summarize these formulas as follows:

$$l_n = 2 \cdot \pi \cdot n , (L-10)$$

Where:

$l_n$  – the length of the surface of the inner drawn circle;

We can write the surface formula in the following order:

$$S\partial_n = \pi \cdot n^2 , (L-11)$$

Where:

$S\partial_n$  – the size of the inner drawn circle surface;

### ***IV. Formulas for the dependence of the length and other dimensions of the circle (circle) drawn inside the Egyptian triangle on the perimeter and surface of the triangle.***

We understand that the ordinal number of the Egyptian triangle "n" is directly involved in finding the perimeter and surface of this triangle. According to the formulas (16) and (17) on page 11 of the book "Egyptian Triangle" by FA Mamadaliev, we have the following result:

$$P_{\Delta_n} = 12 \cdot n , (16)$$

$$S_{\Delta_n} = 6 \cdot n^2 , (17)$$

Finding the value of "n" from these equations is not difficult. To do this, perform the following operations:

$$n = \frac{P_{\Delta n}}{12}, \quad (L-12)$$

$$n = \sqrt{\frac{S_{\Delta n}}{6}}, \quad (L-13)$$

From what we have found (L-12) we put in the formula (L-10) which we quoted above:

$$l_n = 2 \cdot \pi \cdot n = 2 \cdot \pi \cdot \frac{P_{\Delta n}}{12} = \pi \cdot \frac{P_{\Delta n}}{6}, \quad (L-14)$$

$$l_n = \frac{\pi \cdot P_{\Delta n}}{6}, \quad (L-14)$$

If we put (L-13) in the formula (L-11) given above, we get a formula that allows us to determine the surface boundary of the circle drawn inside the Egyptian triangle through the surface of this triangle:

$$l_n = 2 \cdot \pi \cdot n = 2 \cdot \pi \cdot \sqrt{\frac{S_{\Delta n}}{6}}, \quad (L-15)$$

$$l_n = 2 \cdot \pi \cdot \sqrt{\frac{S_{\Delta n}}{6}}, \quad (L-15)$$

(L-15) - the formula allows us to determine the surface boundary of the circle (circle) drawn inside the Egyptian triangle, by the size of the surface of this triangle. we try to solve problems using these formulas.

We put the results of the formulas (L-11) and (L-13) in the formula (L-11) defined above, and we get the expected results:

$$S_{\partial n} = \pi \cdot n^2, \quad (L-11)$$

Let's start with the following operations:

$$S_{\partial n} = \pi \cdot n^2 = \pi \cdot \left( \frac{P_{\Delta n}}{12} \right)^2, \quad (L-16)$$

$$S_{\partial n} = \pi \cdot \left( \frac{P_{\Delta n}}{12} \right)^2, \quad (L-16)$$

(L-16) is a formula that allows you to find the surface of a circle drawn inside an Egyptian triangle through the perimeter of that triangle. (L-16) is the essence of the formula, which is an absolutely correct and unique expression of the scientific-legal relationship of  $S_{\partial n}$  and  $P_{\Delta n}$ .

$$S_{\partial} = \pi \cdot n^2 = \pi \cdot \left( \sqrt{\frac{S_{\Delta n}}{6}} \right)^2, \quad (L-17)$$

$$S_{\partial} = \frac{\pi \cdot S_{\Delta n}}{6}, \quad (L-17)$$

Indeed, the size of the surface of a circle drawn inside a triangle depends in direct proportion to the perimeter and surface area of the triangle. (L-16) - for-mula is a shining proof and confirmation of this idea.

Here are some analytical considerations that are needed to calculate the diameter of a circle drawn inside an Egyptian triangle:

$$d_n = 2 \cdot r_n, (L-18)$$

this equation is a formula that has long been used in geometry to express the quantitative relationship between the radius and diameter of a circle. If here we use the results of the (L-3) - formula and make substitutions, we get the following result:

$$n = r_n, (L-3)$$

$$d_n = 2 \cdot n, (L-19)$$

It is clear from this that the diameter of the circle drawn inside the Egyptian triangle can also be expressed by the perimeter and surface sizes of this triangle. Now, using the results of equations (16) and (17) on page 11 of the methodical-blind sale of the "Egyptian triangle" written by FA Mamadaliev and others, we can determine the diameter of the circle drawn inside the Egyptian triangle to the perimeter and surface sizes of this triangle. We try to write mathematical equations that show the relationship:

$$d_n = 2 \cdot n = 2 \cdot \frac{P_{\Delta n}}{12}, (L-20)$$

$$d_n = \frac{P_{\Delta n}}{6}, (L-20)$$

Here (L-20) is a formula for the equation, the quantitative relationship between the diameter of an inscribed circle and the perimeter of a triangle.

If we put the results of equation (L-13) on (L-19), we get a formula that shows the quantitative dependence of "d" on "  $S_{\Delta n}$  ":

$$d_n = 2 \cdot n = 2 \cdot \sqrt{\frac{S_{\Delta n}}{6}}, (L-21)$$

$$d_n = 2 \cdot \sqrt{\frac{S_{\Delta n}}{6}}, (L-21)$$

All the work we have done so far allows us to get acquainted with the laws governing the relationship between the sizes of the inner circle (circle) and the sizes of the Egyptian triangle. Our further research will be devoted to revealing the laws governing the interdependence of an externally drawn circle (circle) with the Egyptian triangle.

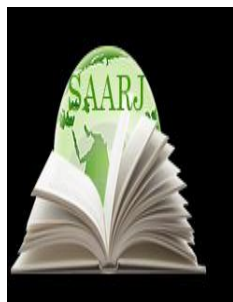
Based on my many years of pedagogical experience, I can say with certainty that the educational system still needs a lot of such progressive research, following the pedagogical aspects of the scientific work on the Egyptian triangle, and supporting them and radically reconsidering the essence of our future research. I would emphasize that it is a must.

## CONCLUSION

The article argues that some suggestions for the process of introducing new pedagogical technologies into practice, as well as a deep understanding of the current scientific innovations and the need to use their advantages in the educational process is a requirement of the day.

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## ISSUES AND CHALLENGES IN TEACHING GRAMMAR ONLINE AT SECONDARY SCHOOLS FOR UPPER GRADES

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### ABSTRACT

*At the present stage of training, the main attention is paid to the communicative orientation in mastering a foreign language, the formation of communicative competence. Communicative competence, along with other competencies, includes linguistic competence, one of which is grammatical competence. Thus, teaching a foreign language involves the formation and improvement of appropriate grammatical skills, further development of cognitive grammatical skills, expansion of the volume of knowledge, systematization of the studied grammatical material.*

**KEYWORDS:** *Communicative Competence, Teaching Grammar, Grammatical Competence, Distance Learning*

### INTRODUCTION

The appeal in the study to the problem of introducing the distance form into the process of teaching a foreign language grammar, at the senior stage (profile level), is due to the primary practical value of grammar and the increasing role of the student's independent learning activity in the process of forming communicative competence

On the one hand, a number of grammatical phenomena and constructions at the senior and profile-oriented stages should be studied at a productive level. On the other hand, the practice of teaching at school shows that very little time is devoted to grammatical material in the lesson, and no time is given to repetition. In general, unfortunately, teachers still prefer frontal types of

activity, in which the real time for the practical application of knowledge is no more than 1-2 minutes for each student.

One of the solutions in this situation is the attraction of distance learning and models of distance learning that are adequate to the goals and objectives of teaching organization of such training is possible according to the integration model of full-time and distance learning, which provides for the transfer of certain types of activities and part of the studied material into a distance form. It is the integration model that allows for in-depth study grammar due to the transfer of time-consuming activities (automation of a skill, consolidation of material, repetition of the past) to a distance form and free up time in the lesson for the direct practice of dialogic, monologue skills and abilities. In addition, this model allows you to inscribe the process of teaching grammar in high school into the whole process teaching a foreign language (FL) in a philological profile, giving students the opportunity to choose the desired specialty of the profile according to their abilities and interests (translation, linguistics, journalism, general educational focus, etc.) due to the differentiation of the content of grammatical material.

## **MATERIALS AND METHODS**

In the domestic methodology, there is a sufficient amount of research in the field of traditional approaches to teaching the grammatical aspect at different stages (Rogova GV, Rabinovich FM, Mirolubov AA, Passov EI, Bim IL, Solovova EN, Kitaygorodskaya NA, Galskova ND, Gez NI, Kolker Ya M, Milrud RP, Moskalskaya OI, Artyomov VA, Titova SV, Berman IM). Domestic scientists considered the problems of distance learning in English (Chetvernina MI, Bukharkina MY, Tatarinova MA, Shapovalova TR, et al), issues of theory and practice of distance learning (DL) (Polat EC), pedagogical technologies in DL for general secondary education, requirements for creating courses for DL (Polat ES, Moiseeva MV, Petrov AE), issues of organizing the educational process of DO in foreign languages (Polat ES, Bukharkina M Yu, Dmitrieva E I, Severova N Yu, Shapovalova TR), the problem of creating and using an electronic reference book on the grammar of the German language (Severova NY).

However, many problems remain unresolved. In particular, the problem of teaching senior pupils of specialized classes the grammatical aspect using distance forms has not yet been studied. At present, there are a number of distance grammatical courses and electronic textbooks. However, there are still no courses that take into account the peculiarities of the profile of Philology and profile education in general and involving taking into account the interests, inclinations, abilities and level of learning of students. The modern process of teaching the grammatical aspect in profile classes remains poorly understood and has a number of problems, which include the following

1. The main idea of profile education is to implement the principle of differentiation of education, but for this there are no sufficiently favorable conditions for the traditional organization of classes (without involving distance learning), especially in relation to grammar
2. Successful formation of linguistic competence in the field of grammar requires the construction of learning according to an individual trajectory, taking into account the successes achieved, elimination of gaps, further improvement of skills and cognitive skills. This problem requires the search for new approaches that have not yet been developed in the methodology



3. Teaching grammar, taking into account different specializations of the philological profile (teacher of foreign languages, linguist, etc.) is possible when organizing the work of students according to individual programs. It is impossible to qualitatively carry out this in the classroom under normal conditions under the traditional classroom-lesson system.

The presence of these problems determines the relevance of the research, which proposes to solve them by integrating full-time and distance learning forms of the grammatical aspect of foreign language speech in specialized classes. The research problem is to search for new approaches in teaching foreign languages, related in particular to the development of a methodology for teaching grammar in specialized classes (philology).

One of the key areas of modernization of the school and the concepts of specialized education is the differentiation of education, which affects the entire educational process, including the learning process of foreign language. In accordance with this, the process of forming grammatical competence (as a component of conditions for the differentiation of grammatical material). The study of various approaches to the interpretation of the concept of "differentiation of learning" has led to the conclusion that the majority of scientists consider the differentiation of learning as a form of teaching organization, in which typological individual psychological characteristics of students are taken into account and a special relationship between teacher and students. Individual psychological characteristics mean the characteristics of students, according to which they can be combined into groups (Shakhmaev N.M.) Theoretical analysis of various approaches to the classification of types of differentiation made it possible to determine the main factors that affect the selection of grammatical material directly in the context of specialized training.

1. Profile requirements and the specifics of its specializations,

2. Students' interests,

3rd level of knowledge of students

Thus, the essence of the differentiation of teaching high school students the grammatical aspect was reduced to

1) Creating conditions for the study of grammatical material, reflecting the specifics of the chosen specialization of the profile of Philology,

2) Improving communicative competence and, within its framework, linguistic (linguistic) and, accordingly, grammatical competence by providing students with opportunities for multi-level teaching of the grammatical aspect, i.e.

- Creation of conditions for repetition of the material provided by the program requirements,

- creating conditions for the consolidation of grammatical rules, not allocated for repetition.

The influence of such factors as class overcrowding, lack of time to work with grammatical material due to labor intensity, reliance mainly on strong students, and, finally, the traditional classroom system with a 45-minute grid of lessons makes it almost impossible to implement the principle of differentiation in relation to learning grammar process

The introduction of a distance form in the learning process of foreign language allows students to provide additional practice in the classroom at school, by making time-consuming tasks for

working out, consolidating and improving grammatical skills for remote execution The expediency of using the integration model of full-time and distance learning is due to the possibility of its use for specialized training (Polat E.U), which is doubly relevant when it comes to organizing training in several specializations of the profile Philology The essence of teaching the grammatical aspect according to the integration model is to study and discuss the most difficult grammatical rules in a lesson in the classroom and perform tasks to consolidate them, practice and automate them remotely at home At the same time, it is preferable to place educational materials for remote work in a specially developed distance course.

The preference for the network model of teaching grammar in the context of integration is due to the psychological characteristics of senior school age, psychological, linguistic features of studying the grammatical aspect and methodological features of organizing teaching the grammatical aspect, the requirements of the State Standard for the level of proficiency in language (linguistic) competence at the profile level, basic teaching materials for face-to-face studies from the point of view of research by psychologists, senior school age is characterized by the desire for independence, the formation of the ability to think practically - to generalize, analyze, concretize and abstract, the development of the skill of independent work These skills are a prerequisite for working in a remote form of psychological aspect of teaching the grammatical side of speech includes the choice of the type of grammar to study a set of rules, or their actual application in practice Distance learning grammar creates conditions for a successful combination of theory with practice due to the possibility of working along an individual trajectory for each student.

The linguistic features of the perception of grammatical material include the presence of such linguistic phenomena as interference and transfer, the features of which are taken into account when determining the system of exercises and tasks, taking into account the specifics of work in a distance form. Analysis of the content of the grammatical material of a specific teaching material in English for students in grades 10-11 of general education institutions (profile level) reveals that basically the grammatical material is repeated, consolidated and systematized, and only some topics studied earlier are offered for in-depth study (for analysis and conducting an experimental test, a textbook was taken under the editorship of Safonova V.V)

Proceeding from this, in the second chapter of the dissertation research, the essence of the implementation of the principle of differentiation in profile teaching in distance form is explained, the didactic features of teaching the grammatical aspect in distance form are determined, the choice of pedagogical and information technologies for teaching the grammatical aspect according to the integration model is justified, the structure of the distance course " Let's learn English grammar "on the example of a textbook for specialized training, edited by Safonova V.V, the principles of selection of grammatical material for full-time and distance learning are determined.

The didactic features of teaching the grammatical aspect in a distance form, due to the capabilities of the Internet information environment, determine their specificity of the form of presentation, structuring, organization of content, forms of interaction between participants, the use of pedagogical and information technologies that are adequate to the concept of a personality-oriented approach in teaching, as well as goals and the tasks of the most distant course.

Accordingly, the organization of teaching the grammatical aspect in a distance form according to the chosen integration model is considered as a complex process, including the stage of developing its components (goals, content, methods, organizational forms and means), their design and use of the developed project in the activities of teachers and students.

The level of formation of grammatical skills and abilities in remote form is checked through such activities as reading and written communication, which determines the appropriateness of the choice of pedagogical and information technologies implemented in writing, namely training in collaboration, multilevel training, Microsoft office tools, e-mail, electronic bulletin board, conference / forum (asynchronous mode), chat (communication in real time).

## RESULTS AND DISCUSSIONS

The key point in the differentiation of grammatical material is its selection and structuring, taking into account the interaction of full-time and distance learning, the goals and objectives of profile training in foreign languages, the goals and objectives of teaching the grammatical aspect, the content and focus of the basic printed textbook for face-to-face studies. Teaching grammar according to the network integration model, it is advisable, before proceeding to the selection of training content for full-time and distance learning, to structure the distance course "Let's learn English grammar".

The curriculum includes general information about the course, a section containing the actual training course (grammar reference, exercises, text bank, course library, test tasks), a module for in-depth study of grammatical material for a specific specialization of the Philology profile, which is structured according to a general principle and has a complete structure, like the main course. There can be several modules, depending on the number of hours allocated for remote work.

The distance learning course integrated into the educational process in the grammatical aspect in specialized classes creates the best conditions for solving the problem of students choosing the specialization of the profile, provides the conditions for the most effective formation of communicative competence and its component linguistic (linguistic) competence. Moreover, the distance course can be a part of the educational process as well as an independent distance course.

For the selection of grammatical material in full-time and distance learning, it is necessary to take into account

1. Degree of study of grammatical material by grade 10, the current moment of its profile study (basic and profile levels of standard Educational program),
2. The degree of formed knowledge about the language as a system, i.e. readiness for theoretical analysis of grammatical phenomena and practical application of knowledge in practice,
3. Degree formed <sup>TM</sup> skills of independent work (including on grammatical material),
4. Selections of a distance learning model and its possible options,
5. Goals and objectives of profile teaching grammar in full-time and distance form

Further, the selection and structuring of the content of grammatical material in a distance course must be carried out in accordance with the chosen integration model of full-time and distance learning.

Prospects for the development of schools in the 21st century determine the use of modern pedagogical and information technologies, which entails a change in emphasis in the field of learning / mastering a foreign language: from the concept of "learning a foreign language for life" they are moving to the concept of "being able and ready to learn a language and culture in throughout life ". This, in turn, leads to the modernization of education, which includes a change in the goals of education, a reduction in the amount of compulsory content, a change in the methods and technologies for mastering content at all levels of education, and the individualization of the learning process. We especially note the emergence of variable education systems, including the introduction of forms of distance learning into the learning process.

The senior school is undergoing significant modernization, which is becoming specialized. The society is interested in literate, mobile and qualified specialists capable of communicating at the international level, and this presupposes knowledge of foreign languages. Accordingly, modernization affects standards, programs and curricula. The main goal of profile education is to provide an in-depth study of the subjects of the profile cycle, create conditions for differentiating the content of education for senior students, equal access to full-fledged education in accordance with the abilities, interests, and needs of students. This also affects specialized teaching of a foreign language (hereinafter in the work of the foreign language), which as a specialized academic subject (6 hours per week) is presented in the Basic Curriculum only in the philological profile.

It is known that now the main attention is paid to the communicative orientation in mastering a foreign language, the formation of communicative competence, and if we are talking about specialized classes, then this is doubly important. At the same time, the formation of communicative competence presupposes the need, along with other competencies, the formation of linguistic competence, one of the components of which is grammatical competence, which implies the formation and improvement of relevant grammatical skills, further development of cognitive grammatical skills, expansion of the volume of knowledge, systematization of the studied grammatical material. ... In this case, the most important component of the educational process is the student's independent educational activity.

Grammar is of paramount practical importance at all stages of learning from junior to senior, since it helps to develop the skills of oral and written communication. Particular attention is paid to the systematization of grammar knowledge at the senior stage.

On the one hand, a number of grammatical phenomena and constructions at the senior and profile-oriented stages should be studied at a productive level. On the other hand, the practice of teaching at school shows that very little time is devoted to grammatical material in the lesson, and no time is allotted for its repetition at all. Unfortunately, until now, teachers prefer frontal types of activity, in which the real time for the practical application of knowledge is no more than 1-2 minutes for each student. A way out of the situation can be the attraction of distance learning and models of distance learning that are adequate to the goals and objectives of teaching.

It should be said that many leading experts have been engaged in the problems of distance learning as a full-fledged form of education and its implementation in the educational process for several years: E.S. Polat, S.A. Shchennikov, A. V. Khutorskoy and others. Models of distance learning have been developed. The use of distance learning in teaching English in general and in improving grammatical skills in particular can provide additional practice for students both in the classroom at school and when doing homework at home. It is possible to organize such training according to the model of integration of full-time and distance learning forms, which provides for the transfer of certain types of activities and part of the studied material to a distance form.

The integration model will provide an in-depth study of grammar by transferring time-consuming activities (automation of a skill, consolidation of material, repetition of what has been passed) to a distance form and free up time in the lesson for the direct practice of dialogic, monologic skills and abilities. In addition, this model will make it possible to integrate the process of teaching grammar in high school into the entire process of teaching foreign languages in a philological profile, providing students with the opportunity to choose the desired specialty of the profile according to their abilities and interests (translation, linguistics, journalism, general educational orientation, etc.) due to the differentiation of the content grammatical material. It is possible to organize such a differentiated teaching when creating a distance course or an electronic grammar textbook.

In our research, we turn to the issues of attracting distance learning to the process of teaching grammar, since research on traditional approaches to teaching the grammatical aspect already exists at different stages. These studies were reflected in the works of Rogova G.V., Rabinovich F.M., Mirolubov A.A., Passov E.I., Bim I.L., Solovova E.N., Kitaygorodskaya N.A., Galskova N.D., Gez N.I., Kozher Ya.M., Milrud R.P., Moskalskoy O.I., Artyomova V.A., Espersen O., Titovoy S.V., Berman I.M. and etc.

We choose the senior stage of teaching foreign language at the profile level due to the sufficient study of the issues of the peculiarities of teaching grammar at the initial stage (studies of Zharkovskaya T.G., Shirokova J.I.A.), problems associated with teaching grammar in the first year of a non-linguistic university, teaching grammar at senior courses of philological orientation, teaching grammar on a cognitive basis for students of short-term courses (works by Bogatyreva O.D., Chernetskaya I.V., Yakimchuk O.S.).

Addressing the problem of introducing distance learning into the educational process in FL at the senior stage (profile level) is carried out in a number of areas:

- distance learning of the English language (works of Chetvernina M.I., Bukharkina M.Yu., Tatarinova M.A., Shapovalova T.R., etc.);
- distance learning of the German language (Dmitrieva E.N.);
- Issues of theory and practice of distance learning (Polat E.S.);
- pedagogical technologies in preschool education for general secondary education;
- requirements for the creation of courses for preschool education (Polat E.S., Moiseeva M.V., Petrov A.E.);
- issues of organizing the educational process of preschool education in foreign languages (Polat E.S., Bukharkina M.Yu., Dmitrieva E.I., Severova N.Yu., Shapovalova T.R.).

With all the development of the above issues, the problem of teaching senior pupils of specialized classes the grammatical aspect using distance forms remains poorly understood.

We consider the organization of teaching grammar in a distance course integrated into the educational process, where students are in constant interaction with a coordinator, a teacher, since there are already many electronic grammar textbooks on the network that offer lessons on-line and off-line that do not provide for constant communication with the teacher. The problem of creating and using an electronic reference book on the grammar of the German language in the work of Severabiy N.Yu.

The study is based on the following hypothesis: integration of distance learning into the full-time educational process will increase the efficiency of mastering the grammatical skills of the English language in senior specialized classes. Proof of a hypothesis requires:

- Analysis of the specifics of teaching English grammar in specialized classes based on the principle of differentiation;
- Use of the accumulated experience on the psychological and pedagogical features of teaching English grammar in specialized classes in a distance form;
- correspondence of the selected models of distance learning to the specificity of the subject, the level of education, and didactic, methodological tasks solved at this stage;
- Differentiation of grammatical material, taking into account various models of an integrated grammar course;
- development of methods for improving the grammatical skills of writing and reading in specialized classes in the context of the integration of full-time and distance learning.

The goal and hypothesis determined the formulation of the following tasks:

1. To analyze the goals and objectives of teaching the grammar of foreign languages in specialized classes for the philological profile;
2. To analyze the theoretical literature and practical research on the research problem;
3. To determine the psychological and methodological features of improving the grammatical skills of foreign language speech at the senior stage of training;
4. to analyze the features of the model of integration of full-time and distance learning forms in order to create a methodology for teaching grammar in these conditions;
5. to develop a grammar training course for the model of integration of full-time and distance learning, taking into account the possibility of training according to individual programs (for example, one of the specializations of the Philology profile provided in the course);
6. Analyze existing educational Internet resources for the formation of grammatical skills in the English language and include relevant email addresses in the distance course. To solve the set tasks, the following research methods were used:

- critical analysis of pedagogical, psychological, methodological literature;
- Pedagogical observations;
- questioning, conversation, interview;



- testing, including automated testing, control works;

- Approbation of the proposed course.

## CONCLUSION

1. The results of the search stage of the experiment showed the correspondence of the selected pedagogical technologies (cooperation technology and multilevel training) to the specifics of the training stage and the network version of the integration model of full-time and distance forms. The results obtained confirmed the availability of the developed methodology for improving the grammatical skills of students by means of work in a distance course.

2. Analysis of the data of the quantitative assessment of the effectiveness of the developed methodology indicates that for all trainees the combination of full-time and distance learning was accompanied by an obvious increase in the effectiveness of skills and abilities for each of the identified competencies.

3. The results of a qualitative assessment (questioning, conversation, pedagogical observation) of the educational process using the developed set of exercises for distance work and methods showed an increase in student motivation to the subject, student activity in the process of working in a distance course, improvement of the psychological microclimate in the group.

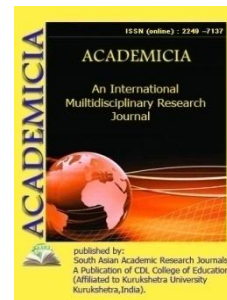
4. The data obtained during the experiment make it possible to judge the effectiveness of the developed methodology for improving the grammatical skill in order to solve specific didactic problems at this stage of training.

5. The results of the experimental teaching confirmed the validity of the hypothesis put forward and the effectiveness of teaching grammar according to the model of integration of full-time and distance forms in specialized classes of high school, provided that it is systematically used.

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## CENTRAL ASIA: STATE AND RELIGION IN THE INTERPRETATION OF ARAB RESEARCHERS

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### ABSTRACT

*The article is devoted to the analysis of the approaches of the Arab scientific community to the relations between the State and religion in the Central Asian region, radical groups and terrorism. The purpose of the proposed article is to further study, synthesize and classify the views of Arab researchers and draw new conclusions based on them. The work uses methods of historiographic and political analysis, methods of religious studies. The content analysis method was used, and the problem-chronological and comparative analysis methods were used as auxiliary methods. In the course of the study, important, controversial and debatable issues of the history of Uzbekistan were re-examined from the point of view of Arab researchers, new data were provided and new aspects of the problem were identified. The study showed that in the Arab countries, knowledge about the religious situation in Central Asia is more one-sided and limited to the activities of certain radical Islamic groups. In the final part, on the basis of expert assessments and judgments of the Arab scientific community on this topic, a spectrum of approaches on the negative impact on the interaction of Uzbekistan with the Arab countries is presented, as well as several recommendations.*

**KEYWORDS:** *Central Asia, State And Religion, Radical Islamic Groups, Approaches Of Arab Analysts.*

## INTRODUCTION

The relevance of the topic – Since gaining independence in the countries of Central Asia, as well as beyond its borders, several assumptions have been made about the influence of the Islamic factor on political and social life, and studies have been developed on this topic. In these works, you can see different approaches to the study of processes, their development and nature, expert assessment, analysis and forecasting. In general, the research on this issue can be grouped as follows: the studies carried out in Central Asia and Russia can be attributed to the first, in Europe and the United States to the second, as well as to the work carried out in the Muslim States to the third. Each research group has different approaches to the problem. In this article, special attention will be focused on the studies of the third group.

It is common knowledge that Uzbekistan's cooperation with the Arab States is now reaching a new level. A similar rapprochement was observed in the early years of Uzbekistan's independence, but misunderstandings on several issues put the partnership in a stagnant position. In the 1990s, Arab countries like Saudi Arabia and Qatar criticized the religious policies of the Central Asian republics and their actions against radical Islamist groups. In turn, the Uzbek Government accused the Arab countries of supporting the Islamic missionary movement, which was widespread in Central Asia in the early 1990s, of imposing radical Islamic ideas on students sent to study in Arab countries; as Egypt and Saudi Arabia, and in the promotion of Salafism. The recognition of the «Islamic Movement of Uzbekistan» by Qatar and Saudi Arabia, as well as the use of the term «Wahhabi» in the political and scientific circles of Uzbekistan with regard to certain radical groups, has caused controversy between the parties. All these phenomena have been reflected in the scientific and policy analyses of researchers.

Between 1991 and 2019, specific content was developed in the Arab States. The political will of States played a major role in its creation. The Arab content, which analyses and evaluates events, did not always correspond to the overall dynamics of events and phenomena in real life. From this perspective, it can be argued that an examination of the Arab segment on this issue is of practical importance for a better understanding of the causes of tension in past relationships and the development of current partnerships. The main purpose of the study is to study, synthesize and analyze the contemporary views of Arab researchers on the relationship between State and religion, radical Islam and terrorism in the Central Asian region.

### Literature analysis

To demonstrate the specificity of the Arab segment on this issue, it is considered appropriate to provide an overview of the general literature on the subject. The interaction between the secular State and religion, as well as the influence of radical Islamic groups on security in Central Asia, has always been the focus of attention of local and foreign researchers. Changes in the fundamentals and methodology of radical Islamic groups in recent years have led to a diversity of views on this issue. The present study selects the work on this topic from 1991 to 2019. It can be studied in three groups:

1. Studies in Central Asia and Russia;
2. Research in the United States and Europe;
3. Scientific writings in Arab and other Muslim countries.

Research by analysts in Central Asia and Russia shows that the threat level of religious and radical groups to the region is very high. In the works of Z. Munavvarov, B. Babajanov, M.Y. Sinichenko, K.I. Polyakov, a serious assessment is made of the level of threat of fundamentalism and the activities of radical groups. The studies of Z. Munavvarov repeatedly analyzed the relations between the secular state and religion in Central Asia.

European analysts often try to portray this threat as unfounded for various political reasons. Specifically, in recent years, Islam in Central Asia has always been an instrument of legitimization for ever-changing regimes and has been pursued by the regimes themselves as a power-wielding force. The idea that Central Asia is a Muslim region that is less affected by Islamic terrorism is hotly debated in academic circles. Experts estimate that 0.005 per cent of the population of Central Asia has been involved in terrorist groups over the past decade, which led to the conclusion that the region is a very low risk of radical Islam and fundamentalism [1].

In the writings of John Heathershaw, David W. Montgomery, Edward Lemon, Catherine Pujol [2], Noah Tucker [3] the Islamic factor in the Central Asian republics is seen as a tool for maintaining the political system.

Although experts do not deny the danger of instability in the Middle East and Afghanistan, as well as the fact that about 5,000 people from Central Asia have joined radical militant groups, they nevertheless disagree with the statement about the high level of threat of fundamentalism and radical Islamic groups.

However the experts do not deny the dangers of instability in the Middle East and Afghanistan, and the fact that some 5,000 Central Asians have joined radical militant groups, nevertheless, they disagree with the assertion that the threat level of fundamentalism and radical Islamic groups is high.

In the Muslim States, there is a perception that radical Islamic groups operating in Afghanistan and West Asia pose a serious challenge to the stability of Central Asia. In their view, in today's reality, radical Islamic groups have markedly stepped up, changed the methodology of their tactics and are looking for a suitable platform for themselves. Against the backdrop of acute social and economic problems, Central Asia was becoming the best platform for radical Islamic groups.

Bayram Balchy's research raises the issue of the evolution of the relationship between the State and religion in Central Asia and the influence of leading Muslim states in strengthening the role of this factor. [4]. In particular, in his book «Islam in Central Asia and the Caucasus Since the Fall of the Soviet Union» the author attempts to reveal the fundamental bases of modern processes in the light of the analysis of the formation of radical Islamic groups in the last years of the Soviet regime.

Each of the individual groups has its specific analysis and presentation features. For example, the works of Arab researchers show a high level of Islamic spirit.

For a more thorough analysis of Arab studies on the subject, they may be classified as follows: issues of the secular State and religion in Central Asia; activities of radical Islamic groups in the region and terrorism.



**Issues of the secular state and religion in Central Asia**

The emergence of secular States in the Central Asian region, recognized from time immemorial as a centre of Islamic culture with a predominantly Muslim population, has become the subject of controversy over the region's political future. International experts see the perspectives of the States of the region in striking a balance between religion and secularism. The current situation in the region has reinforced the aspirations of Saudi Arabia, Iran and several other Muslim countries to expand the range of Islam. In order to integrate their geopolitical interests into the orbit; these countries supported the revival of Islam and Islamization. In particular, the Central Asian region received considerable attention from Saudi Arabian experts. In a short period of time, from 1990 to 2000, a number of scientific expeditions were organized, monographic works and scientific articles on the existence and preservation of the Islamic heritage were prepared. The research of that time was purely informative, and the questions studied were filled with Islamic ideas. At first glance, it may seem that the attention of researchers was focused on places of pilgrimage, mosques, madrassas, religious rites of the population, and the protection of Islamic heritage. However, upon closer examination, it can be understood that their main goal was to assess the role of Islam in the political future of the region by studying the measures taken by the state to develop the religion of Islam. Of great importance are the works of Kharb Mahmud, [5] Obid-kary Muhammadjon, [6] Muhammad Nosir Ubudy and Muhammad Abdulkadyr, devoted to the study of the daily life of Muslims in the region. However, given that the mission of these researchers was to support and propagate Islam, one cannot fail to notice the unilateralism of their views. It is also important to note that the period of these studies coincides with a time when the countries of the region have not yet taken a firm position on the building of an Islamic and secular enlightened State.

The study illustrates that there has been a transformation in the views of Arab scholars on religion and the secular enlightened State from the ideas and approaches expressed in the writings since 2000. In 1996, one of the Arab authors Obid-kary Muhammadjon named the situation in the region as «the desire from darkness to light», thus endorsing the policy on the Islamic religion. But the work done since 2000 has pointed to Islamophobic views in the minds of the region's political elite. For example, the Internet publications «Al-Muslim», [7] in 2004, «Iraq-Amsi» [8] and «Al-Ukah» [9] in 2007, have sharply criticized the government's policy regarding Islam, religion, and the way of life of Muslims in the region, particularly in Uzbekistan.

To summarize the first preliminary results, it should be noted that the research can be divided into two groups by period. The first period covers 1990-2000 and the second period after 2001.

The first group of studies carried out in the 1990s and 2000s, as noted above, were characterized by approval, support and calls for a return to the roots of Islam. They also addressed the following issues:

In the early 20<sup>th</sup> century, Central Asia was isolated from the Islamic world. And in the political governance of the colonial republics of the region, the norms of Islam have also been lost. Since 1917, the countries of the region have been cut off from the Muslim world. Soviet Muslims in Central Asia practised Islam without Sharia since 1926. In 1942, Stalin recognized Islam as the official religion for the Soviet republics of Central Asia. The analysis of such a plan contributes



to understanding the evolution of the region from an Islamic form of government to a secular form of government.

Arab authors, including Muhammad Abdulkadyr, explaining the reasons for the region's transition to a secular form of government, where the foundations of Islamic doctrine, spirituality, Sunni doctrine, and hadith have historically been laid, Colonial policies and ideas of socialism are cited as a fundamental factor. The studies carried out from 1990 to 2000 are of great importance in the study of the history of Islam in Central Asia, the role of Islam in the ideology of Muslims and issues of secularism, the understanding of the processes of religious governance and the attitude of the State towards religion.

The policy of restructuring, which began in the second half of the 1980s, ensured religious freedom in the Muslim republics of the former Soviet Union. [10]. Liberal religious reforms in the Union Muslim republics have attracted the attention of Arab scholars. In particular, in the late 1980s, several Arab scholars visited holy sites and mosques in Central Asia, interacted with Muslim communities, and familiarized themselves with the general situation, religious rites and rituals of Muslims, Prepared first opinions on a religious and secular State in the region [11].

According to the latter, Islam in the region has an element of ethnicity that prevails over religion.

Already in 1998, experts of the newspaper «Al-Khayat» wrote: «In the 1990s, newly formed republics of Central Asia faced a difficult situation concerning religion and secularism. The results of the unsuccessful attempts to alienate people from Islam under the influence of communist ideology and Marxism have, over time, become contrary to the principles of secularism. One of the challenges facing the Central Asian States in the early years of independence was the choice of a path of development linked to religion or secularism [12].

According to Mahmoud Muhammad al-Bahi, in the first years of independence, in order to oppose the fundamentalists and to create a «religious enlightened state,» the Uzbek government turned to local ulema/religious scholars and Sufi. In general, Uzbekistan had two paths characteristic of the Muslim East. The Iran-Sudan model is the Islamic State and the Islamic order, and the second track is the Pakistan-Islamic State, based on secularism. According to the author, the second option was more acceptable to Uzbekistan. In the early 1990s, the internal situation in Uzbekistan was very tense, in other words, the difficult demographic situation, economic difficulties, the rise of Islamists in the Ferghana Valley and the inter-ethnic clashes between Uzbeks and Tajiks in Samarkand, Bukhara, Surkhan-Darya and Kashka-Darya oblasts demanded more radical measures [13].

Aforementioned arguments of Al-Bahi have not been proved in practice, as in the early 1990s international experts, including Arab experts, were unanimous in their view that the perception of Islam in the region was limited to the official recognition of Muslim identity. Al-Bahi analyzed the complexities of the transitional period against the backdrop of religious problems. Experts from Uzbekistan, in particular, Professor A. Khaidarov, point out that neither the Iranian nor the Pakistani model of governance based on the doctrines of Islam can serve as a model for the Republic.

The end of the second cycle of intense internal strife, of the 1990s, depended on the forthcoming elections of 2000. The election was supposed to be an open confrontation between Islamists and supporters of a secular state. Arab research centres and the media actively monitored these

processes. In the periodicals of Al-jazeera.net, [14] Al-Akhram, Kuna.net.kw [15] was given a critical assessment of the election campaigns and results. In analytical materials, in particular, in the studies of Mahmud al-Bahi, a one-sided analysis of the current religious situation and politics in Uzbekistan is conducted.

*According to him, by the year 2000, the process of reviving religious traditions in the daily life of the population of Tashkent and the Ferghana Valley had significantly intensified. By 1997, the appearance of Tashkent had changed considerably since the 1990s. Many women wore the hijab, mosques and dozens of madrasahs were given active religious instruction. This caused alarm among the Christian communities of the European population. A poll among them showed that if representatives of the Islamic forces had participated in the 2000 elections, 70 per cent of Tashkent voters would have voted for them. [16]*

Thus, 1990-2000 was a time for Arab researchers to rediscover the new Muslim republics of Central Asia. They actively monitored religious developments in the region. Studies during this period focus on assumptions and conclusions about the political future of these republics. The studies before 2000 differ significantly from the studies and analyses since 2000. The material published between 2000 and 2016, as opposed to previous years, is highly critical. According to our findings, this is primarily because the Arab States have been unable to Islamize the region and revive Islam.

In particular, the study of the materials of the Internet publication «Alukah» covering the social and political life of Muslims of the world at the end of 2008-2015 showed that they contain a large number of critical approaches [17]. For example, the prohibition of the wearing of the hijab on Muslim women in State institutions, the prohibition of visits by minors to mosques, the imposition of restrictions on mosque assemblies of more than five hours, and the holding of the iftar, restrictions on religious education, on the study of the Koran and the Hadith, and increasing responsibility for private religious education.

Summarizing this section, we can conclude that Arab scholars agree that the political component of the region cannot develop without taking into account the norms of Islam. In their conclusions and judgments, they recommend that Central Asian society, so to speak, be closer to Islam.

### **Radical Islamic groups and terrorism in Central Asia**

The terrorist attacks in Tashkent in 1999, the armed conflicts on the Uzbek-Kyrgyz border in 2000 and the Andijan events of 2005 were assessed as the result of the activities of radical Islamic groups. In the countries of the region, the struggle against radical Islamic groups has begun. Over time, new content on the activities of radical Islamic groups in the region has begun to emerge in domestic and foreign academic circles. Analyses by Arab scholars of the religious situation in the region also focused on radical Islamic groups during the period 2005-2016. In this context, the enormous influence of Arab research centres should be noted. In particular, political research centres such as Al-Jazeera, Al-Akhram and Al-Arabiya have begun to highlight the problem.

Professor of the Cairo University Ragda Mahmud Muhammad Lang, based on the study 'The radical Islamic militants of Central Asia', divides the activity of radical groups in Central Asia into two periods in 2016. The first period was the beginning of a decade after the collapse of the Soviet Union, during which radical Islamist groups attempted to exploit the weaknesses of the

young republics, a process that continued until 2001. A feature of the second period was the new situation in Central Asia, which was preceded by the intensification of the crisis in Afghanistan following the events of 11 September 2001. [18].

The author also highlights several factors that contributed to the spread of terrorism in Central Asia, among them the disintegration of the Soviet Union and the new socio-political processes that followed; cognitive factors, diversity of views on development in the early years of independence. The following factors are also present: the theory of the creation of historical «Cities of Virtue» or state according to the new western model; factors of aggravation of existing racial and religious conflicts in the region; abundance of economic problems in the region and not the elimination of them; Increased political power of the Taliban movement in Afghanistan in the 1990s; and finally, political repression and increased pressure in the republics of the region [19].

Similar studies have been conducted by experts from think tanks such as Al-Jazeera, Al-Arabia and Al-Ahram. Experts from the research centre «Al-Bayan» assert that radical Islamic groups operating in Afghanistan and West Asia pose a serious threat to Central Asia. The region has proved to be a very convenient platform for radical international terrorist and Islamic groups. The Centre's experts attribute this to the following factors:

First, the region serves as the main transit for the transport of narcotic drugs from Afghanistan to Russia. Secondly, the high level of corruption in the countries of the region does not allow for a healthy economic climate and a stable political situation. Thirdly, as a result of unemployment and growing poverty in the region, the level of migration among the population is increasing. Fourthly, the existence of authoritarian regimes and the continuation of the rule of individual leaders. Fifthly, water problems – in other words, Tajikistan and Kyrgyzstan in the region have huge water reserves, while Uzbekistan, Turkmenistan and Kazakhstan are lacking in water resources. This, in turn, could lead to new types of conflict. Sixthly, the threat of increased influence – that is, the clash of interests between the major world powers like Russia, China, the US, the EU and leading Muslim states, which could have serious consequences for the security of the Central Asian republics.

In accordance with the methods used to adapt radical groups to contemporary international realities, the above-mentioned situations constitute the best framework for their activities. In particular, according to the experts, until 2005, Uzbekistan had been the territory where terrorist and radical groups had manifested themselves most. In turn, the Arab analytical resources have made a detailed analysis of certain aspects that have not yet been studied in our domestic historiography, and the programs of radical groups have also been considered.

According to experts, the following factors are particularly relevant in the programs of radical groupings: an ideological factor that has several catalysts and can be grouped as follows. First, national jihad presupposes the overthrow of secular (kafir) systems and the establishment of an Islamic State based on the Shariah. Secondly, global jihad is the elimination of traditional national borders, the creation of a new State with the support of international forces. Third, the creation of an Islamic caliphate linking Xinjiang – East Turkestan and Central Asia-West Turkestan under a single Islamic flag. The Islamic Movement of Turkestan and the Islamic Movement of Uzbekistan were the leaders of this process.

Radical Islamic groups intended to take advantage of the long-standing policy of secession of some Central Asian republics, the complex of economic and social problems common to all republics, and the flourishing of corruption. Among other things, they have begun to attract outside forces, namely, groups such as the Taliban and ISIL [20].

According to Atif Abdulhamid, since the second half of the 1980s religious associations in the region had been formed with the aim of participating in political processes. The author believes that there are three radical Islamic groups in the region: the Islamic Revival Party, the Islamic Movement of Uzbekistan and Hizb Ut-Tahrir (Islamic Liberation Party) [21].

All the groups mentioned by the author are currently on the list of terrorist organizations whose activities are prohibited in the territory of the Central Asian region. Examining the conditions for the formation and evolution of radical groups, the author raises the question of the extent of threats to these groups in the region.

### **Islamic Movement of Uzbekistan**

The history and events of the movement are widely covered in Arabic-language studies, including at the Al Jazeera Research Centre. The movement was founded in 1996 by the Uzbek opposition to Afghanistan. According to the Arabs, the political leader of the movement became Tahir Yuldashev, and the movement was formed as an opposition group against the Government of Uzbekistan [22].

According to Al-Arabiya 2014, former leader of the Islamic Movement of Uzbekistan, Usman Ghazi, joined his supporters in ISIL, the news channel also briefly discussed the history of the movement. Taking into account the participation of members of the movement in hostilities in 1992-1997 on the territory of Tajikistan, in 2000 on the border between Kyrgyzstan and Uzbekistan and in large-scale military operations in the same year together with the Taliban, The Government of Uzbekistan considered it necessary to maintain constant vigilance to combat them [23].

According to him, in recent years, military training centres for Islamic State militants have been established in the areas bordering Afghanistan. This, in turn, required strengthening regional security. It should be noted here that the editorial board made these conclusions referring to Russian information services.

According to the independent news channel Alyaum, in 2012 the members of the movement moved to Syria through Turkey and formed a battalion there «Imam Bukhari». Whereas the number of members of the Islamic Movement of Uzbekistan in 1991 was more than 10,000, later the number fell to 3,000. During the period of its activities in Syria, the movement has been active in bringing young people from Central Asia into its ranks [24]. The information and estimates given by the news channel in 2017 are confirmed in practice today.

The studies and analyses of Arab think tanks and independent experts on radical Islamist groups and terrorism in Central Asia can be summarized as follows:

The rise of terrorism in Central Asia poses several risks. Namely, the most feared supply of soldiers by radical groups operating in the region is to terrorist organizations such as the Islamic State and the “Taliban” movement. For example, a significant number of terrorist acts in Europe

in recent years have been carried out by Central Asian nationals, who have also managed to break through the ultra-powerful security systems of Russia, Turkey and Sweden.

In light of the foregoing, we note that the high level of professional training of the perpetrators of the terrorist attack has raised serious concerns in the international community. According to a report by the Washington National Center for Strategic Research (INSS), between 4,000 and 5,000 fighters from Central Asia fought in Syria in 2016. According to Arabic publications, 1,500 of them are Uzbeks. In light of the latest developments in the Arab media, the issue of terrorism in Central Asia has begun to receive new coverage. On television channels such as Al Arabiya, Sky News Arabia, Al Jazeera, the region began to be portrayed as a zone of active terrorist warfare.

## CONCLUSION

While the research conducted by Arab researchers over the years has varied in content, there is a commonality of goals and objectives. The analysis provides an overview of the historical foundations of the development of the Central Asian States, the study of the Islamic factor in contemporary realities, and a specific analysis of political elites and ideologies. According to the Arab experts, the countries of the region had lost their traditions of Islam and their historical and cultural identity under the influence of Russian colonialism. In the context of independence, there are doubts and fears about their restoration, including the revival of the Islamic heritage. The political and ideological views of the newly established States in the region depend on the political elite of the region, as well as on their will and views on the expression of orthodox or modernist Islam in the political process.

In order to carry out a proper study of the political situation, general situation and prospects of Islam, there is an urgent need for more detailed analysis from the viewpoint of Islamic studies and political science. One of the pressing issues facing the experts is the elaboration of practical proposals for the integration of Islam into the political life of the countries of the region. Experts believe that as long as radical Islamic groups operate in the region, there is no guarantee that they will resort to various forms of terrorist activity. In this sense, the activities of radical Islamic groups, the methods of their actions, must be studied in a comprehensive manner, the information about them must be public. This, in turn, will assist in the development of strategies to combat them.

Another important aspect of the Arab segment on the issues of a secular and religious enlightened state, as well as the activities of radical groups in Uzbekistan, is that the present database influences Uzbekistan's cooperation with Arab countries, and the international image of Uzbekistan in the Muslim world depends to a large extent on the opinions of Arab academic circles and political structures.

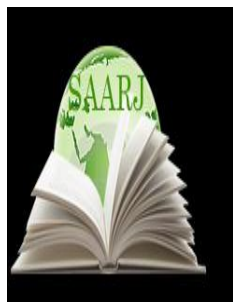
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## CLINICAL AND DEMOGRAPHIC QUALITY OF LIFE FOR PATIENTS WITH ISCHEMIC STROKE IN UZBEKISTAN

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### ABSTRACT

*Stroke is one of the most common neurological diseases and is becoming more and more medico-social and economic. According to WHO statistics, 15 million strokes occur in the world for a year with different causes. One of the frequent causes is arterial hypertension, which affects about 12.7 million people, 6.2 million of whom end up deadly. In 80% of patients, stroke is due to the risk factors of stroke: smoking, high blood pressure, diabetes, obesity. The risk of stroke is twice as high in smokers as in non-smokers.*

**KEYWORDS:** *Stroke, Stroke-Specific Quality Of Life Scale (SS-Qol), Blood Pressure, Diabetes, Obesity.*

### INTRODUCTION

Stroke is one of the most common causes of death and functional disability worldwide. Recent statistics have shown that the incidence of stroke has increased by 20% in low and middle-

income countries such as Russia, Afghanistan, Tajikistan and Uzbekistan. In Uzbekistan, the high prevalence of stroke is a serious economic and social burden. The physical, social and psychological consequences of this condition are devastating - about 90% of survivors have some type of disability. Brain infarcts have a direct impact on the health care system, which leads to high costs, and is also considered a global public health problem due to serious disability, functional limitations and declining quality of life (Living Quality) The impact of stroke on people's lives is a serious problem for society. In addition to being a sudden event, stroke affects both individuals and families who are generally not prepared for the rehabilitation processor for the disability that results from this condition. As a result, after a stroke, a large number of people are unable to work and receive financial assistance.

In study by V. Balaji et al. the measurement of BNP levels help the clinicians to differentiate cardiac and non-cardiac causes of dyspnea in the emergency setting. Patients with IHD and hypertension should routinely undergo inexpensive investigation like spirometry to detect the presence of underlying asymptomatic or subclinical OAD.

Several studies on the quality of life after stroke have been developed all over the world, including in Uzbekistan. It is necessary to realize the seriousness of the consequences of stroke for health. As changes over time in physical, emotional, cognitive and social participation affect the quality of life, it is necessary to identify areas. Also, it is necessary to lay the foundation for the development of future models of care for people who have suffered from stroke by improving their quality of life. After a stroke, people face a new problem, namely, the limitations of not only mental but also physical complications. Patients require special rehabilitation to achieve functional recovery. Moreover, the support of the family, society, as well as maintaining the level of recovery is of paramount importance to achieve a good quality of life. Using the Quality of Life Scale for Stroke (SS-QoL) is important for assessing the impact of human life on society. Studies conducted with stroke patients have shown that stroke affects different areas of quality of life, impairing functionality. However, there are few studies on this topic in the CIS countries. It is crucial to develop specific functional recovery programs and health policies to achieve social integration into the work, as well as health promotion strategies to control risk factors for stroke patients.

Our research aimed to analyze the impact of ischemic stroke (IS) on health-related quality of life.

**Research objective.** To analyze the results of the quality of life scale (SS-QoL), for the criterion of evaluation of ischemic stroke in the examined group of patients who were under treatment in the neurological department of the clinic of Tashkent Medical Academy № 3.

## MATERIALS AND METHODS

We investigated clinical and demographic aspects of 70 patients with ischemic stroke who were under treatment in the neurological department of the clinic of Tashkent Medical Academy № 3. For correlation analysis, we used a life quality scale specific to stroke (SS-QoL). This scale evaluates each indicator according to different gradations (Table 1).

**Quality of life scale for a stroke****TABLE 1.RATING: EACH INDICATOR IS ASSESSED ACCORDING TO THE FOLLOWING GRADATIONS:**

Completely dependent - can't do anything - absolutely agree	1
Heavily dependent - a lot of difficulties - I agree.	2
Partially dependent - some difficulties - neither agree nor disagree	3
A bit of dependency - a bit of difficulty - disagree.	4
Independent - no difficulty - absolutely disagree	5

<b>Indicator</b>	<b>Evaluation</b>
<b>Powerfulness</b>	
1. Most of the time I feel tired	
2. During the day, I need to stop to rest.	
3. I was too tired to do what I wanted to do.	
<b>Family role</b>	
1. I am not involved in family activities for fun	
2. I feel that I am in the burden of my family.	
3. My physical condition prevents me from living my personal life	
<b>Speech</b>	
1. Do you have any difficulties with your speech? For example, stuttering, stuttering, or misspoken words?	
2 Do you have difficulty pronouncing words clearly over the phone?	
3. Do people around you understand what you are saying?	
4. Do you have difficulty finding the right words?	
5. Do you have to repeat what you have said to be understood?	
<b>Mobility</b>	
1. Do you experience difficulty walking? (If the patient is unable to walk, grade questions 2-3 as 1 point and move on to question 4).	
2. Are you losing your balance by leaning over something or trying to get something?	
3 Do you experience difficulty climbing stairs?	
4 Do you feel the need to stop and rest more than you would like when walking or using a wheelchair?	
5. Do you have difficulty standing up?	
6. Do you have difficulty getting up from your chair?	
<b>The mood is.</b>	
1. I was discouraged by my future.	
2. I was not interested in other people's activities	
3. I felt disconnected from other people.	
4. I do not feel confident in myself	
5. I have lost interest in food.	
<b>Features of character</b>	
1. I was irritable.	

2. I was impatient with those around me.	
3. my character has changed.	
Self-service	
1. Do you need help with cooking?	
2. Do you need help with your meal? For example, do you need help cutting or cooking?	
3 Do you need help dressing? For example, do you need help wearing socks or boots, buttoning up or zipping?	
4. Do you need help taking a shower or bath?	
5. Do you need help using the toilet?	
<b>Social role</b>	
1. I do not go out as often as I would like to.	
2. I do my hobby or have less fun than I would like to have.	
3. I see my friends less than I would like to see them.	
4. I have sex less often than I would like to.	
5. My physical condition hinders my social life	
<b>Thinking</b>	
1. It's hard for me to concentrate.	
2. It's hard for me to remember things.	
3. I need to write down so that I don't forget.	
The function of the upper limb	
Do you experience difficulties in writing or typing?	
2 Do you have difficulty wearing socks?	
3 Do you have difficulty buttoning?	
Do you have difficulty fastening zippers?	
5. Do you have difficulty opening the cans?	
<b>Sight.</b>	
1. Do you see the TV so well that you can enjoy the program?	
2 Do you have difficulty getting anything because of your poor eyesight when you need it?	
3 Do you have difficulty "seeing things off" in one direction?	
Work/performance	
Do you experience difficulties in doing your daily chores?	
2 Do you have difficulty completing the work you started?	
3 Do you have difficulty doing the work you are used to?	
<b>THIS BALL:</b>	

To evaluate the quality of life, we applied a quality of life scale for insult (SS-QoL). SS-QoL is a tool specifically used to assess the health-related QoL among people who have suffered a stroke. SS-QoL contains 49 elements in 12 areas ranging from 49 to 245 points, with answer choices from 1 to 5 points. Higher values indicate a better quality of life-related to health. To fill in the questionnaire were used case histories, medical records regarding the occurrence of hypertension, mobility, smoking, alcohol consumption, dyslipidemia, diabetes mellitus, stroke,

cancer, obesity, heart failure, coronary heart disease, acute myocardial infarction, transient ischemic attack, cardiomyopathy. , chronic obstructive pulmonary disease, renal failure, peripheral artery disease and drug abuse. These diseases were diagnosed based on international criteria, medical records and medical consultations. Also, we collected the following socio-demographic and clinical data: age, sex, marital status, skin colour, profession, the real labour market and possible change of job after a stroke, financial assistance after a stroke, the number of people living with the patient, income, level of education, the number of strokes, the affected hemisphere, time after the stroke, the duration of hospitalization and the time between stroke and first treatment.

## RESULTS

Among 70 patients with ischemic stroke, 80% had moderate to severe disability. According to SS-QoL, several domains of QoL have been compromised. Quality of life significantly correlated negatively, indicating a lower quality of life among people with poorer functional status and greater clinical severity of stroke.

In terms of socio-demographic and clinical characteristics, stroke patients were predominantly male (70.0%), married (65%) and retired (35%). A small percentage of patients were employed (8.2%) or changed their profession (1.8%) after an ischemic stroke. More than half of the patients were older than 65 years of age with low family income and attended school until they were four years old. In terms of stroke patterns, both hemispheres of the brain were equally affected.

We also found a high prevalence of arterial hypertension (87%), sedentary lifestyle (82%), smoking (60%), alcoholism (50%), and dyslipidemia (48%).

## CONCLUSIONS

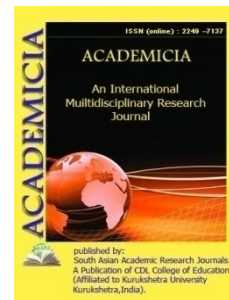
This study describes the inversely proportional relationship between stroke severity, disability and quality of life. Early identification of these factors can contribute to more effective interventions for people with ischemic stroke, minimizing disability and improving quality of life. Men prevailed among patients with ischemic stroke. The average age of patients was 65 years and older. Thus, stroke at this age had an impact on their lives and the society in which they live. It is necessary to pay special attention to patients at risk. Arterial pressure is one of the important risk factors for stroke. Treatment of blood pressure is also important for secondary prevention. In addition to the above factors, attention should be paid to the elimination of various other factors. As for the performance of stroke patients, the study showed that the determining factors are gender, age, level of education and the severity of stroke. Some studies describe a return to working capacity. In general, people in managerial or administrative positions and the self-employed are more likely to return to work. Many studies have proven to improve walking speed and balance when the intervention was associated with physiotherapy that combines repetitive facilitation exercises. Nevertheless, several studies investigated the motor activity of stroke patients. The low level of education, low family income and living in remote rural towns make the rehabilitation period difficult. Patients with worse quality of life were diagnosed with more severe stroke and weaker functional activity. In addition to the above factors, there are secondary factors associated with mental feelings, such as various disappointments and depression. Patients with stroke must feel the support of the family, social support from society.

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## THE NIGERIAN ARMED FORCES IN PEACETIME DEPLOYMENT OF TROOPS TO CONGO, LIBERIA, MALI AND SIERRA LEONE, 1960-2015

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### ABSTRACT

*This paper analyses Nigeria's deployment of troops to other African states such as Congo, Liberia, Mali and Sierra Leone in peacetime beginning from the immediate post-colonial period. It is important as a research effort to present the nature of Nigeria's contribution to peacekeeping, peace building and peace support for the prevalence of unity, peace and stability. This has formed the subject-matter and focus of the paper which is also part of the developments that have informed debates among scholars, decision makers, public policy analysts and commentators at home and abroad. The paper's findings have demonstrated that Nigeria made significant contribution to peace and security throughout the African continent which considerably enhanced its national interest and national security objectives. But the efforts that Nigeria has made to take its pride of place in the world through this key aspect of its foreign and defence policy were hindered by corruption, problems of leadership and good governance, and continued struggle against imperialist interests. The paper argues nevertheless that Nigeria's contribution to peacetime stability of the African states has been significant. The methodology*

*adopted for this paper was the historical research method which uses the multi-disciplinary approach. This methodology also adopted the usage of primary and secondary sources which has been collected, interpreted, evaluated and analysed for harmony and accuracy, corroboration and consistency, in order to achieve the overall objectives of the paper. In conclusion, the paper acknowledges the concerns over Nigeria's peacekeeping efforts and the benefits thereof to the country.*

**KEYWORDS:** *Deployment of Troops, Peacetime, Peace Building and Peace Support, Stability, National Security Objectives.*

## INTRODUCTION

The focal point of this paper is to highlight Nigeria's immense human and material resource contribution to international peacekeeping, peace building and peace support operations in selected African countries especially in peacetime; and beginning from the post-independence era. These African countries or states include Congo, Liberia, Mali and Sierra Leone. Nigeria undertook several such missions in the bilateral, international and global realms through the United Nations Organization, (UNO), the Economic Community of West African States' Monitoring Group, (ECOMOG), the ECOWAS Mission in Guinea-Bissau, (ECOMIB), the African Union, (AU), and through multilateral agreements, as well as several other missions to make Africa safe for peace, security, stability, democracy and development [1].

Thus, this paper takes as its special focus, a study of international peacekeeping through troops' deployment in peacetime and the basic characteristics of these missions as undertaken by Nigeria within African states in the post-1960s era. Special emphasis has been placed upon the country's contribution to peace and conflict resolution in the continent to create an enabling environment for economic growth, progress, development, and the spread of wealth and prosperity taking the case of the selected African states. Efforts have also been made in the paper to show the impact of Nigeria's peacekeeping, peace building, and peace support contribution on the countries concerned, and the results or benefits if any, on its national interest and national security objectives, as well as the country's growing influence in the UN Security Council and within the international community.

The significance of Nigeria's contribution to international peacekeeping, peace building and peace support in African states through troops' deployments even in peacetime, and over the years, and the advantages, benefits, costs and challenges to the country remains a key subject of study. Therefore, the paper seeks to examine these foreign and defence policy engagements of Nigeria and the directions this have assumed taking the case of the selected African states such as the Congo, Liberia, Mali and Sierra Leone. It is imperative to state that these international peace engagements by Nigeria preserved the continued growth of the African states in the cultural, economic, political, defence, disarmament, stability, peace and security fields of national life. It also enhanced technical assistance and multi-lateral co-operation between them and Nigeria on the one hand, and other foreign governments and international organizations [2]. It is stating the obvious that Nigeria's huge contribution to peace and security in Africa remains a great subject of study, analysis and interpretation by present and future historians.

## **CLARIFICATION OF MAJOR CONCEPTS**

The major concepts that have been imperative for clarification in this paper concern the definition or meaning of the deployment of troops and the concept of peacemaking, hence those deployments under study took place in peacetime. This latter concept encapsulates the intertwined work of peacekeeping such as peace building and peace support operations which have also been laid out and explained.

## **DEPLOYMENT OF TROOPS**

Deployment of troops in international peacekeeping refers to the contribution of armed forces personnel and or the police forces by countries towards the peace process in war-torn or conflict-ridden areas or zones. Through these deployments, the countries are then referred to as Troops Contributing Countries, (TCCs). Under the United Nations System, a major component of a country's foreign policy is its willingness to participate in international peace-keeping in order to make the world a safer and secure place. Scholars such as H. Peter Langille have emphasized upon the process of "rapid deployment capabilities" for nations involved in international peacekeeping [3]. International peacekeeping then can be seen as a form of military, police and civilian cooperation for the restoration and the preservation of international peace and security wherever it has been breached [4].

## **PEACEMAKING**

Peacemaking can be seen as the achievement of total reconciliation and the establishment of mutual understanding between parties to a conflict which brings about equitable power relationship necessary to facilitate peace between hostile parties. This effort also incorporates the role of peace building and peace support operations. Peace building has been defined as the effort of a peace mission in the monitoring of a negotiated settlement between hostile groups, or monitoring a ceasefire, disarming or demobilising hostile elements or the parties to a conflict or war. A.B. Fetherston citing Boutros Boutros-Ghali's work, *An Agenda for Peace*, has stated that "peace building is action to identify and help the structures which tend to strengthen and solidify peace in order to avoid a relapse into conflict [5]." Peace support operations on the other hand, involve peace-related operations which also include conflict prevention and management, serving as pillar to the peace, security, stability, defense and development process on the ground, as well as humanitarian assistance [6].

## **TOWARDS A THEORY OF INTERNATIONAL PEACEKEEPING**

Most of the concepts of international peacekeeping are themselves theories developed to address the issues of the search for peace in periods of open and protracted conflict and war. Scholars who have made great efforts towards this direction include John Burton and Ronald Fisher and Loreleigh Keashly. Their ideas have led to the development of the human needs approach, and the theory of contingency and complementarity. John Burton's human needs approach understands peacekeeping as means of conflict resolution essential for humanity's desire for peace and tranquility in order to thrive, endure and prevail. The approach also sees the humanitarian needs of nations as mutual for international peace and development [7].

Ronald Fisher and Loreleigh Keashly's contingency and complementarity theory sees the ultimate aim of international peacekeeping headed towards peace building. This shows that intervention should be utilized immediately after a conflict has become violent and protracted. Firstly, to act as a means of separation and breathing space for both sides to step back from the brink, and; secondly, peacekeeping should then function as peace building for the improvement of communication on both sides, and for social, economic and political regeneration for the country concerned [8]. These theories however, urge for the need to balance up the problems of modernity with the contradictions and cultural complications inherent in the various societies of the world [9].

### **BRIEF BACKGROUND TO NIGERIAN TROOPS' MOBILIZATION AND DEPLOYMENT, 1914-1960**

Nigeria has experienced the deployment of its troops in troubled areas since the beginning of the first few years of the 20<sup>th</sup> century and thereafter. After a long history of developments under the Royal Niger Company Constabulary, (RNCC), the Royal West African Frontier Force, (RWAFF), the Queen's-Own Nigerian Regiment, (QONR), and the Nigerian Regiment, (NR), in the period of British imperialist control, Nigerian soldiers were deployed in major wars such as the first and second world wars from 1914-1918, and 1939-1945 respectively, as well as in various international peacekeeping operations beginning with the Congo in 1960, the war of liberation in Guinea-Bissau and Cape Verde beginning in 1963, and in state-building during the war for the cause of Nigerian unity. Furthermore from 1979-1983, Nigerian troops were deployed to war-torn and troubled spots such as Chad, the Sinai, and Lebanon. The participation of Nigeria in these wars and conflict-ridden areas prepared the country for the latter bold and courageous interventions it undertook to restore peace in various troubled areas especially within the African continent [10].

The various units mobilized since 1960 included the 5 Queen's Own Nigeria Regiment, (QONR) Kano, 4 QONR Ibadan, 24 Battalion, Gboko, which comprised of both armoured and infantry divisions, the 72 Airborne Battalion, Makurdi, 72 Special Forces Battalion, Makurdi, 1<sup>st</sup> Division Kaduna, 35 Battalion Katsina, the military units in Jos and Zaria, the 34 Field Artillery Brigade, Obinze, Owerri, the Imo State-based Artillery Amphibious Medical Corps, the 123 Mechanized Battalion, Ikeja Cantonment, Lagos, the 26 Gaza Battalion, Bonny Camp, the 174 Battalion, Ojo Cantonment, the 244 RECCE Battalion, Ibadan, as well as the mobilization of warships such as the NNS Ohue and NNS Barama, and several military and police units. It is important to note that a large percentage of these deployments were carried out in war-time [11].

### **THE NIGERIAN ARMED FORCES AND DEPLOYMENT OF TROOPS TO CONGO, LIBERIA, MALI AND SIERRA LEONE IN PEACETIME SINCE 1960**

Nigeria's Prime Minister Abubakar Tafawa Balewa believed in "a genuine desire to make life happier for mankind" and therefore that African and world peace and order was necessary without which any plans for social, political and economic development would be meaningless. Thus, began Nigeria's contribution to international peacekeeping efforts since 1960. Nigerian leaders realized that the country's leadership role in Africa could only be effective and sustained by a foreign and defence policy that supports international organizations for peace and stability in Africa and the rest of the world. In periods of peacetime, the emphasis for intervention is based upon conflict prevention and management, preventive diplomacy, security sector reform,

strengthening of democratic structures, providing security and monitoring of elections, peacemaking, peace building and peace support operations, supervisory duties, disarmament, demobilization and reintegration of belligerents, and humanitarian assistance, among others [12].

During the Congo peace operations, Yakubu Gowon who had joined the Third Nigeria Brigade Headquarters at Luluabourg, Congo, as Brigade-Major after completing his staff course at Camberley, England was the Nigerian officer who took surrender of the break-away rebel forces of the Katanga region in Congo. He later requested for and was granted additional UN peacekeeping troops which comprised largely members of the Nigerian contingent to assist him in the peacetime stabilization of the province [13]. By 1977, separatist forces operating from Angola again attempted to break away the region from Congo, but Nigeria deployed troops along with France, Belgium and other African countries. Nigeria helped to restore Katanga back to the fold of Congo and worked in peacetime to secure and stabilize the province between June and July 1978 [14].

In the Democratic Republic of the Congo especially in the year 2004, Nigeria participated in the UN International Observer Mission to monitor a ceasefire and possibly prepare the country for democratic elections [15]. Nigeria combined negotiations and peace talks with elements of peace support operations. Nigeria also worked for the restoration of socio-economic and political stability to Liberia and Sierra Leone. This means that troops were deployed to maintain the existing peace and ceasefire while political and diplomatic measures were taken to bring warring factions to the negotiation table and chart the future of the country. In Liberia, Nigeria maintained a ceasefire monitoring mechanism for many years which meant that troops were constantly deployed during peacetime to help up-build peace and security structures. Between the periods of conflict, war and peacetime in those two countries, that is, Liberia and Sierra Leone, Nigeria deployed over twelve (12,000) military personnel first to enforce the peace and maintain it during post-conflict negotiations. Nigeria also deployed troops to the UN Multi-dimensional International Support Mission in Mali, (MINUSMA), from 2011-2012, which greatly worked to stabilize the country [16].

The country continued to help Mali since 2012 to pull through its various socio-economic and political problems including insurgency and terrorism, as it initiated and contributed to the AU's Africa-led International Stabilization and Support Mission in Mali, (AFISMA), and continued to make progress to stabilize the country and avoid chaos during the period while mitigating the effects or spill-over of terrorism across the entire West African sub-region. The troops' deployment in this case was carried out during the period of crisis but was maintained and increased during the period of relative peace [17]. In these military deployments during peacetime, Nigeria has contributed not less than six thousand, five hundred (6,500) troops to the peace missions in Africa in troubled spots such as Congo, Liberia, Mali and Sierra Leone. In the latter, a bilateral military treaty and agreement with Nigeria has led to military and security training assistance since 1994 which has continued especially during the period of peace. Nigerian officers have served as defence chiefs in other African countries with Brigadier-General Maxwell Khobe who served as the Sierra Leonean Army Chief of Staff from 1998-1999, others served variously as the Command Officers-in-Charge of the Armed Forces of Liberia up to 2007 especially in peacetime and during the period of peace building and peace support [18].



**THE IMPACT OF NIGERIA'S TROOPS' DEPLOYMENT TO AFRICAN STATES IN PEACETIME**

It must be noted from the account of Margaret Shaibu that it was Nigeria's troops' deployment and spearhead of the ECOMOG Mission in Liberia that led to the peacetime monitoring and supervision of the country's democratic election which ushered in the presidency of Charles Taylor in July 1997. Prior to this, a conference of all political parties and other interest groups was convened for the purpose of establishing a broad-based interim government. By 2004, Nigeria worked to ensure peace, security and stability in the Democratic Republic of Congo and helped the development of the peace process which led to a transition to democratic governance. This means that since 1960, Nigeria has monitored peace in the Congo both in periods of conflict, war and peace. This particular peace mission to the Congo lasted from 2003-2005 under Nigerian Major-General S. Iliya. It has been stated that Nigeria worked for the restoration of socio-economic and political stability in Liberia and Sierra Leone. This enabled Liberia to implement a peaceful transition to democracy with the election of Ellen Johnson Sirleaf as president of Liberia in 2006, while earlier restoring democracy to Sierra Leone by spearheading ECOMOG's backing of the democratically elected government of Ahmed Tejan Kabbah on 10<sup>th</sup> March, 1998 [19].

In Mali, Nigeria initiated and contributed to the AU's Africa-led International Support Mission in Mali, (AFISMA), and has continued to make progress in stabilizing the country and avoiding chaos while mitigating the effects or spill-over of terrorism across the entire West African sub-region. This role made it mandatory for Nigerian troops to embark upon the various methods of peace efforts both in times of open hostilities and in peacetime. These efforts through the deployment of Nigerian troops helped the country considerably to pull through its various socio-economic and political problems including insurgency and terrorism and to achieve relative national peace [20]. Peace support operations have also continued in Mali and Nigeria has signed agreements with France and some members of the European Union (EU) for assistance with security sector reform in the country.

Nigeria's effective contribution to international peacekeeping operations in African states through peace support operations even in peacetime has helped the creation of the objective conditions for peace and stability in these African states. For the country has intervened through preventive diplomacy especially in peace time to nip in the bud conflict issues that would have led to extreme suffering and the perpetration of crimes against humanity. Other remarkable achievements have been the building of the capacities and the development of the various sectors of collapsed or failed states and the promotion of democracy and democratization across Africa. It was to this end that Nigeria undertook the reconstruction of Liberia and Sierra Leone through the construction of roads, bridges and other infrastructure which contributed greatly to the rebuilding of the socio-economic and political lives of the war-torn countries. Thus Nigeria's foreign policy aimed at the promotion of African and world peace has been a major development in the events of African history [21].

The nation's increased role in peace support operations undoubtedly gave weight to its recent inclusion as a Non-permanent Member of the UN Security Council, the Chair of the UN Peacekeeping Operations Panel, and the Office of Permanent Police Representative at the UN. In October 2012, the Acting Head of the UN Mission in Liberia, (UNIMIL), Louis M. Ancoin

honoured more than 1,500 Nigerian peacekeepers including 92 women with UN medals for their contribution to the UNIMIL and to all phases of the peacekeeping effort in Liberia. Along with those still serving, over 12,000 veteran peacekeepers that were trained and deployed have been awarded UN Letters of Recommendation and medals for outstanding performance during their tour of duty in various African states including the Congo, Liberia, Mali and Sierra Leone [22].

### **THE CHALLENGES TO NIGERIA'S MILITARY DEPLOYMENTS TO AFRICAN STATES IN PEACETIME**

But despite huge financial and human resources and other costs to Nigeria's involvement in African affairs since 1960, Nigerians continued to be harassed and humiliated in several African countries. In Liberia as a result of hostility against the Nigerian contingent, over 800 peacekeepers were killed and several others were kidnapped. Furthermore, there had been issues of benevolence to other countries as Nigeria has spent tens of billions of dollars in peacekeeping and peace support operations but condone ruthlessness to its citizens at home, stagnancy, cronyism, and favouritism. Nigeria parades a robust profile of international peacekeeping experience since 1960, yet peace has continually eluded Nigeria. The Muhammed-Obasanjo regime of 1975-1979, spent 75% of the country's foreign policy resources in solving Africa's problems without any real benefit to Nigeria because of the lack of clarity in defining the national interest [23].

Nigeria has benefitted through the receipt of military assistance from advanced countries, particularly the United States America. In 2000, the US approved the sum of 66 million dollars as military aid to Nigeria. Additionally, the country was among the beneficiaries of the US sponsored African Contingency Operation Training and Assistance, (ACOTA), which gives training support to African countries that actively participate in international and regional peace support operations. All Troops Contributing Countries, (TCCs), have also been reimbursed by the UN which helps the funding and wherewithal to run modern armed forces and further pay for the services of individual soldiers in peacekeeping operations. But despite all these, there had been complaints of ineffective monitoring, inefficiency, misappropriation and corruption at the highest levels. In addition, according to the *International Crisis Group*, beginning from the 1990s the peacekeeping and peace support missions that were embarked upon such as in the Congo, Liberia, Mali and Sierra Leone, demonstrated clearly that the peace missions for which Nigeria has participated have failed to achieve a major goal of peacekeeping, which is the protection of civilians, especially women and children in the crises or conflict zones or even during periods of relative peace [24].

Nigeria has lacked the necessary equipment and materials to reap maximum benefits and be heavily reimbursed by the United Nations and other peacekeeping missions both in periods of conflict and in peacetime. According to a study, Nigeria lacked the capacity to carry out strategic lifts and other operational needs for the missions. For example, it lacked helicopters or warships to be put on paid services at the disposal of the UN. This made Nigeria to lose tens of millions of dollars annually in peacekeeping activities. Comparatively, Russia earned 6 million dollars annually through its M18 helicopters, Cote d' Ivoire took home 5 million dollars, as did Ghana and South Africa through this process [25].

Closely following the problem of logistics and operations had been inadequate funding of peacekeeping troops or late release of funds. The lack of effectiveness in troop deployments and

troops' rotation has also been a skill or capacity that was not efficiently handled despite the country's varied experience in peacekeeping, peace building, and peace support abroad. Although with great experience in international peacekeeping operations, Nigeria has never achieved mastery of the clash of US and other western imperialist interests with the country's national interest in foreign policy and international peacekeeping missions in the aforementioned African states. This development has also served to challenge the country's capabilities and successes. It must be understood that the mission to Mali in 2013 was strictly based on security considerations rather than its supposed attendant economic and social benefit to the national interest. This means that there were losses without expectations of any benefits [26]. Similarly, Offu and Okechukwu, citing Grezgorz Walinski, said that Nigeria has contributed enormously to peace missions in Africa and spent \$13 billion in peace operations since 1960, but what has been clearly visible is that the costs have outweighed the benefits as the country experienced huge loss of lives, depression and psychological disorder, and permanent disabilities among peacekeepers, but poor veteran welfare and retirement benefits [27].

Finally, reconstruction in several African countries after peacekeeping, peace building and peace support has consistently benefitted western firms because of their technological advantage over Nigeria or official connivance to defraud the country. For during peacetime, Nigeria undertook the reconstruction of Liberia and Sierra Leone through the construction of roads, bridges and other infrastructure which contributed greatly to the rebuilding of the socio-economic and political lives of the war-torn countries. But the biggest construction contract was controversially won by a British firm especially in Sierra Leone which provoked allegations of imperialist meddling or connivance and corruption between Nigerian officials and their British counterparts [28].

## CONCLUSION

This paper made efforts to bring out the salient points with regard to a concise history of Nigeria's troops' deployment to international peacekeeping missions in selected African states of Congo, Liberia, Mali and Sierra Leone during peacetime since 1960. Attempts have been made towards bringing up the major issues contained in the paper by way of an introduction, clarification of key concepts, theoretical foundation, and an outline of the brief history of Nigeria's troops' deployment in wars and conflicts as background to the study of peacetime deployments. Other issues include the contribution of Nigeria to international peacekeeping, peace building and peace support missions in those African states, and the impact and the challenges of Nigeria's experience especially in peacetime, as well as the lessons learnt with regards to the country's national interest and national security objectives. With the various challenges envisaged especially with regards to the cost-benefit imbalance, it behoves on Nigeria to modify policy objectives that focus more on the expansion of bilateral and multilateral commissions, increased investments and trade relations with those African nations and others, where Nigerians' blood has been spilt for the cause of peace, security and stability.

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## MULTIPLICITY OUTPUTTING OF HADRONS IN CC-INTERACTIONS AT THE MOMENTUM 4.2 A GEV/C WITH DIFFERENT COLLISION CENTRALITIES

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### ABSTRACT

*In this paper the multiple of secondary hadrons ( $\pi^\pm$ -mesons and protons) in CC-interactions, depending on the degree of collision centrality was studied. As the degree of centrality accepted number of protons participating formed in the event. The experimental values of the mean multiplicity  $\pi^\pm$ -mesons, protons, proton-participants identified for 4 methodically selected types of collisions. Estimate the yield of protons in different momentum intervals depending on the value of the impact parameter. The experimental data are compared with the results of theoretical calculations of the model FRITIOF. It is shown that the multiplicity of slow and evaporated protons model reproduced unsatisfactorily.*

**KEYWORDS:** *Hadrons Nucleus – Nucleus Collisions, Centrality, FRITIOF Model, IT-- Mesons, Protons, Accelerator, Propane Chamber, Carbon PACS: 25.10.+s, 25.70.Ef*

### INTRODUCTION

The cascade-evaporation model (CIM) is based on the concept of a cascade of interactions within the nucleus during a nuclear reaction. Thus, it is possible to explain the formation of fast nucleons in hadron-nuclear and core-nuclear collisions [1,2]. the large value of the reaction yield in the regions of nuclear fragmentation in CMM is caused by a cascade of regeon exchanges. According to [3], in hadron-nuclear interactions, not only time-sequential knocking out of nucleons is possible, but also simultaneous knocking out of nucleons, described by non-planar



amplified diagrams. With simultaneous knocking out of nucleons, all of them are in a state characterized by the same physical characteristics, and therefore we can expect a weak dependence of the nucleon spectra on the centrality of collisions.

Central and peripheral interactions differ primarily in the number of primary intra-nuclear collisions. In the Central interactions, there must be a concentration of participating nucleons in the Central region of rapidity due to multiple scattering of nucleons inside the nucleus, i.e., we can expect a predominant nucleon birth in the regions of nuclear fragmentation. As the impact parameter decreases, the number of primary collisions and the number of cascade interactions in the residual nuclei increases, and therefore the yield of nucleons in the regions of nuclear fragmentation should be minimal. Therefore, according to the CMM, the shape of the nucleon spectra in the regions of nuclear fragmentation should change. The calculations presented in [4] confirm this reasoning. However, the experiment shows the opposite picture: with an increase in the centrality of collisions, the yield of protons in the Central region increases relatively, and not in the regions of nuclear fragmentation. Therefore, it is interesting to study the yields of nuclear reactions depending on the degree of centrality and at different pulse intervals of secondary hadrons.

This work is a continuation of the analysis of experimental data [5-8] on the interactions of light nuclei with carbon nuclei at a momentum of 4.2 GeV/s per nucleon in the framework of the FRITIOF model adapted to energies below 10 GeV/s [9].

### Obtaining and processing experimental material

Experimental material obtained in a 2-meter propane bubble chamber placed in a magnetic field with a strength of 1.5 T and irradiated in a 12C core beam with a pulse of 4.2 Agev/s at the JINR synchrophasatron (Dubna, Russia) was used for processing. The isolation of inelastic CC interaction events from the complete ensemble of interactions of carbon nuclei with propane (more than 37,000 sob.), as well as the introduction of corrections for the number of secondary particles and their momentum and angular characteristics are described in detail in [10]. Out of all 12C(C3H8) interactions, 20527 inelastic CC events were identified in accordance with the established criteria.

In the considered CC interactions, the secondary particles included  $\pi^+$  and  $\pi^-$  mesons, evaporative protons (protons with a momentum  $p \geq 0.3$  GeV/s), Stripping fragments from the incoming carbon core (whose momentum  $p > 3$  GeV/s and the departure angle  $\theta < 30^\circ$ ), and protons of carbon ( $p > 0.3$  GeV/s without Stripping particles). The "behavior" of protons with a momentum in the range of  $0.3 \leq p \leq 0.75$  GeV/s – protons participating from the target and protons with a momentum of  $p \geq 0.75$  GeV/s – protons participating from the projectile core was also studied. The entire ensemble of inelastic SS collisions was divided into three groups:

1. Peripheral interactions – the number of protons participating in which  $\leq 4$ . The average value of the target parameter  $\langle b \rangle$  for these events is greater than 4 Fermi and the average value of the participating protons is 4.41.
2. Events with the number of participating protons  $4 \leq n \leq 9$ . For these events, the average values of the target parameter lie in the range from two to four Fermi.
3. Central events where the number of proton participants is greater than 9. for these events  $\langle b \rangle$  less than 2 FM.

In addition, a group of carbon-carbon events was identified in which the total charge of the stripped fragments of the Qstr of the projectile core is zero.

### Experimental results and comparison with model calculations

The obtained results on the multiplicity of secondary particles for the considered groups of CC collisions are shown in table 1. The results of processing experimental material (20527 CC events) using the FORTRAN-77 algorithmic program showed that more than half of CC collisions are peripheral interactions and only a few percent of CC collisions satisfy the above conditions of event centrality. From the data analysis shown in table.1 it is clearly seen that as the degree of centrality increases, the multiplicity of secondary charged particles increases. For example, when moving from peripheral collisions to deeply Central events, the proportion of  $\pi$  mesons increases from 23% to 35%. The reason for this is that as the centrality measure increases, the number of nucleon-nucleon interactions with the birth of pions will increase.

In the group with  $n_p \leq 4$ , the average multiplicity of  $\pi^+$  mesons exceeds the average multiplicity of  $\pi^-$  mesons. This is due to the fact that the group with  $n_p \leq 4$  included more events with proton recharge to neutrons ( $p \rightarrow n\pi^+$ ) than with neutron recharge to protons ( $n \rightarrow p\pi^-$ ). And in the group with  $n_p > 9$ , the opposite picture is observed. Where recharge processes are equally likely,  $\langle n_{\pi^-} \rangle = \langle n_{\pi^+} \rangle$ . This ratio is obtained for the groups  $c 4 \leq n_p \leq 9$  and  $Q_{stp}=0$ .

In the transition from peripheral to Central interactions, the form of event distributions by the number of  $\pi$ -mesons changes significantly (for  $\pi^-$  mesons, see figure 1). the number of events without the birth of  $\pi$ -mesons decreases sharply and the proportion of multi-meson events increases. as a result, the average multiplicity of  $\pi^+$  and  $\pi^-$  mesons increases (table 1).1). When calculating the average multiplicities of pions per proton-participant, it turned out that the  $\langle n_{\pi^-} \rangle$  and  $\langle n_{\pi^+} \rangle$  ratios of  $\langle n_{\pi^-} \rangle / \langle n_{p \geq 0.15} \rangle$  coincide with the corresponding  $\langle n_{\pi^-} \rangle / \langle n_{p \geq 0.15} \rangle$  ratio for inelastic CC interactions, which is equal to  $0.325 \pm 0.003$ . The different ratio between the average multiplicities of  $\pi^+$  and  $\pi^-$  mesons in the peripheral and Central CC interactions leads to a different dependence of the average values of negative and positive pions on the degree of centrality (table 2).

**TABLE.1. AVERAGE MULTIPLICITIES OF CHARGED HADRONS IN CC INTERACTIONS WITH DIFFERENT NUMBERS OF PROTON PARTICIPANTS (TOP LINE – EXPERIMENTAL RESULTS, BOTTOM LINE – CALCULATIONS BASED ON THE FRITIOF MODEL)**

Event type	$n_p^{\text{part}} \leq 4$	$4 \leq n_p^{\text{part}} \leq 9$	$n_p^{\text{part}} \geq 9$	$Q_{\text{ctp}}=0$
$N_{\text{event}}$	12010 24501	7101 21351	1416 4150	672 2313
$\langle n_{\pm} \rangle$	$6.82 \pm 0.02$ $6.61 \pm 0.02$	$13.77 \pm 0.04$ $12.38 \pm 0.02$	$19.34 \pm 0.09$ $17.12 \pm 0.07$	$17.48 \pm 0.16$ $15.22 \pm 0.08$
$\langle n_{\pi^-} \rangle$	$0.714 \pm 0.005$ $0.698 \pm 0.005$	$2.158 \pm 0.016$ $1.633 \pm 0.008$	$4.05 \pm 0.04$ $3.46 \pm 0.02$	$3.25 \pm 0.07$ $2.58 \pm 0.003$
$\langle n_{\pi^+} \rangle$	$0.892 \pm 0.006$ $0.898 \pm 0.006$	$2.152 \pm 0.018$ $1.666 \pm 0.010$	$2.96 \pm 0.04$ $2.08 \pm 0.02$	$3.35 \pm 0.07$ $2.81 \pm 0.03$
$\langle n_p \rangle$ $p \geq 0.15$	$4.223 \pm 0.04$ $4.366 \pm 0.03$	$1.822 \pm 0.024$ $2.012 \pm 0.014$	$0.42 \pm 0.10$ $0.55 \pm 0.09$	$1.18 \pm 0.08$ $1.44 \pm 0.06$

$\langle n_p \rangle$ $0.15 \leq p \leq 0.3$	$0.682 \pm 0.007$ $0.367 \pm 0.005$	$0.865 \pm 0.012$ $0.674 \pm 0.006$	$0.54 \pm 0.02$ $0.40 \pm 0.01$	$0.86 \pm 0.04$ $0.62 \pm 0.02$
$\langle n_p \rangle$ $0.3 < p \leq 0.75$	$0.728 \pm 0.005$ $0.626 \pm 0.005$	$1.744 \pm 0.015$ $1.726 \pm 0.009$	$2.66 \pm 0.04$ $2.52 \pm 0.02$	$1.86 \pm 0.06$ $1.52 \pm 0.03$
$\langle n_p \rangle$ $p \geq 0.75$	$1.611 \pm 0.007$ $1.718 \pm 0.007$	$4.936 \pm 0.019$ $4.961 \pm 0.012$	$8.44 \pm 0.05$ $8.51 \pm 0.05$	$8.44 \pm 0.09$ $8.12 \pm 0.04$
$\langle n_p^{\text{part}} \rangle$ $P < 0.15$	$2.282 \pm 0.007$ $2.344 \pm 0.008$	$6.605 \pm 0.016$ $6.676 \pm 0.009$	$12.04 \pm 0.03$ $11.23 \pm 0.02$	$11.12 \pm 0.09$ $9.14 \pm 0.05$

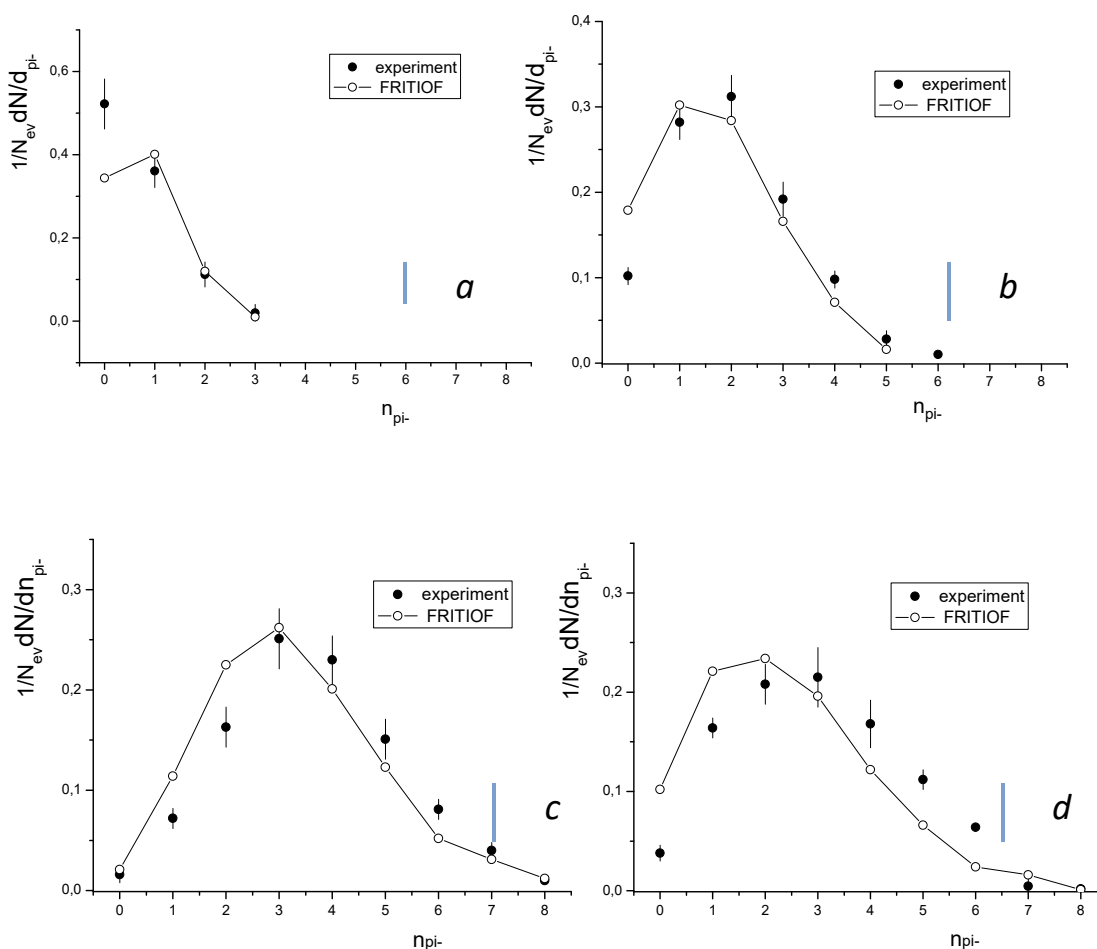


Figure 1. multiple distributions of  $\pi^-$  - mesons in CC interactions.

a)  $n_p^{\text{part}} \leq 4$ , b)  $4 < n_p^{\text{part}} \leq 9$ , c)  $n_p^{\text{part}} \geq 9$ , d)  $Q_{ctp} = 0$ .

**TABLE.2. A RELATIVE OF A PLURALITY OF  $\Pi^-$  - AND  $\Pi^+$  MESONS IN THE CC INTERACTIONS WITH DIFFERENT NUMBER OF PROTONS-PARTICIPANTS (TOP LINE – EXPERIMENTAL RESULTS, BOTTOM LINE – CALCULATIONS BASED ON THE FRITIOF MODEL)**

Тип события	$n_p^{\text{part}} \leq 4$	$4 \leq n_p^{\text{part}} \leq 9$	$n_p^{\text{part}} \geq 9$	$Q_{\text{стр}}=0$
$\langle n_{\pi^-} \rangle / \langle n_p^{\text{part}} \rangle$	0.312±0.003 0.296±0.002	0.326±0.003 0.249±0.002	0.363±0.004 0.290±0.003	0.314±0.007 0.239±0.004
$\langle n_{\pi^+} \rangle / \langle n_p^{\text{part}} \rangle$	0.385±0.003 0.384±0.003	0.321±0.003 0.245±0.002	0.263±0.004 0.179±0.003	0.329±0.008 0.267±0.006
$\frac{\langle n_{\pi^-} \rangle + \langle n_{\pi^+} \rangle}{\langle n_{\text{пр}} \rangle}$	0.697±0.004 0.680±0.004	0.647±0.004 0.494±0.003	0.626±0.006 0.469±0.004	0.643±0.010 0.506±0.007

from table.2 it can be seen that during the transition from CC events with  $PR \geq 4$  to events with  $PR \geq 9$ , there is a slight decrease (~10 %) in the output of charged pions per proton participant. With a decrease in the target parameter, the average number of participating protons from both the projectile core and the target core naturally increases, and, accordingly, the multiplicity of Stripping fragments of the projectile core and evaporative protons of the target core decreases, and to a greater extent due to protons with a momentum less than 0.15 GeV/s (Fig.2-3). The average number of protons with  $p < 0.15$  GeV/s was estimated from the missing charge in the event (table 1). It should be noted that the average multiplicity of proton participants in the subgroup with pulses from 0.3 to 0.75 GeV/s increases more slowly than in the subgroup with  $p > 0.75$  GeV/s. The analysis of experimental data showed that a part of the proton participants from the target nucleus (40-50%) receives large momentum transfers when colliding with the nucleons of the incoming nucleus and passes into the group of proton participants with a pulse  $p > 0.75$  GeV/s. Hence, there is a significant increase in the average number of participating protons with a momentum greater than 0.75 GeV/s in the Central interactions.

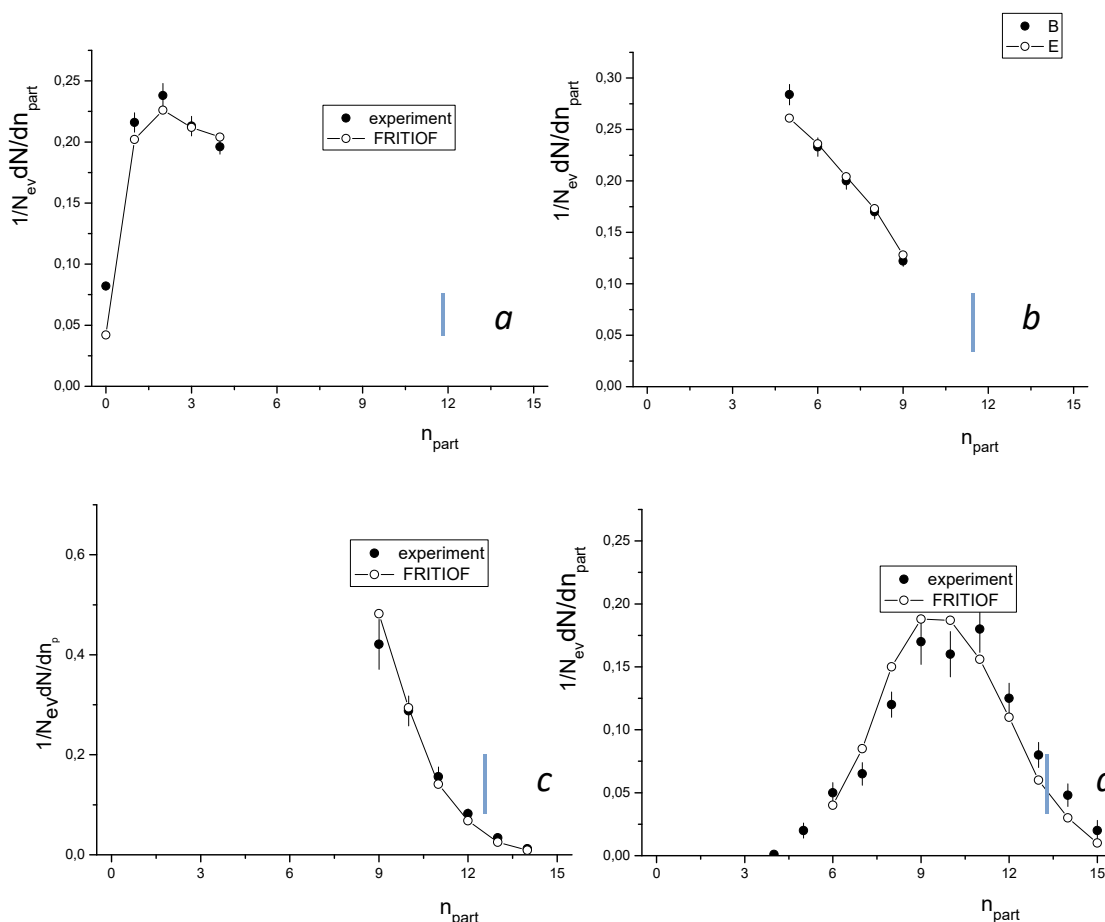


Fig.2. Multiple distribution of the protons participating in the inelastic The SS interactions. a)  $n_p^{part} \leq 4$ , b)  $4 \leq n_p^{part} \leq 9$ , c)  $n_p^{part} > 9$ , d)  $Q_{CTP} = 0$ .

Comparison of the average multiplicities of particles in the groups of CC events with  $P_{rr} > 9$  and  $Q_{str} = 0$  shows that events with  $P_{rr} > 9$  are characterized by a higher average multiplicity of secondary charged particles, a significantly lower average multiplicity of evaporative protons, and the presence of stripped fragments of the projectile core (table 1).

In events with  $Q_{str} = 0$ , by definition, all six protons of the carbon nucleus interact with the target. From the target nucleus, an average of 4.2 protons participate in the interaction. In events  $p > 9$ , these numbers are 7.78 and 5.13, respectively. They are

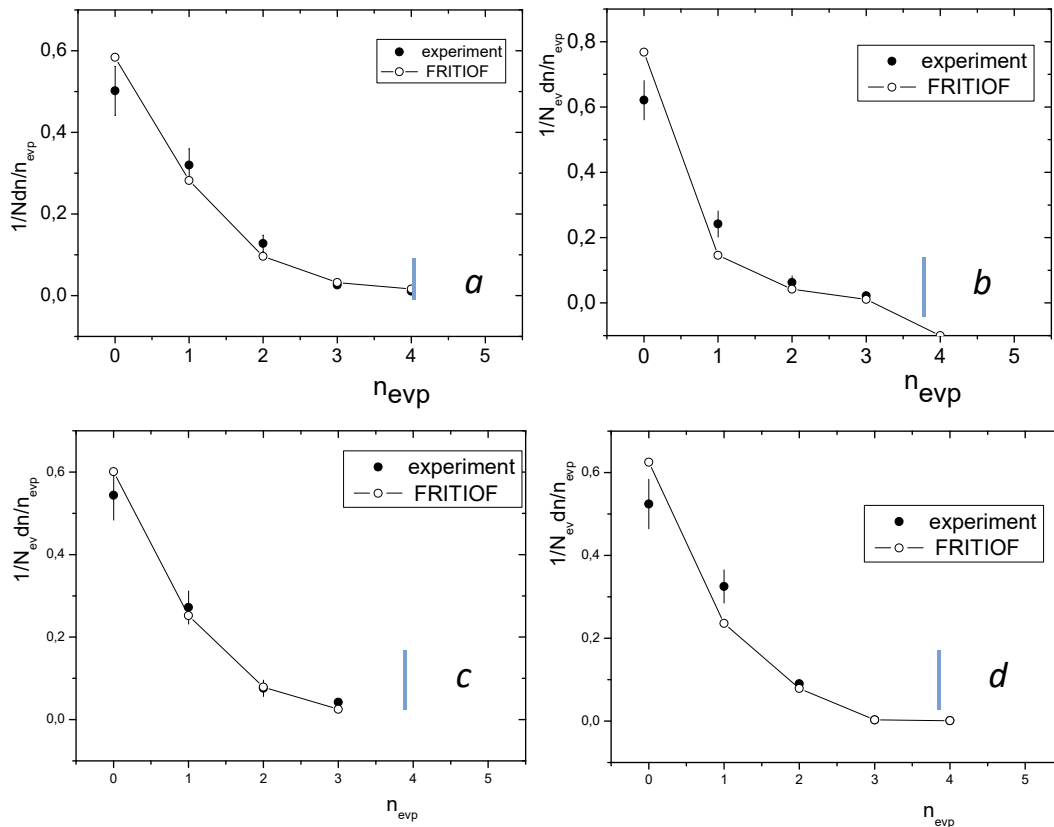


Figure 3. multiple distributions of evaporative protons in SS interactions. a)  $n_p^{\text{part}} \leq 4$ , b)  $4 \leq n_p^{\text{part}} \leq 9$ , c)  $n_p^{\text{part}} > 9$ , d)  $Q_{\text{ctr}} = 0$ . obtained using the average multiplicities of stripped particles and evaporative protons from table.1. a visual representation of the features of the two types of Central CC interactions ( $P_{\text{rr}} > 9$  and  $Q_{\text{str}} = 0$ ) can be obtained from Fig.1 c,d.

## CONCLUSION

The result of the analysis of the experimental data obtained and their comparison with the calculations of the FRITIOF model allows us to draw the following conclusions:

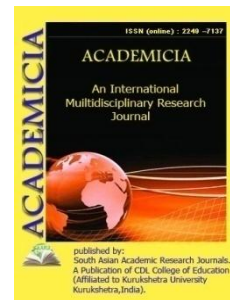
- With close values of the average multiplicities of proton participants (a difference of about 10%), CC events have completely different distributions over the pru. Due to the selection criterion, events  $> 9$  are concentrated in a narrow range of PRCS, while for events with  $Q_{\text{str}} = 0$ , the distribution of PRCS is quite wide (Fig.2 d). Apparently, proton-neutron interactions ( $pn \rightarrow pnX$ ) and interactions with proton recharge ( $pn \rightarrow nn\pi^+$ ) play a significant role in events with  $Q_{\text{str}} = 0$ . This can explain the occurrence of events with  $PR > 9$  when six protons from the incoming carbon nucleus interact with a carbon target.
- As a result of the comparison, it can be concluded that the degrees of centrality of CC interactions with  $PR > 9$  and  $Q_{\text{str}} = 0$  are approximately the same.
- Comparison of experimental data on the multiplicity of secondary particles with calculations based on the FRITIOF model shows that the model satisfactorily reproduces the average multiplicity of all charged particles, participating protons, and evaporative protons in all



analyzed groups of events (table.1 and Fig.2). The greatest discrepancy between the experiment and the model is observed when comparing the multiplicities of  $\pi$  mesons and evaporative protons in subgroups with pulses  $p < 0.15$  GeV/s and  $0.15 \leq p \leq 0.3$  GeV/s.

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## CLASSIFICATION OF GOVERNMENT POSITIONS IN YUSUF KHOS KHOJIB'S VIEWS

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### ABSTRACT

*This article discusses the eight most important public administration positions and their responsibilities, as well as their duties to the state and society. The importance of this task is determined by the provision of security in the public administration. It is also responsible for "inspecting and controlling the food given to the head of state" [8,412]. The head of the bodyguards is also subordinated to the head of the bodyguard, the head of the bed, the head chef, the head of the flag, and the head of the hunting operations [45,412].*

**KEYWORDS:** *Tate, Position, Job Secrets, Network, Statute*

### INTRODUCTION

Yusuf Khos Khojib's work "Qutadg'u bilig" has a unique classification of public administration positions. He was well aware of the functions of public administration bodies and positions, as he worked as a state adviser ("specific hajib") in the Karakhanid centralized state.

### Materials and methods

The following positions are described in Qutudg'u Bilig:

1. Head of state (bek, elig, haqqan). This position was a high position, and the head of state had absolute powers. It coordinates the domestic and foreign policy of the state, appoints and dismisses deserving people. The head of state in his activity is based only on the law. "Toru" is a justice based on the rule of correctness ("kun kiksa") (the concept of "torachilik" which has a negative meaning in our modern language is derived from this). The Great Bugra Karakhan (died in 1102) was recognized for his observance of the law of the net:

The world is at peace, Toru is made,

With the toru the king exalted his name) [8,76].

In our view, the Law of Toru, which is based on justice, was the Charter of our pre-Islamic National Statehood. Because in the pre-Islamic period, we had national states such as Greater Khorezm, Kangli, Bactria, Sogdiana, Parkana, Kushan, Turkish Khanate, and they pursued a policy of public administration in accordance with some common law. Yusuf Khas Hajib was well aware of this law and enriched it with the ideas of mystical justice. In the time of the thinker (in the eleventh century), the mystics understood justice as "looking at everything equally and correctly in any situation and situation" [8,388]. In this sense, the sage says:

Ever since man came into the world (that is, since man was created),

The wise (s) have been pursuing the policy of the noble Toru [8,94].

Because Adam was sent to Earth as a caliph (Head of Being). Civilization took place on Earth when human beings practiced justice, and a crisis arose when they deviated from justice (the law of Toru). It is interesting to note that this Islamic idea, which is reflected in the Qur'an, is being re-perceived today. For example, in a speech at Al-Azhar University in Cairo, one of the beacons of the Islamic world, on June 4, 2009, former US President Barack Hussein Obama put forward the following ideas:

"America and Islam do not deny each other and therefore do not need to compete ... They have common principles such as the pursuit of common goals and justice and progress, tolerance and respect for all people ... As someone interested in history, I believe that civilization is Islam. I also know how much he owes ... to the centuries, Islam has demonstrated the potential for unity of word and deed, religious tolerance and racial equality"[4,247-248]. The mystical teachings of Islam in Central Asia have also made a worthy contribution to this.

According to the thinker, the law of Toru, which is based on justice and development, equality and cooperation, is the essence of the post of head of state. To do this, the head of state must have Knowledge ("bilig") that contains social, economic and legal information.

In which worlds do you have knowledge,

Strictly adheres to the Law of the Toru [8,98].

In this sense, the position of head of state requires unity of justice and knowledge.

This stems from the authority, rights and functional responsibilities associated with the position. It also requires toughness

When the enemy strikes the neck with the sword,

If the state manages the state with the net).

After all, the post of head of state is essentially the embodiment of the unity of "justice + knowledge + determination." In Qutadu Bilig, the image of King Kuntugdi is described as such a head of state. According to the author, King Kuntugdi's observance of justice as the head of state is reflected in the following:

1) Sits on a three-legged silver chair. Because something with three legs will be strong. [8,172]. We interpret this "trinity" as past, present and future. In mysticism, the trinity represents the

human world, the world of angels, and the divine world. [5,298]. Silver, on the other hand, was more valuable than gold in the 11th century [5,22].

a) He has a knife (dagger) in his hand. The head of state is as sharp as a knife in his work [8,174].

b) There is sugar on the right side and poison on the left side. Sugar means justice to good people and poison means punishment to bad people [8,174].

After all, the position of head of state is such an important career.

2. The Minister. This word is found in the Qur'an in Surahs [3,20-29-30], which means "the closest helper", "deputy". After Islam, the post of Minister became the main rank in public administration after the head of state. The thinker interprets the position of Minister as the current Prime Minister. And his authority included the management of the executive branch, his competence also included the coordination of the activities of the military (army), ambassadors

Undoubtedly, the head of state will need a Minister,

If the minister is exhausted, the head of state sleeps peacefully.

The Minister is the bearer of the burden of the Head of State,

Minister of State Order [8,362]

For this reason, the post of Minister embodies the powers of the head of state after the head of state [8,362]. In the play, the wise minister is depicted through the image of Ogdulmish, a representative of the stream of mysticism.

3. Military Commander ("Su bashlar"). According to the thinker, this state position ranks third in terms of authority, and the military commander "manages the entire military sphere" [8,174].

From ancient times the military sphere, especially the formation and management of the army, has been an important sphere in statehood. According to Yusuf Khas Hajib, the basis of a strong army is:

1) Selection of the best people for the army;

2) Adequate material support of the army;

3) Possession of modern weapons;

4) Training the army to be brave and courageous; [8,374-376].

This task falls within the competence of the Military Commander. The thinker, considering the conditions of his time (X1 century), considers an army of twelve thousand men to be the norm [8,382].

An army with a large number of soldiers will be chaotic,

The disordered army will be cowardly and miserable) [8,362].

Of course, this idea must be understood in the context of having a quality and disciplined army. It should be noted that when it comes to the armies of our historical states, many think of a warlike army. This is a false flaw of the former Soviet ideology. However, Yusuf Khas Hajib and others report that the army is a defender of the state, citizens and honor.

Yusuf Khas Hajib emphasized that the minister and the military commander were the backbone of the state, and said that "the minister should work with the pen and the military commander with the sword" [8,396].

4. State Counselor ("khas khojib"). This public office is described as a career that reports directly to the head of state and, at the same time, cooperates with the minister on an equal footing [8,396]. The Chief State Counselor ("Khas Khojib") headed the State Administration ("Orda") as advisers, executive secretaries ("bitikchilar"), servants ("topuqchilar") and those in charge of events in the palace ("Ashchilar") [8,398-399].

The State Counselor is also responsible for organizing the reception of the head of state and overseeing the implementation of the decrees ("yorliglar(labels)") of the head of state.

The State Counselor has three duties:

1) Secrecy of the words of the head of state; 2) not to give in to inappropriate desires; 3) Be calm in any situation. [8,406] He also has three responsibilities:

1) Not to be arrogant; 2) to be vigilant, alert and vigilant; 3) access to him only at the invitation of the head of state [8,408]. Hence, a public advisor is a position with an important functional function. The play depicts Kusamish Hajib as an example of a state adviser.

5. The head of the bodyguards ("Kapug bashlar"). This position has two functions: 1) protection of the state administration ("orda"); 2) protection of the head of state [8,408]. The powers, rights and duties of the head of the bodyguard shall be determined in accordance with the Toru law. For example, they include: observance of laws, illumination of the state administration at night, guarding it day and night, assignment of duties of bodyguards, reporting to the head of state in the morning and evening, etc. [8,408-410]. The importance of this task is determined by the provision of security in the public administration. It is also responsible for "inspecting and controlling the food given to the head of state" [8,412]. The head of the bodyguards is also subordinated to the head of the bodyguard, the head of the bed, the head chef, the head of the flag, and the head of the hunting operations [45,412]. The responsibility of the head of the bodyguard's increases during the time the head of state is on board and on a trip [8,416]. At such times, they "must immediately detect insecure and suspicious people [8,416]. It is very interesting for us that the function of this position was clearly defined a thousand years ago.

6. Embassy ("yalavach"). The thinker interprets this public office as one of the most important positions. The apostles are "the successors of the prophets who brought the message of God, and they play an important role in human and interstate relations" [8,418]. Therefore, this public office is subordinated only to the head of state [8,418], the Embassy is our national statehood has existed since ancient times. The most important thing here is that Yusuf Khas Hajib held this position as an important public official.

7. Head of the office ("eliga bitikchi"). This public office is important with the task of "writing the writings of the head of state, decrees and delivering them to the appropriate places" [8,428]. The main task of the head of the Cabinet is to "clearly, beautifully and clearly understand the decrees and instructions of the head of state" [8,430]. We all know today how responsible this position is. What is important for us is that this position existed in our national statehood even a thousand years ago. At the same time, the nature of the head of state's policy will be "influenced by the masses" [8,434].

8. Minister of Finance ("agichi" - treasurer). This public administration position is one of the foundations of the state. The functional task of the Minister of Finance is to "follow the rule of greed ("sarang") in the spending of "gold, silver and valuables" [8,440]. Because the state treasury is not generous. If the position of finance minister is misunderstood, any state will face a crisis.

## RESULTS

These eight public administration positions thus analyzed are important positions. In addition, the thinker describes the following key positions in public administration:

- 1) The head chef of the head of state ("ash bashchi") [8,450].
- 2) The head of celebrations and events ("idishchi bashi") [8,456].
- 3) The judge in charge of legality [8,786]
- 4) The muhtasib in charge of trade and market affairs [8,786]
- 5) Caliph in charge of religious affairs [8,786]

These positions are given by the thinker in the background.

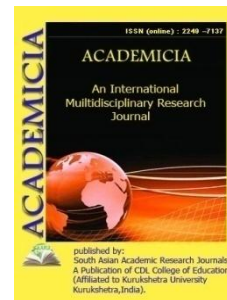
Indeed, we are faced with a specific classification of positions in the development of our national statehood. This is important from the point of view of political philosophy.

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## RESOURCE SAVING TECHNOLOGIES IN COTTON GROWING

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### ABSTRACT

*Studies have shown that among the various methods of cotton irrigation, the development of cotton plants has improved compared to the options irrigated by simple film and flexible pipes with black film on the edges, the plant's absorption of nutrients is high, water consumption is reduced. As a result, more crop elements were retained in the plant and the ripening of the pods was accelerated compared to other methods, the crop ripened earlier, the yield increased and its quality indicators improved.*

**KEYWORDS:** Water, Cotton, Thrift, Egat, Method, Technology, Kosak, Sewage, Soil, Flexible Pipe, Egat, Number Of Irrigation, Transparent Film, Yield, Humus, Agrotechnics, Element, Mechanical Composition, Moisture, Sewage, Groundwater, Total Nitrogen, Mobile Phosphorus, Cultivation, Mineral, Variety, "Partner", Vegetation, Variant, Water Consumption, Cocoon, Plant Height, Element, Medium Fiber, Black, Flower, Comb, Nitrate, Drip Irrigation, Moisture, Number Of Harvests, Centner, Control, Exchangeable Potassium, Content, Efficiency .....

### INTRODUCTION

Rational use of available water resources in Central Asian countries, including the Republic of Uzbekistan, saving water in irrigation of agricultural crops, the introduction of technologies to improve the quality of irrigation has become a requirement of the times.

In particular, in the cultivation of cotton, one of the main crops in the Republic of Uzbekistan, proper irrigation, rational use of available water resources and increasing the efficiency of irrigation to ensure even distribution of water in the field and even soil moisture, it is important to know the biology of the variety and the level of water supply of the area.

Irrigation requires a further improvement of irrigation technologies in order to reduce the waste of water in the effluent and the physical evaporation of moisture from the soil surface, increase the efficiency of the given mineral fertilizers. The problems of climate change and desertification in the region, the problems of water scarcity in agriculture, the rational use of existing water resources, the development of cost-effective irrigation technologies in the region, the in-depth study and implementation of water-saving irrigation technologies. requires a number of scientific studies on each type of crop.

**The main purpose of the study** was to test cost-effective methods of irrigation of cotton plants in production conditions and to study the cost-effectiveness of irrigation methods using simple film irrigation by covering the edges with black film and flexible pipes.

**The object and method of research work.** The research was conducted in 2013-2014 on a 12-hectare cotton field belonging to the farm "Khudoynazar Omon" in Termez district of Surkhandarya region, which is the southernmost region of Uzbekistan. The climate of the region is sharply continental, the soil of the experimental field is medium sandy, barren meadow soil, groundwater is 3-3.5 m in early spring and 1.5-2 m during the growing season.

The "Hamkor" variety of medium fiber cotton was planted in the experimental field, the area of observation and phenological calculations was 50 m<sup>2</sup>, all observations, measurements and analyzes in the research were carried out on the basis of SoyuzNIXI (1981) methodical manual. The agro-technical measures used in the experimental field were carried out in the system adopted on the farm.

The experimental field soil is very poorly supplied with humus, according to the analysis of soil composition, the total nitrogen is 0.084-0.066%, total phosphorus is 0.142-0.116%, nitrogen in the form of nitrate is 18.4-12.3mg / kg, mobile phosphorus is 28.1-14, 3mg / kg, and exchangeable potassium is 200-160 mg / kg.

Experiments have shown that irrigation and its methods have a specific impact on the growth and development of cotton, along with complex agro-technical measures such as feeding it with mineral fertilizers, quality processing between rows of cotton, the use of growth regulators.

In particular, a sufficient amount of moisture in the soil during the growth of cotton to absorb the necessary nutrients from the soil at the required level plays an important role in the proper development of the plant and the prevention and proper formation of crop nutrients. In the experimental field, after the seeds were collected evenly after wet collection water, the inter-row, cut and cotton row spacing was cultivated twice and deeply loosened, and in the third decade of June the nitrogenous mineral fertilizers to be applied during the growing season were fully applied. In Option 2, the edges were covered with a black transparent film, and in order to absorb water into the soil, the film was drilled with a diameter of 1.5 cm every 30 cm, and in Option 3, flexible pipes were laid on top of the edges. In this option, the amount of water supplied to one unit is 0.3 liters / sec. defined as normal. In all experimental variants, water consumption was calculated at 3-4-5 irrigations of cotton. In the case of normal irrigated option, the average water consumption per hectare is 950 m<sup>3</sup>, the total water consumption during the growing season is 4750 m<sup>3</sup>, in the case of irrigation with flexible pipes 900 m<sup>3</sup> and 4500 m<sup>3</sup>, respectively, in the case of black film irrigation the irrigation rate is 630 m<sup>3</sup> per hectare. m<sup>3</sup>. (Table 1)

### Variation in the number of irrigations and water consumption depending on irrigation methods during the growing season

TABLE 1

Variants	number of irrigations, times	average water consumption per irrigation, m3 / ha	amount of water consumed during the growing season, m3 / ha	The difference between, m3
Irrigation-control in simple method	5	950	4750	-
Irrigation covered with black polyethylene film	5	756	3780	970
Irrigation using a flexible pipe	5	900	4500	250

Note: Water consumption between options was calculated at 3,4,5-irrigations.

Observation, measurement and counting were carried out to determine the effect of irrigation methods in the experimental options on the growth, development and emergence and formation of yield elements of cotton.

In particular, in the 1st variant, irrigated from all branches in a simple way, as of August 1, the plant height was 80.2 cm, the yield horn was 11.7, the yield elements were 13.0, in the 3rd variant irrigated with flexible pipes, the plant height was 90.5 cm, the yield horn 12.1 units, yield elements 14.7 units, in the 2nd variant irrigated with black film on the branches, respectively, the plant height was 88.8 cm, the yield horn was 12.5 units, the number of yield elements was 18.7 units. (Table 2)

The average number of clumps formed in a single tuber is 01.08 in the control variant. 8.4 units, 8.9 units in the case of irrigated with flexible pipes, 11.3 units in the case of irrigated with black film on the edge, or 2.9 units more than in the control.

As of September 1, the number of buckets in the control variant was 12.1, of which 7.3 or 60.3% were fully opened. 12.8 units or 77.5%, and in the variant irrigated using flexible pipes 14.6 units, respectively; 9.5 pieces; Was 64.6%. In terms of the number of hollow cocoons, as well as the degree of their opening, a clear advantage can be seen in the options using economical technologies for irrigation in the simplest way.

### Influence of irrigation methods on plant growth and development

TABLE 2

Variants	plant height, cm	harvest horn, pcs	yield element, pcs	Hence			01.09.2013 year		
				Bud	Flower	Shona	yield element, pcs	Bud	Flower
1-Irrigation-control in simple	80,2	11,7	13,0	8,4	1,9	3,6	18,7	12,1	6,6

method									
<b>2-Irrigation covered with black polyethylene film</b>	<b>88,8</b>	<b>12,5</b>	<b>18,7</b>	<b>11,3</b>	<b>2,6</b>	<b>4,8</b>	<b>19,3</b>	<b>16,5</b>	<b>2,8</b>
<b>3- Irrigation using a flexible pipe</b>	<b>90,5</b>	<b>12,1</b>	<b>14,7</b>	<b>8,9</b>	<b>1,6</b>	<b>4,2</b>	<b>19,6</b>	<b>14,7</b>	<b>4,9</b>

Two experiments were carried out in the experimental field and the 3rd harvest was calculated biologically. In the control option, where cotton is irrigated from all branches, the yield is 32.2 ts / ha, using flexible pipes in the irrigated variant it was 34.9 ts / ha or +2.7 ts / ha more than in the control variant, and the highest yield was 39.7 ts / ha or 7.5 quintals more than in the irrigated variant.

Also, due to the early formation and rapid opening of the cocoons, the yield of the first crop was higher than that of the other options in the case of irrigated with film on the edges. (Table 3)

#### The effect of irrigation methods on the opening dynamics and productivity of the canopies

**TABLE 3**

Variants	terms, ts / ha			productivity, ts / ha	additional yield relative to control	
	1-term	2-term	3-term		ts,ha	%
1-Irrigation-control in simple method	19,4	8,2	4,6	32,2	-	-
2-Irrigation covered with black polyethylene film	32,4	6,5	0,8	39,7	7,5	23,3
3- Irrigation using a flexible pipe	24,2	7,6	3,1	34,9	2,7	8,4

According to the results of the analysis, the development of cotton improved in the simple method of film irrigation and the use of flexible tubes in the irrigated areas, which allowed each bush to retain more nutrients, and the development of the formed elements accelerated and matured earlier than other irrigation methods.

#### CONCLUSIONS

a). When using the method of film-coated irrigation, the cost of fuel and lubricants and maintenance costs are reduced by 40-45% due to the fact that the cotton is not processed between rows.

b). In return for this method of irrigation, the efficiency of water use increases by 30-35% compared to conventional irrigation, and the average water consumption per hectare is saved by 750-900 m<sup>3</sup>.

v). Most importantly, due to the maintenance of the same moisture in the field along the length of the ridge, the plants grow evenly and prevent excess water consumption and transpiration in the field during the growing season. In these areas, a microclimate is created for the normal growth and development of the plant.

g). In the method irrigated in this way, the nutrients in the soil are not washed away and the efficiency of the plant's use of mineral fertilizers is high.

d). The formation and maturation of pods in cotton is accelerated when irrigated with a film, the yield is 23% higher than in the conventional method, and when irrigated with flexible tubes, the yield is up to 8.4% higher than in the control.

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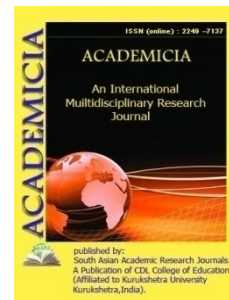
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## DIAGNOSING PROBLEMS AND GROWTH PROSPECTS OF BUSINESS ACTIVITY OF A TRAVEL AGENCY

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### ABSTRACT

*The article examines and highlights the problems associated with the performance of the enterprise first in the field of tourism, as well as explores traditional methods of assessment of bankruptcy. To improve assessment methods, sectors of the economy need government support. Today, different mechanisms of interaction are used at the regional level. This approach is capable of radically changing the content of the regional economy.*

**KEYWORDS:** Bankruptcy, Investment Projects, Marketing, Mechanism, Management, Innovation, Market, Goods.

### INTRODUCTION

The multifaceted nature of the activities of small businesses, and in the field of the tourism industry requires a study of its effectiveness, based on a systematic approach. High-quality performance management is impossible without its analysis and assessment, therefore, improving the methodological foundations for assessing the effectiveness of small businesses is highly relevant.

### LITERATURE REVIEW

In foreign literature, the theoretical, methodological and practical aspects of the efficiency of enterprises are devoted to the works of such authors as K. Adams, P. Drucker, R. Kaplan, K. Cross, D. Miles, K. McNair, G. Mintsberg, D. Norton, D. Sink et al.

Despite the large number of works on efficiency problems, theoretical and methodological approaches to assessing the efficiency of small businesses have not been sufficiently

developed. The use of modern approaches for assessing efficiency is limited to the use of financial analysis and, in particular, profitability indicators, which is clearly not enough to justify management decisions aimed at increasing the efficiency of tourism enterprises .

### Main part

Based on a qualitative assessment of the values of indicators at the end of the analyzed period, as well as their dynamics during the period and the forecast for the next year, it should be noted that the financial position and results of the travel agency "NODIR SAMARKAND" is characterized as satisfactory, and the financial results for the entire analyzed period as excellent. On the basis of these two assessments, the final rating assessment of the financial condition of the enterprise was obtained, which was B - satisfactory condition. The "B" rating reflects the satisfactory financial condition of the organization, in which the bulk of the indicators fit into the normative values, or are close to the norm. An entity with this rating can be viewed as counterparties that require a prudent approach to risk management. An organization can apply for credit resources, but the decision largely depends on the analysis of additional factors (neutral creditworthiness).

The final rating of the financial condition of the travel agency "Nodir Samarkand" on the results of the analysis for the period from 01.01.2019 on 12/31/2020 (analysis step - year): B (satisfactory). Next, the analysis of the balance sheet structure is formed from the beginning of 2019 till 31.12.2019, because the coefficient both on December 31 in 2019 were lower than standard set value as a third parameter calculated solvency recovery factor. This ratio serves to assess the prospects for the organization to restore the normal structure of the balance sheet (solvency) within six months while maintaining the dynamics of the first two coefficients that took place in the analyzed period. The value of the coefficient of recovery of solvency (-) indicates the absence in the near future of a real opportunity to restore normal solvency.

The bankruptcy forecast is part of the analysis, since it is very important for the company to timely identify bottlenecks and other problem areas, as the company intends to develop further. As one of the indicators of the likelihood of bankruptcy of the organization, the calculation is presented and the Z-score of Altman is calculated (for the travel agency "NODIR SAMARKAND", a 4-factor model for private non-manufacturing companies is taken).

$$\text{Z-score} = 6.56T1 + 3.26T2 + 6.72T3 + 1.05T4. (1)$$

The estimated probability of bankruptcy, depending on the Altman Z-score, is:

- 1) 1.1 or less - high probability of bankruptcy;
- 2) from 1.1 to 2.6 - the average probability of bankruptcy;
- 3) from 2.6 and higher - low probability of bankruptcy.

Based on the calculations performed and their results presented in Table 2.11, it follows that according to the results of calculations for the travel agency "NODIR SAMARKAND" the value of the Z-score as of 12/31/2019 was 2.82. This value of the indicator testifies to the insignificant probability of bankruptcy of the travel agency "NODIR SAMARKAND".

The calculations and analysis of the obtained results of the company's activities, as well as the use in the calculations of the 4-factor model of the probability of bankruptcy for private non-

manufacturing companies, the recommended measures were developed to improve the efficiency of the company's activities, which are presented in Table 1.

The capital structure of an organization, that is, the ratio of different types of assets and liabilities, is a defining indicator of the sustainability of an organization's financial position. Assets and liabilities are divided into long-term and short-term, and liabilities (sources of funds of the organization) are also divided into own and borrowed ones. It is the ratio between these indicators that largely determines the financial condition of the organization. In this regard, it should be clarified how optimal the capital structure is. Equity capital of the organization as of December 31, 2019 is equal to 40% of the total capital. It is considered normal to have at least 50% of equity capital in the total capital of the organization and may fluctuate depending on the industry (more precisely, depending on the ratio of current and non-current assets characteristic of the industry).

For the "Tourism" industry, a share of equity capital of at least 50% (preferably 70%) is normal. Taking into account the actual ratio of circulating and non-circulating assets of the travel agency "NODIR SAMARKAND", we recommend focusing on the optimal share of equity capital equal to at least 70% (minimum - 50%). Said optimum proportion of equity for the organization is designed in such a way that the ratio of the equity, consistent rate.

**TABLE NO. 1 RECOMMENDED MEASURES TO IMPROVE YOUR FINANCIAL CONDITION**

<b>Recommended measures to improve your financial condition</b>	<b>Quantification (minimum value)</b>	<b>goal</b>
Increase share equity up to, % of total capital	45	Ensure sufficient financial independence (increase the coefficient autonomy).
Reduce the amount of short-term creditor debt (for example, transferring it to long term debt), by, thous. sum.	1684	Increase the security of short-term liabilities current assets (indicator current liquidity). When the organization's optimal asset structure share of short-term liabilities equal to 49% of Balance.
Increase the balance amount cash and short-term financial investments for, thous. soums.	481	To raise continuity of ongoing calculations (improve the indicator absoluteliquidity).
Reduce inventory by transferring them to more liquid assets - short-term accounts receivable debt,	3211	Increase solvency (indicator of fast liquidity).

financial investments or cash, per thousand sum .		
Increase share equity capital% of all capital		Ensuresufficient financialindependence
Reduce the amount short term creditor arrears (for example, translating it a long-term debt), on , thousand. soums .		Increase security short-term liabilities current assets (indicator current liquidity). When the organization's optimal asset structure share of short-term liabilities equal to 0% of Balance.

This ratio is the most stringent available regulatory benchmark for the size of equity capital. The minimum recommended share of equity capital is based on the fact that the organization's equity capital covers at least 70% of the book value of all non-current assets. With such a share of equity capital, the financial independence of the organization will remain satisfactory, but some financial ratios, in particular the equity ratio, will be below the established standards. In addition to the optimal and minimum share of equity capital, there is a limit above which the share of equity capital is considered excessive, holding back the development of the company. Typically, for non - capital intensive industries, this limit is 70%. Considering the large share of non-current assets of the travel agency "NODIR SAMARKAND", this limit is 50%. With such an indicator, equity capital will become a source of funds for all non-current assets of the organization and 40% of circulating assets is more than enough. Exceeding the specified percentage will be an indicator of not only high financial independence, but also an unused opportunity to attract borrowed funds to increase the return on capital invested by owners. Now the share of the organization's equity capital is 40%, which is 30% less than the minimum acceptable value. In this regard, an important question arises for the company: "How to increase equity capital?" The main source of a firm's equity capital gains is net income. In addition, there are the following "one-time" options for increasing the equity capital (net assets) of the organization:

- 1) revaluation of fixed assets increase their book (residual) value. A commercial organization may not be evaluated more than once a year (at the end of the reporting year) revalue groups of similar fixed assets at the current (replacement) cost. When deciding on revaluation of such fixed assets, it should be borne in mind that subsequently they are revalued regularly. Also note that an increase in the residual value of fixed assets leads to an increase in corporate property tax, but is not included in the income tax base;
- 2) an increase in the authorized capital;

3) the founder's contribution to the property of the company (without changing the authorized capital). This option does not imply a return on investment, unlike a loan or loan.

In addition, the organization not only has problems with its own capital, but is also observed inadequate current liquidity of assets (not enough money and assets that can be quickly converted into cash). So, the structure of assets and liabilities of an organization, that is, the balance sheet, largely determines its solvency.

The assessment of solvency is carried out by investors on the basis of the liquidity of current assets, which is determined by the time required to convert them into cash. In this part, the indicators of the quality of the structure of assets and liabilities are liquidity ratios. Therefore, taking into account the analysis carried out, it should be established what is currently the state of liquidity of assets of the travel agency "NODIR SAMARKAND". In this regard, it is necessary to consider the current liquidity ratio, which shows the ratio of current assets and short-term liabilities.

***Current liquidity ratio = Current assets / Short-term liabilities = 0***

The current liquidity ratio as of December 31, 2019 is equal to 0. This means that only 0% of short-term liabilities are secured by current assets. A ratio value of at least 1 is considered normal. A ratio value of less than 1 (i.e. short-term liabilities exceed current assets) is considered unacceptable, although there are examples of successful companies with such an indicator, for example, McDonald's (due to the incredibly fast inventory turnover, when raw materials almost immediately turns into finished products and is sold to the client for cash). We recommend that you focus on the normal value of the current liquidity ratio of at least 1.

There are two ways to increase current liquidity:

- a) Reduce the amount of short-term liabilities. It is possible to reduce short-term liabilities by converting part of them into long-term liabilities, i.e. attracting loans and borrowings on a long-term basis.
- b) Increase the amount of current assets by reducing the value of non-current assets (for example, by selling unnecessary, non-core, unused fixed assets). In addition, it is possible to increase the liquidity (solvency) of the organization through the acceleration of asset turnover. Asset turnover largely depends on the production cycle. Shorter cycle allows less liquid assets (stocks) to turn into highly liquid assets (accounts receivable, cash) faster. This enhances the organization's ability to meet its obligations. To increase the turnover allows not only the acceleration of the production process itself (or the process of performing work and rendering services), but also tightening the payment discipline of buyers, reducing the period of collection of receivables.

The current liquidity ratio is the most common indicator of asset liquidity. To check the solvency for the near future, the quick liquidity ratio and the absolute liquidity ratio are calculated. The absolute liquidity indicator of the NODIR SAMARKAND travel agency can be increased as follows:

- 1) Reduce the organization's current accounts payable, including by changing the sources of financing in favor of long-term borrowings;



2) Reduce the share of less liquid assets (non-current, inventories, receivables), transferring them to more liquid ones - funds in the current account or in short-term deposits (for example, reduce the grace period for buyers (increase the turnover of receivables), sell surplus inventories or gradually reduce their level.

## CONCLUSION

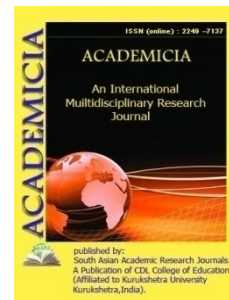
Thus, based on the calculations, diagnostics of the state of the probability of bankruptcy and the prospects for the company's growth, a number of conclusions were drawn:

- 1) The coefficient of autonomy of the organization indicates its significant dependence on creditors due to a lack of equity capital;
- 2) The investment coverage ratio for the entire period under review has increased and the value of the coefficient as of December 31, 2019 corresponds to the normative one, the investment coverage ratio has grown throughout the entire period;
- 3) The ratio of short-term debt shows that the amount of long-term accounts payable of the organization significantly exceeds the amount of short-term debt;
- 4) As of December 31, 2019, the current liquidity ratio is below the norm. During the analyzed period, the ratio remained unchanged. There were no changes in the current liquidity ratio during the analyzed period;
- 5) below the norm, like the previous ratio, was the absolute liquidity ratio, while from the beginning of the period the absolute liquidity ratio remained unchanged.

The conclusions made about the problems and the existing potential of the company will allow the development of organizational and economic design measures, the implementation of which will allow the company to function more efficiently and profitably.

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## THE DEVELOPMENT OF THE SCIENTIFIC OUTLOOK OF STUDENTS IN THE STUDY PHYSICS COURSE

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### ABSTRACT

*The phenomenon of the scientific worldview is understood as an integral part of a student's competence development -future specialist at the university. Studying a university physics course contributes to the formation of the worldview foundations of transformative personal approach to the global unity of the world of Nature and the world of Manbased on the principles of co-evolutionary coexistence, ethical responsibility and aesthetic understanding. In this regard, quite justifiably arises the need to identify educational potential and develop pedagogical aspects of the formation of a scientific worldview future specialists in the process of studying a university physics course.*

**KEYWORDS:** *Scientific Worldview, Personality Development Student Studying Physics.*

### INTRODUCTION

Human life has never been so difficult and contradictory, never before has humanity faced such a voluminous set of serious and responsible problems associated with environmental threat, increasing aggressiveness, violence and cruelty, strengthening of the social, political, national-ethnic, religious and other confrontation.

In the context of an aggravating crisis and an interesification of global challenges, the social need for a fundamental, holistic education of the individual, focused on understanding the modern world in the multidimensional dynamics of its formation and development, revealing deep connections between various socio-natural processes, the formation of ideological attitudes of the individual as meaningful and semantic dominants of productive activity, active behaviour and responsible life. At present, the importance of the worldview maturity of a specialist, his ability

to think strategically, to understand the main trends in the development of his own profession and society as a whole, is increasing. A modern man must see the world in its entirety in order to comprehend, understand and bear the fullness of individual responsibility for its existence.

Most researchers understand worldview as a system of generalized ideas of a person about the world, society, himself, existing at the level of conviction, postulate, axiom, principle. In a figurative refraction, the worldview is "a large canvas, where we inscribe a wide variety of events and facts", it is a kind of " lens through which we try to look at the world in order to understand it ".

Along with other conditioning factors (philosophy, psychology, art, ideology, practice), the determining value in the formation and development of the worldview belongs to science. Focus scientific knowledge for a deep, objective, rational understanding of the essence things is becoming increasingly important for modern man, filling his outlook on "a sense of sustainable progress" (M. Born), prompting reasonable and responsible search for adequate, including "Fateful" decisions in the variety of emerging life situations [3, p. 5].

The orientation of modern science towards the comprehensive integration of subject areas, which raises a disparate set of views to a holistic picture of the world, contributes to the widespread ascertain of principles of synergetic thinking, where the reality comprehended by a person " is felt by the senses, and is experienced emotionally, and is reflected in a conceptual way", and the knowledge gained appears in the status individually significant, valuable, personal – as "a single knowledge – way – action ", " knowledge, inside which the subject is included. "[1, p. 366].

In the field of subject mediation of the educational process the formation of the personality worldview, the leading role belongs to scientific knowledge, natural sciences.

Natural sciences not only drive technological growth productive forces of society, but with all its content, revealed objective laws of the dispensation of life, have a significant influence on the development of the rational component of a person's worldview, form a special, "natural-scientific mentality" of a modern person, his scientific outlook.

The scientific worldview is constantly enriched with new knowledge is unthinkable without the development of a person's cognitive attitude to the world of nature, includes the most important achievements of various fields of science, which, in the logic of scientific education, are integrated into "uniform cycles of fundamental disciplines ", focused on interdisciplinary connections and united by "a common target function, the object of research and methodology for constructing content ".

In the modern sense, scientific education is a single complex of natural sciences, among which the dominant place in physics is right. In this regard, quite justifiably arises the need to identify educational potential and develop pedagogical aspects of the formation of a scientific worldview future specialists in the process of studying a university physics course.

Thus, modern physics cannot develop without relying on worldview, which acts for her "an extremely broad theoretical foundation ", representing directly related to perceived human interests "systematic unity of the diversity of generalized beliefs about the nature of natural or social phenomena, or the totality of those and others".

On the other hand, the factor of "deep knowledge of physics" is one of the most important conditions for "successful human life in the modern world". Today, without physical education, the development of creative human capabilities, the formation of his "image of I" and "image of the World", since physics provides fundamental knowledge about the laws of the development of nature, an integral part of which he is.

Studying the course of general physics in the system of higher professional education is designed to help students "find themselves" - to build their own the world of values, master creative ways of solving scientific and life problems, open the reflective world of one's own "I" and learn manage it in the globally expanding space of interaction between Man and Nature.

The decisive role in this process belongs to the personality of the university teacher, who is called upon to personify high ideals for the students. a modern, intelligent, educated person, a professional specialist. In this respect, the physics teacher is no exception. Its main ideological mission is not so much to clarify the answers as to pose problems, to reveal the contradictory reality of the cognizable physical world, encouraging students to rethink, check, to systematize the usual forms of worldview.

At the same time, the success of the development of a worldview is largely based on the feeling of trust arising in the relationship between the teacher and students, which to a decisive extent "facilitates the teacher's actions and makes his example is beneficial ... But woe to the teacher, who his careless behavior, the manifestation of their passions in front of students destroyed that the charm with which he was surrounded in their eyes ... Once the moral trust is lost or at least a little shaken, immediately the teacher's word loses its strength " [2, p.145].

Consistent integrity of social and professional position teachers are the key to the successful formation of a worldview students. Only the teacher who accepted with all his being uplifting the meaning of science, the advanced ideas of the century, which is formed as a creative person, can be a spiritual mentor for youth.

In this regard, an enduring example that positively affects development of the personal component of the scientific worldview students, serves the lifestyle of outstanding physicists. For example, deep versatile knowledge of S.I. Vavilov, his love and devotion science organically combined "with a sensitive, benevolent attitude to people and personal charm, which invariably attracted young people to him ". The memoirs of contemporaries about M. Curie emphasize her

"Boundless dedication to science, ease of relationship with students and employees ", whom she taught" simplicity and sincerity ", the ability create a "uplifting and family-friendly" atmosphere at the same time, "Unusually conducive to scientific discoveries" .

The scientific worldview represents the unity of the theoretical and spiritual-practical attitude of the individual to the world, aims at the unity of word and deed, knowledge and deed, feelings and beliefs, forms active life position.

The systematic use of scientific research methods in physics classes allows to adequately develop the prognostic component educational component of the scientific worldview of future specialists. In this regard, academician G.S. Landsberg pointed out that "Teaching cannot, of course, be exhaustive, but its it is necessary to build in such a way that in the future the student can and I should have finished my studies, but I would never have been forced to retrain .

The practical orientation of the development of scientific the worldview of students when studying a physics course, the formation of the ability to objective judgment and productive action are due to and by the fact that physics is a complex science that has boundaries contact with many subjects studied at the university. In this connections the teacher should disclose the relationship of the topic under consideration not only with a specific section of physics, but also with previously studied areas scientific knowledge (for example, chemistry, biology, etc.). Thereby

the physical component of the activity on the conscious transforming the surrounding reality, the worldview capabilities of the physics course expand in the formation of the integrity of the natural science views and ideas of students.

In the context of our consideration, the use of historical material in teaching physics was of great importance. The implementation of the principle of historicism helped to improve the quality of students' knowledge by understanding the history of physics, first of all, as a process of scientific evolution a number of fundamental physical concepts and ideas [4].

The study made it possible to conclude that the scientific worldview of a person is constantly developing on the basis of an expanding circle of knowledge about nature, a holistic system of views and beliefs of a person, based on a behaviorally asserted idea inseparable connection of Nature and Man in a meaningful and semantic context co-evolutionary coexistence.

The scientific worldview of a person assumes not only developed human ability to base their behavior on the identified the essence of the "hidden process" that determines the "unity of nature in dissimilar matters" (F. Bacon), but in its true understanding it is impossible outside of its aesthetic (expressive) component, which makes possible "true contemplation and free action" and confirms the inalienable nature of the relationship between Nature and Man according to the laws of Harmony, Order and Beauty.

The theoretical significance of the study lies in the fact that its results expand the scientific and pedagogical ideas about the theory and practice of the development of the scientific worldview of students in university education, contribute to the further development of implementation issues, the ideological potential of the university course "General Physics".

The results of the study showed that pedagogical the conditions for the formation of the scientific outlook of students university are: actualization of the ideological potential content of the university course "General Physics"; implementation the relationship between educational and extracurricular forms of educational activity; improving the scientific and methodological support of the teacher's activities.

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## EXPERIMENTAL STUDIES FOR STUDYING THE PROCESS OF WATER ABSORPTION OF APRICOT SEEDS

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### ABSTRACT

*In this article, the author studied the process of moisture absorption in the production of salted apricot pits in a new way. The article analyzes an old recipe - a handicraft method of making traditional national salted seeds from local varieties of apricot, preserved from ancient times, which is very laborious. Before starting the preparation of traditional national salted pits from local varieties of apricot, the pits are sorted by hand according to size, then on each apricot pit, cracks are formed on the shell with a hammer, after which the pits are boiled for 20-30 minutes in a salty solution until they are moistened. After that, the seeds are dried in the sun for 1-2 days in the summer, or in dryers for 10-12 hours in the winter. Then the bones are fried in cauldrons along with a lot of salt, for 15-20 minutes. Leave to cool in cauldrons, then send for sale. The advantage of cooking such national salted seeds is the preservation of vitamins, iron and potassium. Having analyzed the existing method of preparing salted seeds, the author was tasked to develop an experimental plan for studying the process of moisture absorption of apricot seeds. Experimental research aimed at developing a new method for the production of Uzbek national*

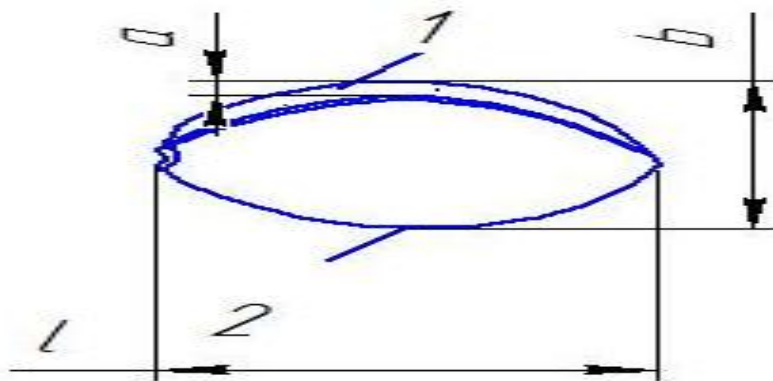
salted pits from apricot processing waste. The conditions for the course of the moisture absorption process, providing the optimal value of the selected parameters - the temperature of the salt solution and the duration of exposure of the product in the saline solution, and the construction of an interpolation formula for predicting the values of the studied parameters of temperature and time, depending on a number of factors, have been revealed. A regression equation is obtained for the output value of moisture absorption by two factors of the temperature of the brine solution and the duration of exposure of the product in the brine solution. The coefficient of the Student's criterion was also calculated, and the regression equation was checked for adequacy according to the Fisher criterion. Based on the data obtained, a graph of the dependence of the moisture absorption of apricot seeds on the influencing factors - the temperature of the saline solution and the duration of exposure of the product in the saline solution was built using the MATLAB mathematical model program.

**KEYWORDS:** Experiment, Matrix, Regression, Adequacy, Pit Of Apricot, Salted Seeds, The Mechanization Process, The Formation Of Cracks, Bone Shell, Factor, Water Absorption, Temperature, Exposure Duration, Saline Solution.

## INTRODUCTION

Apricot consists of pulp and pits. The apricot kernel consists of a shell and a kernel (seeds), the latter is rich in vitamins and nutrients for the functioning of the human body.

Apricot kernel - a kernel covered with a woody shell, small, smooth or slightly rough, with a firm hard shell, approximately 1-2 mm thick, found in the flesh of an apricot [3].



**Fig. 1. Apricot kernel:**

**1 - bone joint; 2 - the hollow part of the bone. a - the width of the shell joint; b - bone width; l - is the length of the bone.**

In Uzbekistan, or rather in the ancient city of Bukhara, called the "pearl of the East" since ancient times, an old recipe for the preparation of traditional national pickled seeds - has been preserved. The method of preparation of such salted seeds includes cracking the shell mechanically (with a hammer blow of each seed separately) to form cracks, which are boiled for 20-30 minutes in a salty solution until they are moistened, where the water temperature reaches 100-150°C, then the moistened seeds are heat treated, i.e. frying in cauldrons.

We have analyzed all the existing methods for processing pits, but mostly artisanal methods, and the task was set by mechanizing the process of cracking in the pits shell and intensifying subsequent heat and mass transfer processes, to identify the optimal new method for preparing the national product "salted pits" with the lowest energy consumption. The essence of the method we propose is to calibrate the seeds for the maximum and minimum sizes, moisten them in a saline 25-30% solution, then heat treatment for 1.5-2 minutes to form a crack on the shell of the seeds, and frying for 2 - 3 minutes [2].

The purpose of this experiment is to collect the necessary statistical information about an object to establish quantitative and qualitative relationships in mass phenomena and build stochastic models that reflect the relationship between various factors and properties of the object [1].

The experiment is carried out in order to find the conditions for the process of moisture absorption, providing the optimal value of the selected parameter (extreme problem), and constructing an interpolation formula to predict the values of the studied parameter, depending on a number of factors (interpolation problem) [5].

The moisture absorption of apricot kernels at a water temperature of 50 - 60°C is an important process for the preparation of traditional national kernels. In essence, moisture absorption is the determination of the porosity coefficient of a product by measuring the amount of liquid absorbed by a sample by weighing it in a dried and saturated state; gives the value of porosity that most closely coincides with the value of effective porosity [4].

In our case, for the development of an experimental plan, the influencing factors on the moisture absorption process are: temperature and duration of exposure in a saline solution.

Moisture absorption of apricot kernels is the main quality indicator in the production of salted kernels, as it influences and allows to mechanize and intensify the process of cracking in the shell of the kernels, and to improve the quality and taste indicators.

The first influencing factor on the moisture absorption process is temperature - this is the main physical quantity that characterizes the thermodynamic state of products and their aggregates.

The second factor influencing the process of moisture absorption is the duration of exposure of the apricot kernel in a saline solution and duration is time.

To develop the planning of an experiment for studying the process of moisture absorption of apricot kernels, we introduce the concept of lower  $X_k^l$  and upper  $X_k^u$  at the level of factor  $X_k$ . In our case, the first factor is the temperature of the saline solution  $X_1$ , the second factor is the duration of exposure of the product in the saline solution  $X_2$ . The levels of variation of the two factors are taken as follows:

Upper level (+):

- temperature of the brine solution is 47°C;
- the duration of exposure of the product in saline solution 24 hours (1440 min).

Lower level (-):

- temperature of the brine solution 42°C;
- the duration of exposure of the product in saline solution 12 hours (720 min).

The coding of factors was carried out (Table 1.)

**TABLE 1. FACTOR CODING**

Factors	Top level $X^t$	Lower level $X^l$	Centre	Interval variations $\lambda$	Dependence of the encoded variable on natural
$X_1$	47	42	44,5	2,5	$(x_1-44,5)/2,5$
$X_2$	24	12	18	6	$(x_2-18)/6$

Since we have two influencing factors and they change at two levels, we get the planning of experiments by  $2^2$ . Thus, it is necessary to carry out 4 experiments. For the example we are considering, the coding of factors means the transition from a coordinate system in natural units to a coordinate system in coded form. Each point of the factor space  $(-1; -1)$ ,  $(+1; -1)$ ,  $(-1; +1)$ ,  $(+1; +1)$  is an experience in research.

In the general case, an experiment in which all possible combinations of factor levels are realized is called a complete factorial experiment  $2^2$  (CFE) [5]. The  $x_1x_2$  interaction effect is obtained by multiplying all two columns and is called the first order interaction effect. If each of all the factor combination entries in coded form forms a planning matrix. Table 2 is a planning matrix for two factors at two levels.

**TABLE 2. EXPERIMENT DESIGN MATRIX FOR  $2^2$**

Experiment №	Factors		Interaction effects of factors	Experimental results			Average results $y_j$
	$x_1$	$x_2$		$y_1$	$y_2$	$y_3$	
1	-1	-1	1	19,2	19	18,6	18,933
2	1	-1	-1	20	20,3	20,2	20,167
3	-1	1	-1	21,5	21,2	21	21,233
4	1	1	1	19,9	20,2	20	20,033
$\Sigma \bar{y}_j$							80,366

The sample mean of the results  $\bar{y}_j$  for each experiment is calculated by the formula and written in Table 2:

$$\bar{y}_j = \frac{1}{m} \sum_{i=1}^m y_{ji}$$

where **m** is the number of experiments (observations) in each experiment;

$y_{ji}$  is the result of a separate  $i$ -th observation in the  $j$ -th experiment.

To establish the dependence of the output quantity on the input quantities, it is necessary to draw up a regression equation for the output quantity  $y$  by two factors. To do this, in the future, we calculate the regression equation. Regression coefficients are found using the least squares method [6].

Since the planning matrix of the CFE2<sup>k</sup> must satisfy certain requirements, the formulas that determine the coefficients of the regression equation are quite simple:

$$b_0 = \frac{1}{n} \sum_{j=1}^n \bar{y}_j$$

$$b_1 = \frac{1}{n} \sum_{j=1}^n x_{ji} \bar{y}_j, i = \overline{1, k}$$

$$b_{r,p} = \frac{1}{n} \sum_{j=1}^n x_{jr} x_{jp} \bar{y}_j, r < p, r = \overline{1, k}, p = \overline{1, k}$$

etc. if other interactions are considered. Substituting our values, we get the values and write the calculation results into table 3:

**TABLE 3. THE RESULTS OF CALCULATING THE VALUES OF THE REGRESSION COEFFICIENTS:**

Odds	b <sub>0</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>1,2</sub>
The values	20,0917	0,0083	0,5417	-0,6083

The obtained coefficients must be checked for significance. We determine the significance of these coefficients:

We find the variance of reproducibility S<sub>j</sub> by the formula:

$$S_{\{j\}}^2 = \frac{\sum_1^N \sum_1^n (y_{nj} - \bar{y}_j)^2}{N(n-1)},$$

where **N** is the number of experiments in the experiment;

**n** is the number of repeated observations in each experiment.

It is calculated separately for each result.

The calculation results are shown in Table 4:

**TABLE 4. CALCULATION OF THE VARIANCE OF REPRODUCIBILITY**

j	y <sub>1</sub>	y <sub>2</sub>	y <sub>3</sub>	$\bar{y}_j$	$(y_{j1} - \bar{y}_j)^2$	$(y_{j2} - \bar{y}_j)^2$	$(y_{j3} - \bar{y}_j)^2$	S <sub>j</sub> <sup>2</sup>
1	19,200	19,000	18,600	18,933	0,0711	0,0044	0,1111	0,0933
2	20,0	20,300	20,300	20,167	0,0278	0,0178	0,0011	0,0233
3	21,500	21,200	21,000	21,233	0,0711	0,0011	0,0544	0,0633
4	19,900	20,200	20,000	20,033	0,0178	0,0278	0,0233	0,0233
							Σ	0,2033

Then, summing up the elements of the last column of Table 4, we get:

$$\sum_{j=1}^4 S_{\{j\}}^2 = 0,0933 + 0,0233 + 0,0633 + 0,0233 = 0,2033$$

From this we get the reproducibility variance:

$$S_{\{j\}}^2 = \frac{1}{4} \sum_{j=1}^4 S_j^2 = \frac{1}{4} \cdot 0,2033 = 0,0508$$

The standard deviation of the coefficients is determined by the formula:

$$S_{coef.} = \sqrt{\frac{S_{\{j\}}^2}{n \cdot m}} = \sqrt{\frac{0,0508}{4 \cdot 3}} = \sqrt{0,00423} = 0,0651$$

where  $n$  is the number of experiments (observations) in each experiment;

$m$  is the number of repeated observations in each experiment.

From the tables of Student's distribution [5] by the number of degrees of freedom  $n(m-1) = 4 \cdot 2 = 8$  at the significance level  $\alpha = 0.05$  we find  $t_{cr.} = 2,31$ .

The calculated value of the Student's criterion is determined by the formula

$$|b_j| = t_{cr.} \cdot S_{coef.} = 2,31 \cdot 0,0651 = 0,150381$$

Comparing the obtained value  $|b_j| = 0,150381$  with the coefficients of regression equalization presented in Table 3, we see that all coefficients except  $b_1 = 0.0083$  are greater in absolute value  $|b_j|$ . Therefore, all coefficients except  $b_1$  are significant. Thus, this coefficient is excluded from the regression equation. In the final form, we get the equation in coded variables:

$$y = b_0 + b_2 - b_{1,2}$$

$$y = 20,0917 + 0,5417b_2 - 0,6083b_{1,2}$$

Let us check the obtained regression equation for adequacy according to Fisher's criterion [5,6]. Since the reproducibility variance has been found, to determine the calculated value of the  $F_{calc}$  criterion, it is necessary to calculate the residual variance  $S_{res}^2$ .

To do this, we find the values of the studied parameter according to the obtained regression equation  $\bar{y}_j$  ( $j = 1, \dots, 4$ ), substituting  $+1$  or  $-1$  instead of  $b_i$  in accordance with the number  $j$  of the experiment from Table 2:

$$y = b_0 + b_2 - b_{1,2}$$

$$y_1 = 18,94$$

$$y_2 = 20,16$$

$$y_3 = 21,24$$

The residual variance is  $S_{res}^2$  calculated by the formula:



$$S_{res}^2 = \frac{m}{n-r} \sum_{j=1}^n (\tilde{y}_j - \bar{y}_j)^2$$

$$S_{res}^2 = \frac{3}{4-3} \sum_{j=1}^4 (\tilde{y}_j - \bar{y}_j)^2 = 0,00083$$

The calculated value of the Fisher criterion  $F_{calc}$  is determined by the formula:

$$F_{calc} = \frac{S_{res}^2}{S_{\{j\}}^2}$$

$$F_{calc} = \frac{0,00083}{0,0508} = 0,0016 \approx 0,02$$

The tabular value of the Fisher criterion  $F_{tabl}$  is found from the tables of the critical points of the Fisher distribution [5, 6] at a significance level  $\alpha = 0,05$  for the corresponding degrees of freedom  $k_1 = n-r = 4-3 = 1$  and

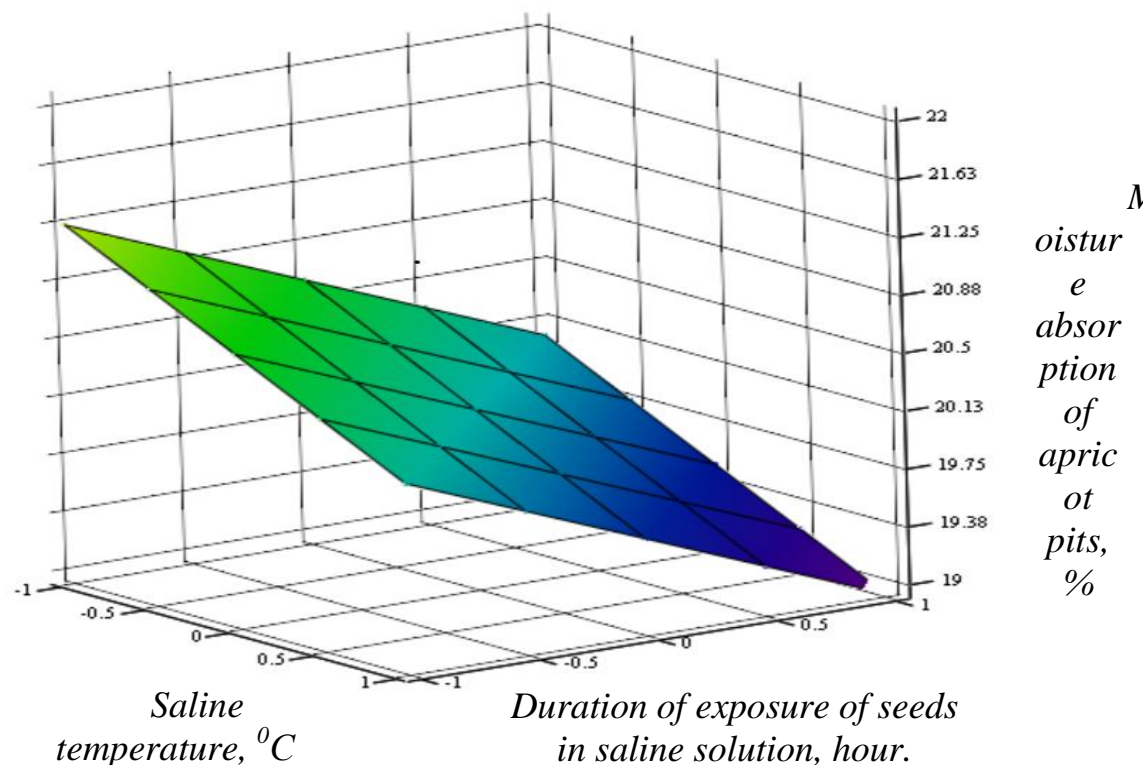
$$k_2 = n \cdot (m - 1) = 4 \cdot (3 - 1) = 8$$

According to the table of critical points of the Fisher distribution at the significance level  $\alpha = 0,05$   $F_{tabl} = 5,32$ .

Since  $F_{calc} = 0,02 < F_{tabl} = 5,32$ , the regression equation is adequate.

## CONCLUSIONS

This means that the resulting model adequately describes the process. Using the obtained equations, we will construct a graph of the dependence of the moisture absorption of apricot seeds on the influencing factors of the temperature of the saline solution and the duration of exposure in the saline solution using the MATLAB program (Fig. 1).

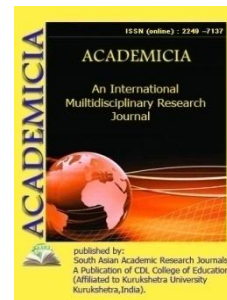


**Fig.1.** The dependence of the moisture absorption of apricot pits on the influencing factors of the temperature of the saline solution and the duration of exposure in the saline solution.

The graph shows that with an increase in the duration of exposure of apricot kernels in a salt solution, moisture absorption increases. According to Figure 1, the rational values of the influencing factors are the temperature  $t = 47^{\circ}\text{C}$  and the duration of exposure in saline solution for 24 hours.

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## STUDY OF TRANSMISSION OF ELECTRIC ENERGY THROUGH AC AND DC CURRENTS AND THEIR ANALYSIS IN A SPECIALLY ASSEMBLED LAYOUT

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### ABSTRACT

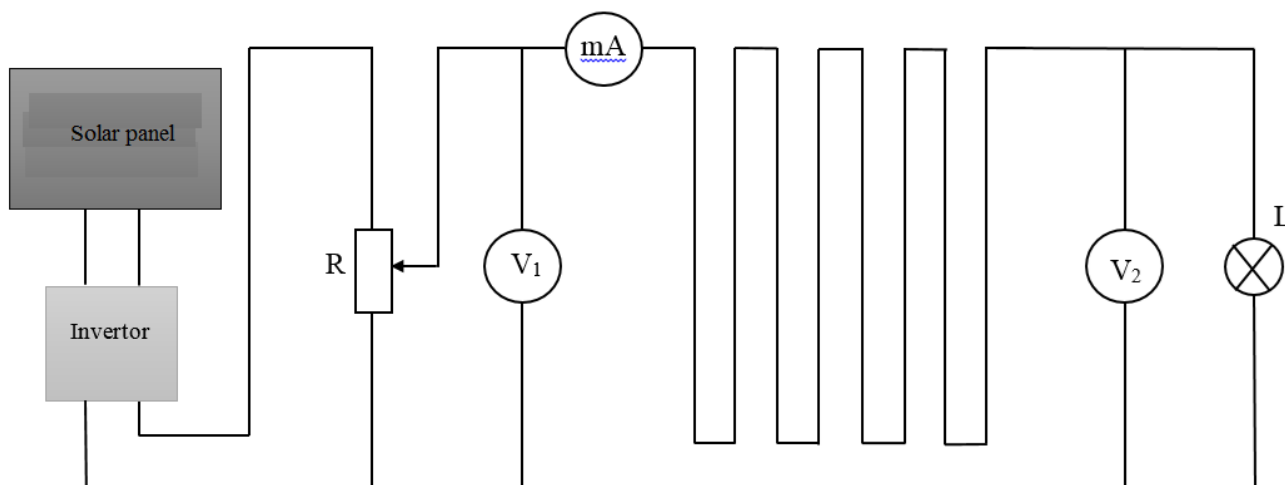
*A special model was assembled to study the transmission of electricity through an alternating and alternating current overhead line, and the results obtained and the results obtained using this model describe a graph of power losses in AC (constant current) transmission and AC (constant current) transmission, depending on the transmitted power.*

**KEYWORDS:** *Power Transmission, Direct Current, Alternating Current, Cable Lines Overhead Lines AC (Constant Current) Conductors, Power Consumption.*

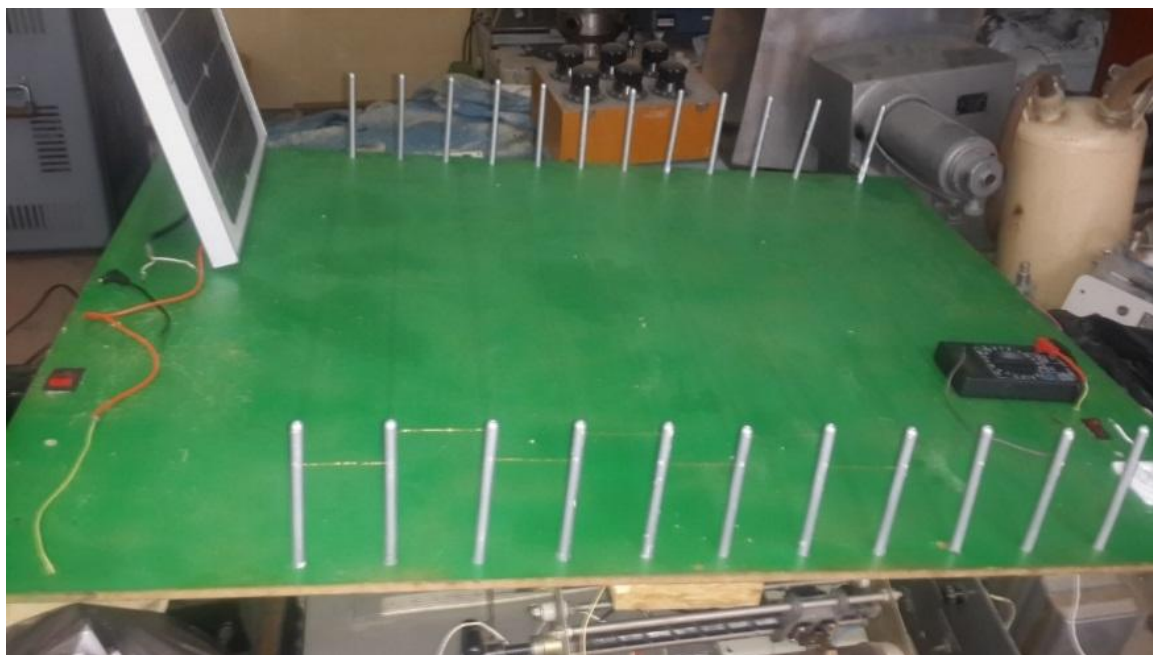
### INTRODUCTION

The geographical location of our country, natural conditions, the size of its territory, the uneven distribution of mineral resources, the developing industry, testify to the fact that Uzbekistan has a wide range of alternating current facilities. Given that by 2031 Uzbekistan plans to generate 21% of total electricity generation from alternative energy sources, as well as the widespread introduction of solar and wind power plants, the use of uninterruptible power transmission will be highly efficient in the transmission of electricity to consumers. Especially in this area, given the efficiency of low-power AC (constant current) power transmission, it is advisable to use modern voltage converters based on new types of electronic devices. [1] Currently, there is a tendency for the share of natural gas to generate electricity to decrease and the share of coal to increase. Therefore, it is also advisable to use AC (constant current) power from thermal power plants in combination with AC (constant current) power transmission. Of course, this issue requires a sufficiently in-depth analysis and technical-economic research. [1]

A special model was assembled to study the transmission of electricity through an alternating and constant current overhead line. Its general appearance is depicted in Figures 1 a, b.



1 a– picture. Schematic view of the experimental device.



1 b - picture. A mock-up designed to study the transmission of electrical energy through fixed and alternating current overhead lines

The alternating current generated in the solar panel is fed to the inverter, when the breaker-connector position in the inverter is low, the alternating current at the inverter output is fed to the rheostat and the current supplied through the rheostat is passed to the LED (load). The values of the input and output voltages from the readings of the first and second voltmeters, as well as the value of the current from the readings on the milliammeter are recorded. The results obtained from the experiments are presented in Table 1 below.

$U_1$ (V)	I (mA)	$U_2$ (V)	$P_1$ (mW)	$P_2$ (mW)	$\Delta P = P_1 - P_2$ (mW)
1	25	0,5	25	12,5	12,5
2	68	1	136	68	68
2,5	85	1,3	212,5	110,5	102
3	105	1,5	315	157,5	157,5
3,5	120	1,7	420	204	216
4	133	2	532	266	266
4,5	150	2,3	675	345	330
5	165	2,5	825	412,5	412,5
5,5	182	2,8	1001	509,6	491,4
6	200	3	1200	600	600
6,5	218	3,3	1417	719,4	697,6
7	235	3,5	1645	822,5	822,5
7,5	250	3,8	1875	950	925
8	265	4,1	2120	1086,5	1033,5
8,5	280	4,3	2380	1204	1176
9	297	4,6	2673	1366,2	1306,8
9,5	310	4,8	2945	1488	1457
10	327	5	3270	1635	1635
10,5	340	5,3	3570	1802	1768
11	357	5,6	3927	1999,2	1927,8
11,5	372	5,8	4278	2157,6	2120,4
12	388	6,1	4656	2366,8	2289,2
12,5	400	6,3	5000	2520	2480
13	415	6,7	5395	2780,5	2614,5
13,5	435	6,8	5872,5	2958	2914,5
14	445	7,1	6230	3159,5	3070,5
14,5	460	7,3	6670	3358	3312
15	475	7,6	7125	3610	3515
15,5	485	7,8	7517,5	3783	3734,5
16	500	8,1	8000	4050	3950

If the alternating current generated in the solar panel is fed to the inverter and the breaker-connector in the inverter is switched to the upper position, an alternating voltage is obtained at the inverter output and fed to the sliding rheostat. In this case, the input and output voltages from the first and second voltmeters, as well as the currents in millimeters are recorded. The results we obtained are presented in Table 2 below.

$U_1$ (V)	I (mA)	$U_2$ (V)	$P_1$ (mW)	$P_2$ (mW)	$\Delta P \approx P_1 - P_2$ (mW)
1	15	0,4	15	6	9
2	32	0,9	64	28,8	35,2

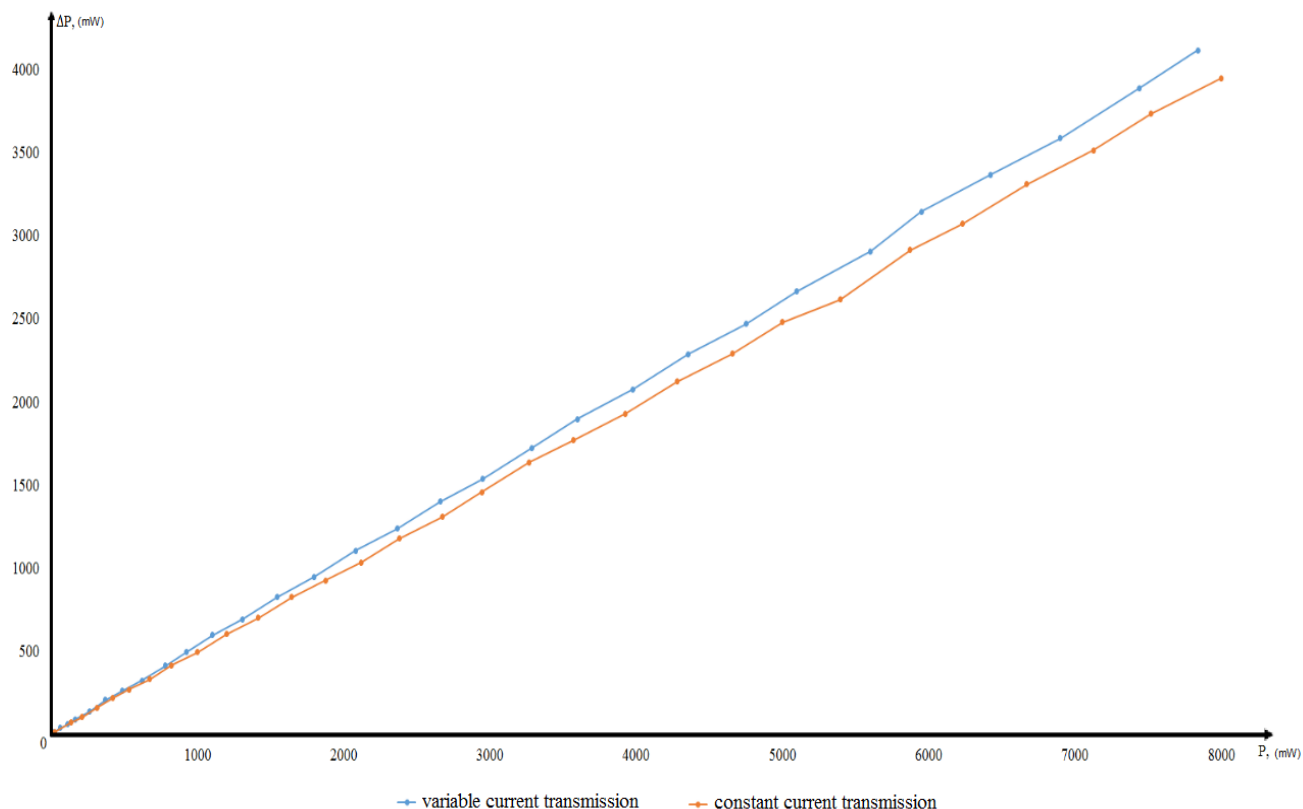
2,5	45	1,2	112,5	54	58,5
3	55	1,4	165	77	88
3,5	75	1,7	262,5	127,5	135
4	93	1,8	372	167,4	204,6
4,5	108	2,1	486	226,8	259,2
5	124	2,4	620	297,6	322,4
5,5	142	2,6	781	369,2	411,8
6	154	2,8	924	431,2	492,8
6,5	170	3	1105	510	595
7	187	3,3	1309	617,1	691,9
7,5	206	3,5	1545	721	824
8	225	3,8	1800	855	945
8,5	245	4	2082,5	980	1102,5
9	263	4,3	2367	1130,9	1236,1
9,5	280	4,5	2660	1260	1400
10	295	4,8	2950	1416	1534
10,5	313	5	3286,5	1565	1721,5
11	327	5,2	3597	1700,4	1896,6
11,5	346	5,5	3979	1903	2076
12	363	5,7	4356	2069,1	2286,9
12,5	380	6	4750	2280	2470
13	392	6,2	5096	2430,4	2665,6
13,5	415	6,5	5602,5	2697,5	2905
14	425	6,6	5950	2805	3145
14,5	443	6,9	6423,5	3056,7	3366,8
15	460	7,2	6900	3312	3588
15,5	480	7,4	7440	3552	3888
16	490	7,6	7840	3724	4116

Thus, at different values of alternating and alternating current voltage, the value of the current passing through the copper wire is recorded.

After the results obtained in the experiment were processed and calculations were made, connections were made. Figure 2 shows a graph of power losses in AC (constant current) transmission and AC(constant current) transmission, depending on the transmitted power. It can be seen from the connections that the power losses in an AC (constant current) transmission at the same power transmission are different from the power losses in an alternating current transmission.

Power losses in AC (constant current) power transmission are lower than power losses in AC (constant current) power transmission.



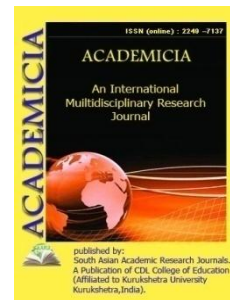


The data obtained show that the limit of power transmitted over an AC (constant current) line is much larger than that of an AC (constant current) line and is determined only by the throughput of the converter substations. In this case, it is only necessary to take into account that the reactive power losses in the transmission of natural power through an alternating current line are compensated by the charging power of the line. When the transmitted power exceeds the natural power, the reactive power losses on the line increase sharply.

From this it can be concluded that in the transmission of high-power electricity through overhead lines, the use of transmission lines over AC (constant current) power lines leads to a reduction in the waste of electricity at high capacity

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## TYPOLOGY OF MODERN AND MODERN IMAGES IN UZBEK CINEMA

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### ABSTRACT

*This scientific article covers a new era in the cinematography of Uzbekistan, focusing on some films made in both state and commercial film studios. More precisely, the contemporary and contemporary images created are studied in general, and the general conclusions arising from the comparative review of the characters in the films created in different film studios are divided into categories on the example of men and women.*

**KEYWORDS:** *Uzbek Cinema, Contemporary Image, Modern Image, Hero, Typology, Director, Actor, Film, State Cinema, Commercial Cinema, Creator, Interpretation.*

### INTRODUCTION

Uzbek cinematography has a rich heritage and a unique creative approach. During the period of independence, many contemporary and modern images were embodied in public and private film studios. They differ from each other in their art, relevance, content, significance, impact. By dividing the protagonists of films made in different film studios into categories on the example of men and women, general scientific conclusions are drawn based on a comparative review. Below, films with unique images were selected and analyzed, and the typology of the characters was determined.

The life of Iskandar (played by Bahodir Adilov), the protagonist of the film "The Preacher" (directed by Yusuf Rozikov), which depicts an active male figure (modern image) in public administration, is growing dynamically. The ordinary charioteer then rises to the level of a preacher. However, his personal life does not end as desired. Alexander is left alone at the end of the film.

The image of Maryam Fozilovna (modern image) in the film "The Preacher" has a special place in the Uzbek cinematography due to its artistry and expressiveness.

Another modern character of Yu. Rozikov - Boykenjaev (played by Farhod Abdullaev) in the film "Comrade Boykenjaev" also perfectly fulfills the tasks given during his life. Nevertheless, his fate ends tragically.

The life of the protagonist of Zulfiqor Musakov's film "Lead" Umar Kadyrov (performed by Bobur Yuldashev) is spent on the orders of senior government officials. Professional imbalances against inner feelings and feelings of humanity ultimately end with the protagonist putting an end to his or her own life. The fact that the lives of some modern characters created in the new era did not go as planned can be seen in the example of existing films.

In Uzbek films, the images of men and women in the family are based on national customs and traditions. In particular, the contemporary characters in Melis Abzalov's film "Chimildiq" - the bride (played by Rano Shodieva) and the groom (played by Said Mukhtorov) try to find their way into each other's hearts through various traditions. "Chimildiq" reflects how important it is for two people to understand each other and follow customs in order for the family to live in peace and prosperity.

The protagonist of Yolkin Toychiev's film "Spring" - a contemporary character Orzibi (played by Nigora Karimbaeva) is thinking about what kind of lady she will be in the future, when people face the problems of life. What he saw and experienced will be a lesson to him. Through this film, the director looks at the existing problems in the family fortress. Analyzes and reacts to them. To this end, he embodies the image of a woman as the protagonist.

Roza Hasanovna (played by Shahida Uzokova), the protagonist of Ravil Botirov's film "Where is Heaven?" For our contemporaries, paradise is about watching beautiful places and living in that land (America). Only the untimely death of her husband (played by Afzal Rafikov) will be a lesson for her to realize how many mistakes she has made in her life. This contemporary image attracts the viewer's attention with its real life. The idea put forward in it covers issues that are very relevant to the art of cinema today.

Commercial filmmakers also often refer to the family theme in the example of contemporaries. Ibrahim Rasulov made a film based on the screenplay "Tulip" based on a real event. In it, the couple's relationship is manifested in the strength of their affection for each other. Nevertheless, the man (played by Ogabek Sobirov) dies prematurely due to his wife's (played by Rano Shodieva) neglect of her health. The film, which features touching scenes, emphasizes the importance of not only kindness but also attention in the family.

Aziz Umrzakov's film Oqibat is also a commercial film production, in which a man (played by Umid Iskandarov) is portrayed as the main person who keeps the family together. It is said that no matter how difficult a family may be, it must be resolved by two people, the husband and wife, and they must support each other.

While state filmmakers have focused on nationalism and the further strengthening of its resilience in creating a hero on a family-themed scale, emphasis has been placed on potential problems in commercial cinema. It was reflected in the image of contemporaries that the most appropriate way to do this is to pay attention in time and prevent it.

Public and private studio filmmakers have repeatedly appealed to the image of business women in creating the image of contemporaries. However, it is difficult to say that these heroes were able to find a logical and artistically perfect solution.

The protagonist of Ayub Shahobiddinov's feature film "Late Life", the publisher, divorced her parents early. He lives only for work until he is thirty. The protagonists are a young man named Hamlet (played by Bobur Yuldashev) who lives in the village and Shahodat (played by Dilnoza Kubaeva) who lives in the city. Shahodat still claims to be a businessman after getting married. She later realizes that being married and having a child is the essence of human life.

The image of D. Kubaeva seems like a strong hero at the beginning of the film. But she later realizes that she is a woman and needs to get married. In this film, too, it is difficult to convince the viewer that the contradictions are fabricated.

It is appropriate to look at the lives of women who make a worthy contribution to the development of society in the creation of images of business women. We believe that the study of their daily lives and, most importantly, the production of films on the solution of problems arising from the simultaneous work with the family will be the basis for the creation of new heroes. In this regard, the image of a modern man can be seen in the image of the hero of the film "Hope". Raised in a simple family, Umid achieves the level of a mature entrepreneur as a result of his constant search for himself.

At a time when the Republic of Uzbekistan pays special attention to entrepreneurship, it is necessary to take a serious approach to creating the image of contemporary entrepreneurs. Whether it is in the field of construction, or the hero who opened and developed a company, it is not surprising that it serves to reflect the environment of this period and give a positive impetus to the audience.

The way of life of women is as delicate as itself. It is enough for him to go astray once. The theme of women lost in the trails of life has always fascinated filmmakers. Because while observing the way of life of such contemporaries, the spectator draws an educational conclusion for himself.

The protagonists of the films "Scorpion" (directed by Sabir Nazarmuhamedov) and "Let there be a way" (directed by Tamara Kamalova) tarnished the name of womanhood. That is why the fate of one ends in tragedy. The second is to continue the path of life because of a good person. In both films, which are based on real-life events, the viewer not only feels sorry for the fate of these characters, but also hates them. He thinks about how he can behave when these heroes are in place. Such films are relevant in this respect.

The image of men straying from their purpose in life is not observed in either stream of cinematic art. The image of a contemporary man created in such a theme layer can be a new hero for a new era.

In the state cinema, the protagonist of the film "Zabarjad" by director Bahodir Adilov Zabarjad (performed by Ilmira Rakhimjanova) is unique. Very rude in appearance, this girl is actually pure in heart and likes to do good to everyone. Throughout the film, he seems to care about a married man. In fact, he sees his late father in the form of that man.

Playwright Sharof Boshbekov is the creator of the unconventional way of creating the image of a woman. He emphasizes in the poem "Iron Woman" that even an iron robot cannot do what an Uzbek woman can do. Impressed by his work, director Abduvahid Ganiev made the film "Sevginator". The efforts of commercial filmmakers to continue the tradition of state cinema can be seen in the example of some films created.

The character of Alomat in "Iron Woman" is called Malomat (played by Manzura Yuldasheva) in this film. In both films, the image of a woman is central. One is a hero of a bygone era, the other is a discovery of a new era. The fate of the sign ends in tragedy. But Malomat has an independent mind so he creates a male robot like himself. The events and their integral connection reflected a new cinematic look due to the possibilities of the technical age.

As a continuation of this direction, the film "Flying Girl" (directed by Yolkin Toychiev) was presented to the audience. The image of a flying girl (performed by Asal Shodieva) is also created in an unconventional style. However, he did not succeed at the level of the heroes before him. Because the events on which the scenario is based seem to be fabricated. Auxiliary characters also failed to help him rise to the level of a hero. However, in this film, the technical means of embodying the events related to the protagonist are of great interest to the audience. The tradition in Uzbek cinema, which began with the film by Shukhrat Abbasov "Mahallada duv-duv gap" - the changing and moving state of objects, delights the audience. The flight of the broom and the movement of the teapot in this film will remain in the memory of the audience for a long time.

Happily, research has also been conducted on the unconventional embodiment of male images. The protagonist of Zulfiqor Musakov's film "Thanks to the Creator" (performed by Rustam Sadullaev) does not know that he has such an ability. When he finds out, he will witness wonderful events. Based on the situations that can happen in everyday life, this film is characterized by spectacle, as well as the fact that the protagonist is a pure man. The audience hopes that such a contemporary hero will appear around.

The film "From Myself to Myself" (directed by Abduvahid Ganiev), created by a private film studio, also tried to create male characters (performed by Adiz Rajabov) in an unconventional way. However, the shortcomings in the script do not allow for a realistic portrayal of events throughout the film. It is a unique style for an actor to play two heroes. This look becomes more convincing, especially after professional installation. However, the shallowness of the cinematography is evident in the consistent continuation of the events surrounding the protagonist.

In general, the art of cinema requires creative research to create a contemporary image in an unconventional way. Such an aspiration creates new heroes. It retains its relevance not only ideologically or thematically, but also in terms of the method of creation. In this regard, various studies have been conducted in Uzbek feature film.

Films about love for the motherland, devotion to the country are always relevant. For example, Zulfiqor Musakov's "Vatan" and Rustam Sadiev's "Alien Groom" films made at the state film studio and commercial studio, respectively. The characters in both films are new heroes. Importantly, they were able to express the image of our contemporaries artistically. The fact that the image of women is not observed in films made in the spirit of patriotism proves that it is possible to conduct research on this topic in both studios. This requires a modern approach in creating the image of the hero.

In short, contemporary and contemporary images created during the period of independence were reflected in the scope of various themes. Existing traditions were followed in order to reflect the heroes in the creative process. There have also been some peculiar news in this regard.

However, the fact that films made in state-owned film studios are not widely promoted among the population and their distribution is one of the current problems.

In a state studio, the depiction of heroes in the image of men is more common than the image of women. In commercial cinema, on the contrary, it can be observed that mainly the image of women is embodied as heroes. It seems that some images created in commercial film studios do not serve enough to raise the morale of the audience. Therefore, it is necessary to correct the existing shortcomings before the film is released on the big screens. Because the viewer is not focused on which studio the film was made in, but on its protagonist. Therefore, special attention should be paid to the artistic perfection of each image created.

There are contemporary heroes in the films, but there are flaws in their vivid portrayal. The essence of the issue in this regard lies in the issue of the script. When this topical issue remains unresolved, textured images continue to dominate in films. We think it makes sense to look for heroes in life in order to prevent it.

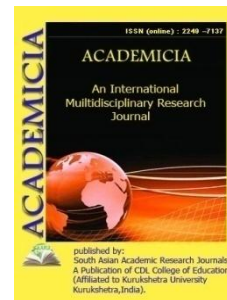
We believe that if the analytical conclusions drawn from the typology of contemporary images are taken into account by cinematographers, they will lead to the incarnation of new heroes in the future.

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## DEVELOPMENT OF A REAL-TIME WEB-BASED EMPLOYEE ABUSE REPORTING SYSTEM

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### ABSTRACT

*The progression of the economy of any nation is of extreme significance and the workplace plays a foremost role in the progression and the general development process. As a result of current trends of reducing, rightsizing, reengineering and dismissal, employees put up with abuses because of the concern about job security. Agreement in employee engagement produces a relationship amongst individuals and institutions or organizations with associating responsibilities and commitments. To make certain the stability at workplace, the need for regulation arises in order to create a well-adjusted relationship amongst the parties in an employment contract. This study pay attention to employee abuse reporting using the real – time web based system to support the reporting procedure; in so doing cubing the challenges that has to do with report procedure, linguistic, hierarchy and obstacles faced in communication by the prevalent reporting system. A prototype web application was developed, tested and found to meet the related concerns of the workplace and these concerns are then conveyed to the management or the International Labour Organization (ILO).*

**KEYWORDS:** Workplace Abuse, Reporting System, Employee, Real Time, Web-Base.

## INTRODUCTION

In the light of the undue exploitation of employees, regulations for the social protection of employed workers were developed in the second phase of the 19<sup>th</sup> century. These regulations were intended to ensure people work in dignity and are not overly exploited in the course of work (Adewaumi and Adenugba, 2010). Workplace abuse is on the increase in many organization and occupations. Some managers find it hard to control their abusive behaviour which most times, results in a hostile working environment (Ebeidet *al.*, 2003) and in Nigeria and most other countries, labour and management persistently strive to maximize their replicate values; in so doing, they try to augment their main respective income and enhance their positions. This creates a striking divergent and enthusiastically minced rival claims which do not lead to agreeable reconciliation (Nwokpoku et al., 2018). The danger of workplace harassment in modernized economies has led to decisive legislations, enacted to fight it.

Advancement in information and communication technology in our society is clearly seen in every facet of life, management and presentation of the information stored in databases (Gjorgjevikj et al., 2010). Reporting system, usually, collects information about certain users who have come to lodge confident complaint of any corporate entity or organization, because of abuse or some character trait related to abuse in the workplace or any given environment. This type of system could be in any form and with an objective when dealing with a particular issue (Smart, 2000). Some organization/employer makes employees do what management wants through fear, intimidation and coercion, this is described as abusive. Abusive organizations function with insensitive indifference for their employees, not exhibiting what might be a minimum amount of concern for their needs as humans. As a result of current trends of reducing, rightsizing, reengineering and dismissal, employees put up with abuse because of concern about their job security. Because, many employees who are not laid off fear further downsizing, so, they tolerate abusive treatment. Employees who remain at such organizations are faced with increased pressure to complete the same amount of work as before, but with fewer employees. This form of behaviour, at workplace by superiors/ or employers is the statement of the problem of this study. The aim of this work is the design and implementation of a real-time web-based employee abuse reporting system. This is done by creating a database management system, incorporating a tracking system to monitor each employee reportage in the system and using codeigniter: a web-based framework to ensure security of the system.

## LITERATURE REVIEW

### THEORETICAL FRAMEWORK

In Ebeid et al, (2003) paper, they stated the evolving nature of the abusive workplace behaviour, stating that Workplace abuse is on the increase and that many cases of abuse that has occurred in many organizations are still not recognized. Nigeria and most countries, employers tend to maximize their values by exploiting their employees to enhance their incomes and positions (Edeh et al., 2018). As a result of these ill-treatments, employees specially in developing countries have consequential effects on their economy which in turn attract attention globally (Abibu and Adeolu, 2017) and this has led to enacting decisive legislations to fight this menace (Akintayo, 2014). The commonness of abuse in the society which in most cases is not reported is becoming a general knowledge. He observed that these abuses can be emotional which are:

intimidation, harassment, insecure, uncomfortable and more. These can lead to low self-esteem and a loss of sense of belonging (Kimeu, 2014).

## **REVIEW OF EMPIRICAL STUDIES**

Employees should be sensitized of a healthy workplace culture and awareness to be created regarding the measures adopted by the institutions to prevent workplace abuse (Shetty and Nithyashree, 2017). One can conclude logically, based on findings that both Nigeria and the international level, there is enough and sufficient laws to usher in enviable standards to ensure that Nigerian workers' rights are protected and enjoyed by all workers (Oginni and Adesanya, 2013). The workplace environment has experienced a dramatic transformation these two decades because of the changes in the economic, political, technological and social sphere (Ebeid et al., 2003). Looking at different decisions of the national industrial court of Nigeria (NICN) have shown that they departed from the traditional or common law position in employment relation practice (Ofoha, 2019).

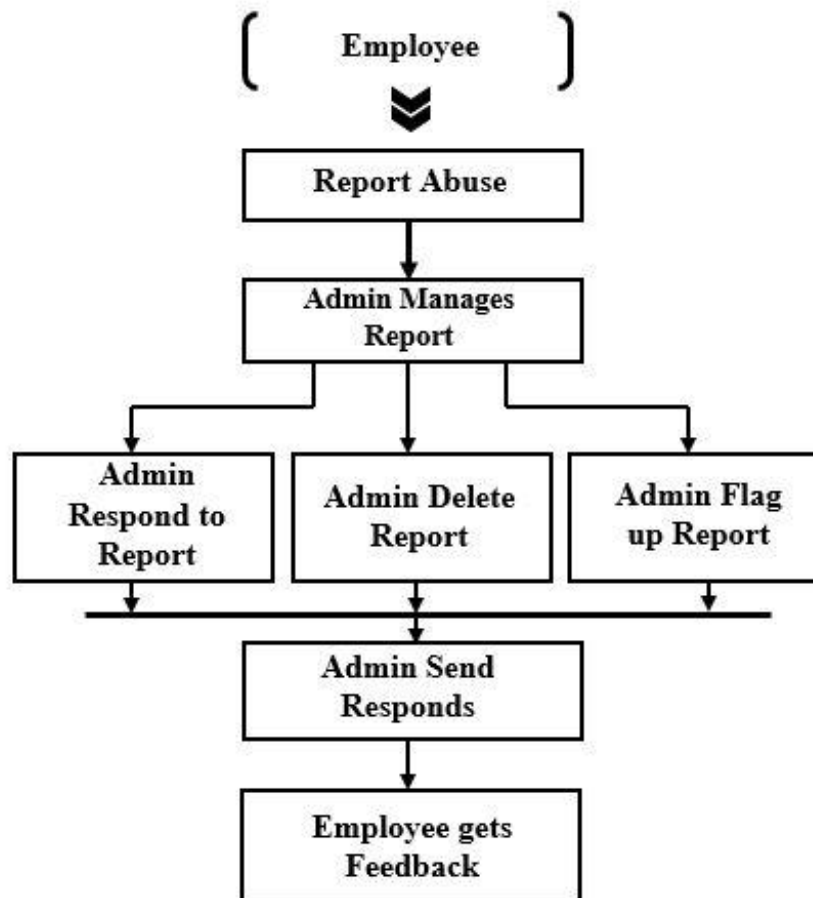
## **REVIEW OF RELATED LITERATURE**

Rootman et al., (1980) presented a drug abuse reporting system. He said that reporting system is a good way of collecting data that relates to abuse. The authors Ganironet al., (2019) in their work stated that Nowadays, much of the crimes committed were unreported to the authorities. Given this fact, their study presented a crime management and reporting system through online and even offline with the active participation of the citizen. Gjorgjevikj et al., (2010) in a conference paper highlighted the abundance of database usage in almost all aspect of our lives which helps with the reporting system. the progress of integrated reporting system was brought to light by Oprisor et al., (2016) in the area of an efficient communication instrument bringing active contributions. A pilot study was done that improve the process of incident reporting as a new electronic incident reporting system was implemented by Tayyab et al., (2019) and architectural framework for independent reporting system was developed by Laksitowening et al., (2014) as one look forward to extracting information as a basic tool to making strategic decisions.

## **SYSTEM DESIGN AND METHODOLOGY**

### **SYSTEM DESIGN**

The proposed design and implementation of a real – time web – based employee abuse reporting system solves the challenges faced with security and privacy of the existing employee abuse reporting. This system is web-based, hence, can be accessed by employees from any part of the world where one can have access to the internet service or facility. The system is to be used by the agency/ or organization responsible for handling such issues. So, privacy of employees is ensured: as the reportage will be sent directly to the administrators of the agencies/ organizations. The user or employee creates an account in the system so that he/ she's details can be stored into the database of the system. With the details of the employee already stored, he/ she can now login into the system and send a report. The system administrator(s), also have their own access to the system where they manage employees and their reports are treated accordingly. The user has no access to the admin area of the system. This enables the security and privacy of employee reports. Figure 1 presents the architectural design of the proposed system.



**Fig.1. Architectural Design of a Real Time Web Base Employee Abuse Reporting System**

Figure 1 presents an illustration of the proposed system. The employee reports abuse at the workplace through the system and the administrator of the system manages the report by responding to the report(s) deleting irrelevant reports and flagging up reports that needs urgent responds. After analysis and necessary considerations of the report, response is sent to the employee with necessary comments and steps they are/ or have taken. The employee gets feedback with respect to the report he/ she sent which is the main aim of the system. Privacy is upheld and all the process is done in real time except for when the report need to be analyzed.

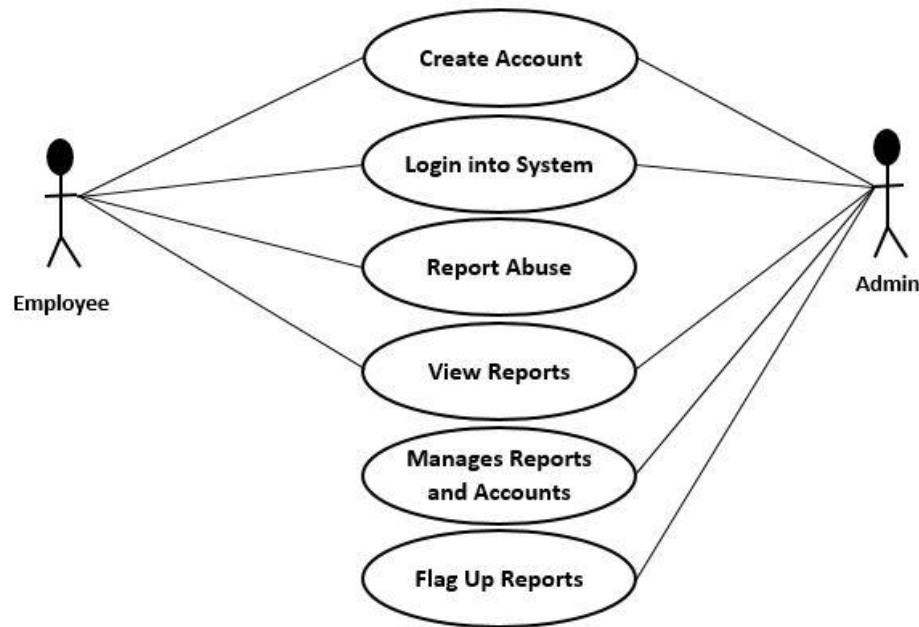
## METHODOLOGY

The proposed system employed the Object Oriented Analysis and Design using the UML diagrams to explain the workability of the system for which the design method reveals the significance by clearly capturing both classes and object hierarchies of the system.

### • Use Case Diagram

The use case diagram of the proposed system is used to model the various use cases of the real-time web-based employee abuse reporting system. The two major user of the system are the employee and admin which is illustrated in the diagram below. Figure 2 presents the use case

diagram of the proposed system.



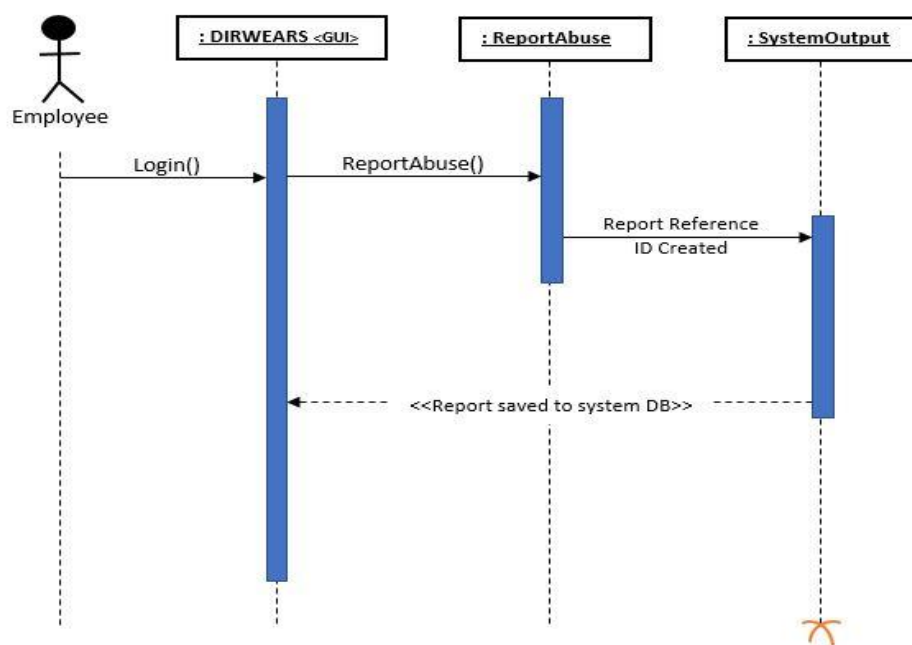
**Fig.2. Use Case Diagram of the Proposed Real Time Web Base Employee Abuse Reporting System**

Figure 2 presents the use case diagram of the proposed real time web based employee abuse reporting system with two actors, the employee and the admin. The employee can create an account in the system, login into the system and report an abuse. The employee can view reports he/ she has sent to either edit or view response. The admin also creates an account, login, view reports, manages the reports and flag up the reports. When the admin view reports, he/ she views the report list of all reports sent by various employees from different organizations so that he/ she can respond to the different employees report. The creation of account by the admin is done by the super admin. So, users will not create an account as an admin.

#### • Sequence Diagram

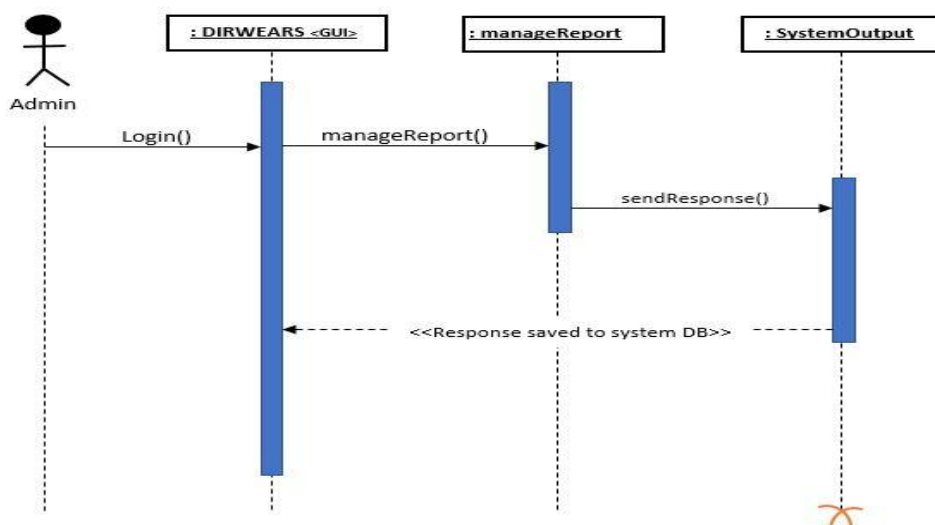
The sequence diagram of the proposed system demonstrates the step by step actions for the employee and admins with respect to workplace abuse report and admin response. Figure 3 and Figure 4 presents the sequence diagram of the employee and the system admin of the proposed system.





**Fig. 3. Sequence Diagram for Employee in the Proposed Real Time Web Base Employee Abuse Reporting System**

Figure 3 shows a clear illustration of the employee actions through the system. The employee login() into the system and reportAbuse() at his/ her workplace and reference id is generated for that report and saved to the database of the system. The admins relate to the different reports via the reference id and if employee wants to ask for a report that has not been responded to, they refer to the reference id of that report. The sequence diagram for the admin is shown in Figure 4.



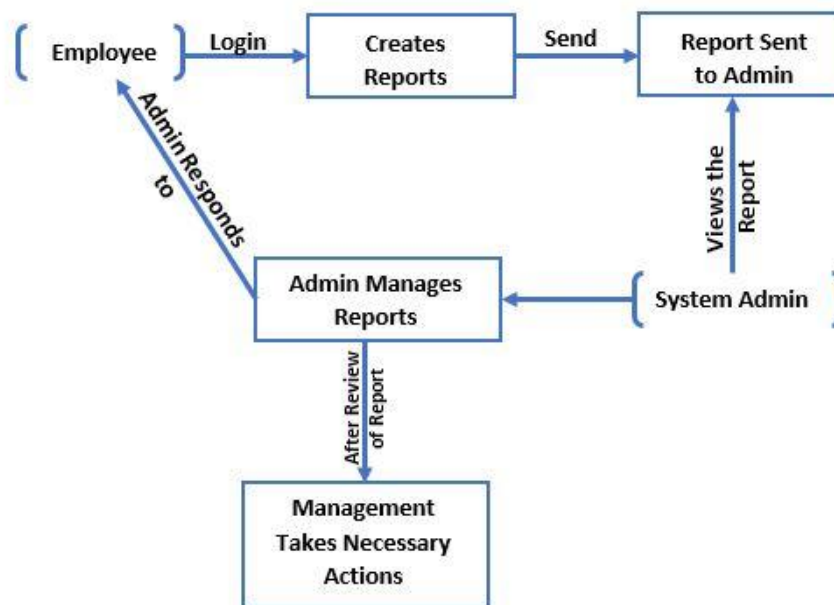
**Fig. 4. Sequence Diagram for Admin of the Proposed Real Time Web Base Employee Abuse Reporting System**

Figure 4 demonstrates the procedure taken by the admin to manage the reports of employees.

The admin login() into the system and manageReport() of the employee by analyzing the different reports and sending response to the various employees reports. The response of the admin is saved to the database so that it can be referenced to at a later date and the employee can also see it from their own dashboards.

## IMPLEMENTATION ARCHITECTURE

The implementation architecture of the proposed system describes the operational process of the system. It started when the employee creates the report to when the admin responds to the report. Figure 5 illustrates the implementation of the process of the system



**Fig. 5. Implementation Architecture of the Proposed Real-Time Web-Based Employee Abuse Reporting System**

Figure 5 presents pictorially, illustration of the implementation architecture of the proposed design and implementation of a real-time web-based employee abuse reporting system. This illustration presents the system from when the employee creates the report and send. The admin views the report and respond to the employee that the report has been received. While passing the report to the appropriate quarters for deliberation and review. After which, the management takes a decision with respect to the content of report.

## RESULT AND DISCUSSION

The design and implementation of this project work was effectively carried out with all the modules implemented. The testing of the system was carried out with an offline server that enables the execution of the backend script (PHP) and the manipulation of the database of the system. Hence, the implementation of the employee abuse reporting system. The modules include the Employee/ Admin Registration, Employee/ Admin login, Creating of Report, Viewing of Report List and Replying of Reports by the admin. All modules worked well and the system can be deployed for use.

There are other aspects of the system that are not part of the main function of the system. They are the dashboard, the log list, Report count, and flagging and or unflagging of reports by the admin. Two of the screen shot of the system are displayed in figure 6 and figure 7.

**Fig. 6. Employee Report Form Screen for the Proposed System**

This screen is used by the employee to create or write out their reports and to send to the admin for their attention.

#	Full Name	Subject	Report Body	Date Received	Action
1	Abingo Sabi	kju hihih ihjh	dhhdh ddghgdd dgdgdgdd	August 15, 2019	Del. Report Reply Report Unflag Rep
2	Vitalis Otungba	dhhdh ddghgdd dgdgdgdd	dhhdh ddghgdd dgdgdgdd	December 17, 2019	Del. Report Reply Report Flag Report
3	Vitalis Otungba	helo world wordup wordup	dhhdh ddghgdd dgdgdgdd	December 17, 2019	Del. Report Reply Report Flag Report
4	Abingo Sabi	helo world wordup wordup	dhhdh ddghgdd dgdgdgdd	December 17, 2019	Del. Report Reply Report Flag Report
5	Abingo Sabi	unwarranted Insult	unwarranted Insult fro r okoye repeated again and again	July 3, 2020	Del. Report Reply Report Flag Report
6	Abingo Sabi	blabbing and frustration	cf d cgdg pruhe sggs sgsgs	July 3, 2020	Del. Report Reply Report Flag Report

**Fig. 7. Admin Report View Screen for the Proposed System**

The report view interface shows all the reports that have been sent to the admin and their corresponding actions on the reports by the admin. This actions are delete report, reply report and flag report

## CONCLUSIONS

From research reviews and considerations, the challenges faced in workplace environment and solution proffered by the system development and implementation; it is worthy of note that many employee abuse occur and the perpetrators go unreported. This project provides a platform for

employees to report such abuses to the appropriate authorities.

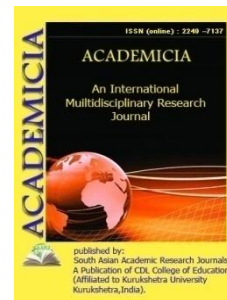
The lapses encountered in this reportage necessitate the need to design and implement a real time web based system which will fill in the lapses faced with unreported abuses. The system was developed and simulation test carried out with an optimal performance in abuse reporting which in turn improve the relationship between the employee and employer in workplace and its environment.

The objective of this project work was achieved with the assurance of integrity in the system process of all employees that may use the system as a medium of reportage. The use of web base application in abuse reporting ensures a quicker, effective, secure and a more trustworthy manner of getting information from the workplace.

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## AGRO AND ECO-TOURISM DEVELOPMENT IN RURAL AREAS OF UZBEKISTAN

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### ABSTRACT

*The main purpose of the article is the formulation of ways and favourable conditions and possibilities for the development of agroandeco-tourism in rural areas of Uzbekistan. At the same time, the inflow of tourists using the approach of "Gravity" model was analyzed in order to identify theoretical and practical aspects of alternative identification of the share of tourism services in the contemporary development of rural areas and agriculture of Samarkand region. As a result of the research, scientific and practically significant commendations have also been developed and figured out.*

**KEYWORDS:** *Tourism, Agro-Ecotourism, Ecotourism, Rural Tourism, Rural Areas, National Park, Economy.*

### INTRODUCTION

The major changes in mankind's life and activities started in the early years of the twentieth century. These changes appeared both in the development of science-technology and the creation and management of modern technologies. Human beings, who are considered to be both the creator of material needs and at the same time the consumer of those, are gradually overcoming changes in each aspect of life. Their philosophy, mental activity, worldview, and a higher level of thinking have changed. After the proclamation of independence, Uzbekistan formed market-based economy, chose its model of development and at present the country is following the chosen way. Transition to a market economy has become an objective necessity[1]. The market-based economy is the phenomenon related to all possibilities and it is a path that should be



stepped by all developing countries of the world during the civilization development. The strategic goal of transition to a market economy is, above all, to create appropriate living standards for people, to maintain prosperous life for them and finally, to obtain easily modern culture and knowledge as well. There is no other priority but to use properly all available resources and aim them to keep the good pace of living of the population during the stage of transition to a new state of market relations. As mentioned earlier, Uzbekistan is following the path of democratic reforms which are aimed to intensively develop the national economy of the country. That is why current policies are pointed to provide good living conditions of the population in the future and all measures to maintain the development of their material and spiritual resources aimed at creating a strong economic base[2].

## **MATERIALS AND METHODS**

At the moment, in all countries of the world, including Uzbekistan much attention is paid to the non-manufacturing economy, especially to the tourism sector which has been on the rise. Humans always had to change the scope of their action, discover new places, and they were seeking to gain practical knowledge. People spend their free time effectively; they usually have a rest in order to ensure their recreation, to see the world, to learn the traditions and values of other cultures. Tourism is standing in the leading positions in implementation of all aforementioned social activities and moves. Although tourism is an ancient event, people started to make frequent travels just in the twentieth century, people's aspirations in the field of tourism grew and that prompted and triggered the development of the tourism industry. Therefore, the efforts to develop tourism as a separate economic activity began in the second half of the twentieth century. One of the fastest-growing sectors of the global market in the tourism industry and global tourism flows and sustainable growth of the tourism income have been seen in recent years.

In some countries, the travel and tourism sector has been developing continuously at very stable growth rates, and its share of the total gross domestic product is on average 8-10%. This is evidence which shows that economy of the sector is of vital importance for the development of the whole national economy. It is noteworthy to mention that tourism development leads to progress of such spheres as transport, market infrastructure, trade, and food industries, construction, craftsmanship and other service industries [3]. The service industry is considered as the most important resource and a factor for sustainable development of the economy of Uzbekistan. In this approach, there is a huge role of the service sector in the country's socio-economic development. The tourism sector in the country, furthermore, has a more significant role in the improvement of quality of life and living standards of the people. These industry sectors, including the development of tourism in the theoretical, methodological and practical aspects, require a thorough examination of the development of new routes. At the same time, the importance of tourism should be considered. This sector is different from other sectors for its quick process of developing. Because Uzbekistan has been paying great attention to the development of tourism and trying to find potential ways of the effective use of tourism in recent years. XXI century, according to some experts, is estimated to be more effective to develop tourism. In this century, tourism will be regarded as one of the key elements of Uzbekistan's national economy and will ensure its contribution in terms of hard currency earnings of the budget. To realize this, our country has full capacity and sufficient grounds. The only thing to do would be to formulate and implement an effective modern strategy for sustainable development

of tourism in the country and the tourism industry should be raised into high positions. Tourism is not a new sector for Uzbekistan's economy; it has existed since ancient times. We have to just make calculations in the field of tourism, take everything into the consideration and our tourism strategy should be based on the development and prospects of the task ahead of all. The tourism industry is an industry which covers several types of services involving all networks inclined to provide entertainment for tourists. Cooperation in the field of tourism in the production of the agricultural and other types of products will lead to improvement of the employability of partially employed and unemployed people; full and rational use of labour resources will create a foundation for solving the problem of unemployment. This is especially important for the least developed industrial regions[4].

The cooperation in terms of the tourism industry is the most suitable to better the financial state for those countries which do not have higher economic opportunities or could less effort to do other businesses. Tourism will help to reduce the problems of unemployment in these regions, the active non-public sectors will help to attract the working-age population, extend the scope of the implementation of labour. The co-operation in tourism sector helps to speed up the process of development of the economy, to use efficiently the existing resources and makes rural areas develop as well as cause the development of modern services and the improvement of people's living standards and prosperity of a positive impact on the professional development of employees. Also, the tourism sector provides conditions to improve agricultural production and the development in great tempos. In the future, with the expansion of the service sector of the population, the number of employed people will increase in the tourism service sectors. This is, of course, a key factor for the countries whose economy is not so developed. No matter whether the country is developed or not the tourism will help to make it's economy better. So, tourism is the best way to reduce the unemployment rate, to cooperate with the financially advanced countries and influence to other aspects of life. It is one of the best features of prosperity in the economy. Growth in developed or developing countries is the main factor that determines the quality of life and environmental sustainability. Tourism is a specific sector of the economy, which also makes a significant contribution to the area of the country's economy. The reforms of the agricultural sector and rural areas play a significant role in Uzbekistan's developing economy and the gross domestic product. In this approach, the share of tourism in the development of agriculture and rural areas, which is also known today, can be seen by the experience of foreign countries. There are many types of tourism and tourism can be classified according to several features. This article describes the development of modern and sustainable rural areas, aimed at the study of the effects of agro and eco- tourism. Agro and ecotourism are directly related to rural tourism. Ecotourism is a type of travelling tourism which is closely connected with natural territories, in which the local area and the protection of the social and economic status of the population have been attached importance too.

The direction of ecotourism's development is associated with the emergence of the green paradigm(model) and strong and real differences between the supply of the eco-tourists, i.e., the environmental priority elements in the Western paradigm have been controlling and influencing the commercial aspects of the industry. It is considered that all aspects of the development of eco-tourism have a positive impact on the environment; economic and environmental protection of rural areas; and this sphere interconnects national parks, the economy of the least developed villages and tourism relations[5].

In our scientific research, we paid attention to the flow of tourists into the rural areas of Samarkand region. It is one of the largest and oldest regions of Uzbekistan, and its geographical location creates a good opportunity to develop tourism. Samarkand is laid in the middle of the ancient "Great Silk Road" and its economic and social advancement of modern tourism; it ties the main aspects of development between the countries of the East and the West.

Theoretical and practical aspects of the need for the development of the diversified set of tourism services of Uzbekistan, including eco and agro-tourism services sector, the effectiveness of their various services, quality, value, cost, and other economic indicators were analyzed by the number of economists and the results of their works are reflected in the works of scientists and researchers. However, the issue of efficient use of existing touristic resources has not been thoroughly studied yet and to make this sphere at the same level as other modern touristic countries are our prior task. Accordingly, the economic literature on this topic has been published in a few numbers. That demands to study the sphere of tourism and learn both theoretically and practically the effective use of agro and eco-tourism resources. The problems of development of tourism were discussed by Uzbek and foreign scientists involved in various aspects and dimensions. Tourism development characteristics, trends and companies engaged in tourism, theoretical issues of the service system of ensuring development of sustainable tourism, socio-cultural and tourist-based and historical tours' descriptions of the main features and the issues and needs of the population were described in details. Uzbekistan's potential in tourism resources has been evaluated and possibilities in touristic activities were analyzed, the opportunities and prospects of the development of new tourism in some regions have been taken into consideration and perspectives of further development of tourism industry in our country have been formulated. The development of tourism regions, in turn, creation of the opportunity to establish cooperation with other sectors of the economy and the basis of the development of tourism infrastructure, the structure and functions of the tourism market, the development of tourism products and services and theoretical and practical aspects of the tourism market-specific features were revealed by scientific researchers and scientists. Some of the most important issues for the development of tourism are creating a vast variety type of tourist routes, principles and routing services, creating appropriate routes in accordance with the development of ecological tourism routes, route planning project design, tourism promotion and advertising of tour routes as well as mechanisms of ensuring the safety of the tourists are studied and expressed in details. The rural and agricultural economic development of the tourism sector, tourism, agro and eco-tourism in rural areas can be explained by the means of touristic directions. The main areas of agro and eco-tourism and the ways of developing it were analyzed by several scientists. The principles of ecological tourism, recreational tourism and their definitions, as well as the specifics of the development of eco- tourism development and ecotourism resources, estimation of potentiality and agricultural development in Uzbekistan, are studied and analyzed and organizational as well as economic mechanisms of implementation of these proposals are formulated [8]. Agricultural enterprises in rural areas and recreation facilities in agricultural factories, agricultural activities, participating in agricultural activities and helping them can result in practical knowledge. Uzbekistan has enormous potential for the development of tourism and this sphere is considered as highly competitive and the sphere plays a very important role in the process of reforms aimed at the formation of the market economy. After the proclamation of independence, the process of further development of the market industry has been constantly taking place. It is widely known fact that alongside with universal patterns of economic

development for all the countries of the world, each country's economic performance and indicators are evaluated separately taking into account geographical location, natural conditions, climate, population, natural resources and other factors. Despite this potential, the share of touristic services in the economy of rural areas is developing with a lower rate compared with other spheres. There are certain issues and problems which have a negative impact on the continuous development of tourism services market. More specifically, it means that the distribution of touristic resources in rural areas and their use are not arranged effectively[6]. Improvement of material and cultural welfare of the population plays a crucial role in the development of all spheres of the national economy. One of the most important problems here is to develop scientific grounds for the elaboration of effective methods of using touristic resources in rural areas and identification of forecasted indicators to ensure the development of the touristic services market of Uzbekistan and its further advancement. Taking into account above mentioned it can be seen that at present time significant attention is paid to create favourable conditions for the development of this sphere in Uzbekistan and the process of formation, development and further advancement of the market of tourism services in Uzbekistan is undergoing a new stage. A certain set of actions is being implemented in Uzbekistan to secure the continuous improvement of agro tourism alongside with other types of tourism and ensure effective use of the existent potential of the industry. The reason behind these actions is that this sphere has been attracting vast investments from a variety of sources (state property, the private property of entrepreneurs, foreign investments). The principal objective of these actions is to preserve the touristic resources in the rural areas of Uzbekistan and provide conditions for their development. Actions are implemented in correspondence with the needs of tourists and the requirements of destination areas [7]. These include such a way of management of all resources, which results in a satisfaction of economic, social and aesthetic needs of the population, securing preservation of cultural values, ecological and recreational resources, biological diversity and at the same time these resources and facilities will be used in the recreational activity of the local population. This process will lead not only to economic effectiveness but also to social effectiveness. Ecotourism is one of the most principal directions of Uzbekistan's tourism because ecotourism resources in rural areas have been developed to a certain level. However, these areas are not sufficiently utilized as a touristic resource in the field of eco-tourism in Uzbekistan. The reason behind this under-utilization is the absence of eco-touristic tours and routes which are scientifically grounded and provide security to tourists and support environmental protection of the areas. Moreover, these tours and routes are not provided to touristic companies.

As a consequence of lack of wild places with natural beauty, which have not been damaged by human intervention, the visits to such areas are limited and the prices of such tours are high. And this sphere of eco-tourism is not well- developed in Uzbekistan yet. A certain proportion of Uzbekistan's territory is occupied by mountains, gardens, hills, steppes as well as deserts. In such areas, it is possible to construct and develop "black houses" and other facilities with the purpose of their inclusion into tour routes. Nowadays, the ecological crisis which has been taking place in the Aral Sea dictates the requirement for the elaboration of specific eco-tours. It has to be specifically mentioned here, that Uzbekistan is witnessing the appearance of new Aydar Lake which occupies vast territory. However, the potential of this lake is not thoroughly studied yet and the potential of this touristic resource is not used sufficiently.

## CONCLUSION

It can be concluded that there is enormous potential to develop agro and eco- tourism in rural areas of Uzbekistan. However, although this issue has been thoroughly studied by various scientists, there is a lack of evidence of scientific research on the ecological tourism resources of the Samarkand region and the ways of their efficient use. In the given article, the issue was analyzed based on “Gravity” model approach and forecasted indicators of tourism flows were calculated. According to the research results, the model is a very useful tool to obtain the size of tourism flows in rural areas. Several scientific-practical recommendations were developed based on the given research.

1. Elaboration and provision of scientific grounds for touristic tours which are adequate for local and foreign tourists to develop ecologic and agro-tourism in Samarkand region 2. Taking into account importance of the development of tourism industry, it is advisable to use economic-mathematical methods in identification of forecast indicators and it is also required to solve the issue of implementing these methods both in educational institutions and practice. 3. As one direction of eco-tourism includes learning national values and traditions, we think that it is reasonable to include existent ancient bazaars and objects which preserve national traditions and customs into the places of visit for a variety of tours. If our recommendations are implemented, we think that we can secure the development of agro and eco-tourism and this will result in the development of rural economies.

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## AUDIT OF EVENTS AFTER THE REPORTING DATE

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### ABSTRACT

*This article highlights the methodology for auditing compliance with the requirements of International Financial Reporting Standard No. 10 "Events after the reporting date" by business entities when preparing financial statements based on International Auditing Standard No. 560 "Events after the reporting date".*

**KEYWORDS:** *Events After The Reporting Date, Going Concerned, International Financial Reporting Standards, International Auditing Standards, Date Of Financial Statement, Date Of Publication Of Financial Statements, Date Of Auditor's Report, Audit Procedures, Audit Evidence, Written Submission, Formal Request, Contingent Liability, Contingent Asset, Contingent Loss, Contingent Profit, Material Misstatement.*

### INTRODUCTION

Events after the reporting date are positive and negative events that occur between the end of the reporting period and the date of approval of the publication of financial statements in accordance with the eponymous International Financial Reporting Standard 10 (IFRS) [2]. For auditing practice, this period is determined following International Standards on Auditing (ISA) 560, "Events after the reporting date":

- events that occurred between the date of the financial statements and the date of the auditor's report;



- Events that become known to the auditor after the date of the auditor's report but before the date of publication of the financial statements.
- Includes events that became known to the auditor after the publication of the financial statements [3].

In this case, the following paragraph 5a of ISA 560, the date of the financial report means the final date of the last period, including the financial statements. According to paragraph 5g of this ISA, the date of publication of the financial statements is the date that all users have access to the audited financial statements and the auditor's report.

In the case of the public sector, the date of publication of the financial statements may be the date of the audited financial statements and the audited statements of those statements submitted to the legislature or otherwise published. In paragraph 49 of IFRS 700 (Revised), Formation of Financial Statements and Comments thereto, the date of the auditor's report is the date on which the auditor's opinion is obtained, which provides sufficient audit evidence on which to base the auditor's opinion on the financial statements. marked as [4].

## RESEARCH METHODS

Events after the reporting date affect the financial statements:

- a) positive or negative events;
- b) events requiring correction or disclosure of financial statements.

Significant events after the reporting date must be reflected in the financial statements for the reporting year, regardless of whether they have a positive or negative impact on the company's business. Reflections can be made in the form of corrections in the financial statements or detailed disclosures. Examples of events identified after the reporting date that require adjustments to the financial statements:

- receiving prior to the reporting date information on the crisis of the company's largest debtor;
- the resolution of the case after the end of the reporting period, confirming that the economic entity has current obligations at the end of the reporting period;
- information received after the end of the reporting period indicates that the asset was impaired at the end of the reporting period or that an adjustment is required to the amount of loss previously recognized for the asset;
- the value of assets acquired before the end of the reporting period, or the return on assets sold after the end of the reporting period;
- the occurrence of amounts of payments or premiums subject to distribution at the end of the reporting period as a result of events that occurred before that date at the end of the reporting period due to the existence of a current legal or arising from practice obligation to make such payments;
- Detection of fraud or errors indicating inaccuracies in financial statements, etc.

An entity shall make adjustments to the amounts recognized in its financial statements to reflect events after the reporting date that require adjustments. Examples of information that does not require adjustments to be disclosed in the financial statements include:

- the merger of a large business or the exit of a large subsidiary after the reporting date;
- the announcement by the founders of their intention to terminate the company's activities;
- Acquisition of large amounts of assets, transfer of part of long-term assets to a group of assets held for sale, disposal of assets by other means, or confiscation of large assets by the state;
- Significant losses resulting from a fire at the company's finished product warehouse after the reporting period;
- the announcement by the company's management of a large-scale restructuring plan or the start of its implementation;
- Large financial transactions with ordinary shares after the reporting date;
- Extremely large changes in asset prices or exchange rates after the reporting date;
- Announcement of changes in the tax rate or current tax legislation after the end of the reporting period that has a significant impact on current and deferred tax assets and liabilities;
- the company accepts major or contingent liabilities by providing letters of guarantee;
- commencement of a major lawsuit arising only from events after the reporting date.

## RESULTS AND DISCUSSION

In accordance with ISA 560, the auditor's objectives in this area are:

- a) Obtain adequate audit evidence that events occurring between the date of the financial statements and the date of the auditor's report that require adjustments or disclosures in the financial statements are properly reflected in the financial statements in accordance with the financial reporting framework; and
- b) Take appropriate action to address facts that become known to the auditor after the date of the auditor's report and, if known to the auditor at that date, could cause the auditor to change his auditor's opinion.

The auditor shall follow audit procedures designed to obtain sufficient appropriate audit evidence that any events occurring between the date of the financial statements and the date of the auditor's report have been identified in the financial statements that require correction or disclosure:

- send an official request to the management of the audited enterprise after the reporting date on the occurrence of these events;
- consideration of the minutes of the meetings of the founders, the board of directors, the audit committee and members of the executive body held after the reporting date;
- get acquainted with information on the results of inspections or monitoring carried out by law enforcement and regulatory authorities;

- to obtain detailed official information from the company's lawyer about major lawsuits and current disputes initiated (ongoing) in relation to claims filed against the company or filed against contractors;
- analysis of the last interim financial report prepared before the annual financial report;
- request information from the insurance company based on the results of negotiations to determine the amount of insurance payment as of the reporting date;
- study of documents on obtaining a loan or credit for a large amount, or on guaranteeing a large amount of debt received by other persons, etc.

One of the most widely used procedures in practice is the "Formal Request" from client management in accordance with paragraphs A22 AXS 500 and A9 AXS 560 entitled "Audit Evidence". A sample form is shown below. (Table 1)

**TABLE 1 LLC "XYZ" AUDIT ORGANIZATION TO THE HEAD OF AN ECONOMIC ENTITY AN OFFICIAL INVESTIGATION INTO EVENTS AFTER THE REPORTING DATE**

<b>Customer:</b>	<b>"Sharq" Joint Stock Company</b>				
Contract:	11.03. 2020 № 03- 2020	Executor:	Mamatxonov M.	Finished:	14.05. 2020
The period of the audit	01.01. 2019- 31.12. 2019	Inspector:	Maraziqov M.	Checked:	15.05. 2020

No.	Questions	Answer		Comment when the answer is "Yes"
		Yes	No.	
1	After the reporting date, are there cases when the report contains information about the counterparty, which was reflected in the receivable but was in a crisis situation at the reporting date?			
2	Has there been a sharp decline or increase in the company's share price since the reporting date?			
3	Has there been a major merger or major subsidiary since the reporting date?			
4	Were there any planned sales of large assets or similar transactions after the reporting date?			
5	Was information received after the reporting date indicating that an asset was impaired at the end of the reporting period?			

6	Have there been any significant changes in the authorized capital, the issue of securities in the framework of new shares or debt obligations, restructuring or liquidation of the company since the reporting date?			
7	Have there been any cases of confiscation of state property by the state after the reporting date or causing damage to it as a result of emergencies (fire, earthquake, flood ...)?			
8	Has there been an unusually large change in asset prices or exchange rates since the reporting period?			
9	Are there any cases of non-traditional accounting translations formalized during the reporting period after the reporting date, especially at the end of the reporting period?			
10	Did the company have a significant obligation or contingent obligation in relation to the provision of letters of guarantee?			
11	Have there been significant contingent assets and / or contingent liabilities that are significant after the reporting date?			
12	Etc.			

Incidents since the reporting date include the occurrence of the COVID-19 coronavirus pandemic globally and in our country from late 2019 to early 2020.

This event caused serious losses in the economic and social spheres of most enterprises and organizations. Certain types of businesses (air and rail transport, people and freight transport, travel and tourism, hospitality, entertainment ...) have even ceased or significantly reduced their activities even in the context of the ongoing pandemic. The COVID-19 pandemic, in turn, has led to expansion, deepening inspections, expansion of inspections and the organization of remote inspections.

In this case, the auditor conducted an audit of the company's management and / or those charged with governance to assess the impact of the event on the company's business continuity, future financial performance, cash flows, financial position and financial statements and disclose them appropriately in the financial statements. should check the quality of their work.

This is because the financial statements are usually prepared on the assumption that the entity will operate as a going concern and continue as a going concern in the foreseeable future.

Therefore, it is assumed that the business entity has neither the intention nor the need to close or significantly reduce the scope of its activities; if so intent or necessary, the financial statements should be prepared on a different basis, and if so, on that basis.

This is provided for in paragraphs 14-15 of IFRS 10. It should not be prepared in a going concern basis. If the going concern basis is determined to be inappropriate, the effect is so great that this Standard requires a fundamental change in the accounting basis, rather than an adjustment to the amounts recognized in accordance with the previous accounting basis. Another area that the auditor should pay particular attention to when conducting an audit in accordance with international standards is assessing a client's compliance with the requirement to account for and disclose contingent assets, contingent liabilities, contingent losses and contingent benefits in preparing the financial statements. In accordance with paragraph 10 of IFRS 37 "Provisions, Contingent Liabilities and Contingent Assets",

***Contingent liability:***

- a) a liability that may arise as a result of past events. Its existence is confirmed only as a result of the occurrence or non-occurrence of one or more future uncertain events that are not under the full control of the economic entity; or
- b) it is a current obligation arising from past events, but not recognized because:
  - it is unlikely that the removal of resources containing economic benefits will be required to fulfil the obligation; or
  - it is impossible to estimate the amount of this obligation with sufficient reliability.

A contingent asset is an asset that may arise from past events and whose existence is confirmed only as a result of the occurrence or non-occurrence of one or more future uncertain events that are not under the full control of the entity. For the auditor, who is responsible for including or disclosing information in the financial statements of the client company and his appointed auditor, the main condition in this area is the correct application of the criteria for recognizing contingent liabilities, contingent assets, contingent losses and contingent benefits.

In accordance with paragraph 4.44 of the Conceptual Framework for Financial Reporting, an asset is recognized in accounting when it is probable that future economic benefits will flow to the entity and the value or value of the asset can be measured reliably. In accordance with paragraph 4.46 of this document, a liability is recognized in accounting when it is probable that resources containing economic benefits will be available as a result of the disposal of the existing liability and that the amount to be recovered can be measured reliably.

Contingent losses are recognized as expenses or liabilities when the following conditions are met:

- events after the reporting date confirm that the asset has been impaired or a new liability has arisen, taking into account all possible compensation at the reporting date;
- is it possible to reliably assess the amount of damage?

*Contingent profit* should not be recognized in the financial statements as income or asset. Because if it can be calculated accurately, it will not be conditional and still have to be recognized. The algorithm of relationships that can be expressed in terms of accounting and financial statements for a contingent liability, contingent asset, contingent loss and contingent profit, taking into account the above requirements, is shown in the following diagram.

The probability of a conditional event occurring	In a position where measurement is possible	When it is not possible to measure
Conditional damage		
There is a possibility	Losses and liabilities are calculated and reflected in the report	Losses and liabilities are not calculated but disclosed in the financial statements
The probability is not present	It does not need to be calculated and revealed	
Conditional benefit		
There is a possibility	It is not recognized as a conditional benefit	It is not calculated, it is not disclosed in the report
Probably not	Disclosure is also not recommended	
Conditional obligation		
Conditional obligation	A backup will be set up	The backup is not organized, it is disclosed in the report
The probability is not present	Backup is not organized, the opening is also not recommended	
Conditional asset		
When the probability is very high	Disclosed in the financial statements	No entry is allowed

**Figure 1. The procedure for recognizing a contingent liability, a contingent asset, a contingent loss and a contingent benefit.**

In accordance with paragraph 10 of ISA 560, the auditor is unable to perform any audit procedures on the financial statements after the date of the auditor's report. This is because, in accordance with current auditing standards, the responsibility for informing the auditor of information that may affect the audited financial statements after the date of signing the audit report rests with the organization's management. However, if the auditor became aware of the auditor's report after the date of the financial statements. The auditor should take the following steps if he or she becomes aware of any facts that could lead to a change in the auditor's report:

- discuss this issue with the management of the economic entity and, if necessary, with those responsible for management;
- determining the need to make any adjustments to the financial statements, if necessary.
- Determine from the organization's management how it intends to address the financial reporting problem.

The auditor shall provide a written statement from the management of the entity and, if appropriate, from management that all events that occurred after the reporting date in accordance with IFRS 580 have been corrected or disclosed in the financial statements in accordance with the basis used for presentation. financial reporting. should be asked [3-8].

If the entity's management makes adjustments to the financial statements, the auditor shall perform the audit procedures necessary to deal with the adjustments and present a new or revised auditor's opinion on the adjusted financial statements. In the new (revised) auditor's report.



In this case, a new auditor's report (opinion) cannot be submitted before the date of approval of the amended financial statements.

If the auditor's report identifies events that require adjustment after the date of presentation of the financial statements to users, the company does not take the necessary steps to notify all those who previously received the financial statements and the auditor considers it necessary to revise the financial statements [9-12. If the report is not considered, the auditor must notify the management and management of the economic entity about the adoption of the necessary measures to notify third parties that the audit report (opinion) cannot be relied upon. If the management of the business entity or trustees do not take the necessary measures despite receiving such notification, the auditor should take appropriate action to inform that the audit report (opinion) cannot be relied upon.

However, in this case, the auditor must carry out his actions in agreement with the lawyer of the audit organization in a manner that does not go beyond the legislation of the Republic of Uzbekistan. Material events after the balance sheet date must be disclosed in the financial statements, regardless of whether they have had a positive or negative impact on the company.

## CONCLUSION

In conclusion, events that occur after the balance sheet date can affect the form of the auditor's report to be presented by the auditor, depending on its scope and materiality.

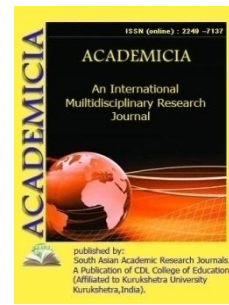
Based on the results of the audit, the auditor determines their impact on the financial statements:

- express an unchanging opinion;
- If the auditor has sufficient audit evidence of an event that has occurred after the reporting date that casts doubt on the accuracy of the financial statements (for example, going concerned), the auditor shall express a modified opinion based on that fact.

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## "LIFE AND WORK OF UMAR KHAYYAM DURING THE SELJUK RULE"

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### ABSTRACT

*This article was devoted to reveal middle age in Niyshabur and Omar Khayyam's role in different social and political states. In this way, it was used some of Hkayyam's literary works, net sources, scientists' thoughts and others. By this research, the author tried to open Seljuqs rule, Alp Arslan's and Melikshah's periods, in the meaning, during this time well-known poet, philosopher, and mathematician Omar Khayyam's role. The most stress was given on this.*

**KEYWORDS:** Seljuqs Dynasty, Niyshabur, Persian Calendar, Sultans, Treatise, Omar Khayyam, Middle Ages, Scientific Researches, Philosophy, Policy, History

### INTRODUCTION

It is known from history, that there are lots of scholars were become in the West during the middle age. One of them Omar Khayyam, full name is Abul Fath Umar ibn Ibrahim Khayyam, had lived during 1048-1131 years (today's Iran) and it shows that he'd lived during scientific, literary, religious and political position were developing in the middle centuries. At the time, Niyshabur was a commercially wealthy province, as well as an important intellectual, political, and religious centre. At the time, Persia was ruled by the Turks who had conquered the territory in 1037 bringing with them their Islamic faith. They remained in control of the region until the early 1200s. While little is known of Khayyam's early life, it is believed that he received an education emphasizing science, mathematics, and philosophy from the celebrated teacher Iman Mowaffak in Niyshabur.

According to the literature, it was a period of peace during which the political situation allowed Khayyam the opportunity to devote himself entirely to his scholarly work. We had learnt him as

Persian poet, mathematician and astronomer. But in reality, he had his own place also in the social-political life of Persian.

## MATERIALS AND METHODS

Up today, many scientists of the world learnt Khayyam, such as Harold Lamb, has written a book named "Omar Khayyam: A Life" (1934), the most authoritative treatment of his poetry is Arthur John Arberry (in 1952), on Kayyam's contribution to mathematics Seyyed Hossein Nasr, has written, "Science and civilization in Islam" (1968) and others.[4] Umar Khayyam hasn't considered himself as a poet, but he wrote down some of his thoughts on life in four lines of poetry. Until the XVIII century, any research hadn't been done on his rubais. He's first studied by Oxford University professor Thomas Hyde, then von Homer Birgestel and Meme Nicolas. In 1859, after the English poet and translator Edward FitzGerald published Omar Khayyam's translation of 70 rubai, these poems became very famous and after that were translated from English into other languages of the world. Therefore at present, he's best known as a poet-scientist in the West.

Although, he had written several scientific-philosophical treatises, such as "Risolai fil barohiyn alo masoil al-jabr va al-muqobala" (Treatise on demonstration of algebraic problems), "Mezon ul-hakam" (Criterion of sagacity), "Ziji Malikshohiy" (Melikshah's calendar), "Risolai fil vujud" (A treatise on presence) and others.

In fact, Omar Khayyam was born in the district of Shadyakh of Niyshabur in the province of Khorasan. Considering the word "Khayyam," it means "tentmaker," it's likely that his father Ibrahim or forefathers were tentmakers. Khayyam is said to have been quiet, reserved, and humble. His reluctance to accept students drew criticism from opponents, who claimed that he was impatient, bad-tempered and uninterested in sharing his knowledge. Given the radical nature of his views in the

"Ruba'iyat", he may merely have wished to remain intellectually inconspicuous.

The secrets which my book of love has bred,

Cannot be told for fear of loss of head;

Since none is fit to learn, or cares to know,

This better all my thoughts remain unsaid [1].

By his literary and philosophical works, we can see Omar Khayyam can control people in some kind of religious discords, social and political conflicts. Also, Umar Khayyam's "Navruznama" testifies to his perfect knowledge of history, ethnography and folk customs. In this book, we encounter many customs, events, legends, associated with the holiday of Navruz. We are amazed at the great differences between the modern holiday of Navruz described by Umar Khayyam. True, such habits are fencing, tyranny and riding are almost non-existent today, but the pamphlet encourages us to think about these habits to some extent.

Following several journeys to Herat, Ray, and Isfahan (the latter being the capital of the Seljuqs) in search of libraries and pursuit of astronomical calculations, Khayyam's declining health caused him to return to Niyshabur, where he died in the district of Shadyakh. Besides Khayyam's reference to Ibn Sina as "his teacher" has led some to speculate that he studied with

Ibn Sina. Although this is incorrect, several traditional biographers indicate that Umar Khayyam may have studied with Bahmanyar, an outstanding student of Ibn Sina.

Another source notes remarkable reports, that Sultan Alp Arslan was called “Heroic Lion” and he was born 20 January 1029 A.D. This sultan was the 2<sup>nd</sup> Sultan of the Seljuk empire. Alp Arslan was the son of Chaghri Bey and nephew of Sultan Tughril, founding fathers of the Seljuk Empire. During his reign, Alp Arslan was assisted by his remarkable vizier Nizam-ul-Mulk, one of the finest statesman and administrator in the Muslim History who wrote the book *Siyasatnama* (Book of Government). Sultan Alp Arslan’s decisive victory against the Byzantine Empire at Manzikert in 1071 earned him the title of “Lion of Manzikert”. Sultan defeated Emperor Romanos IV Diogenes of the Byzantine Empire who broke the peace pact between the Seljuk Empire and Byzantine Empire, Romanos was personally commanding the much larger Byzantine army.

During the battle, Sultan Alp Arslan captured, forgave and set free Emperor Romanos with presents and military guard. Alp Arslan’s efforts opened the way into Anatolia for the Seljuk Empire. It also marks the beginning of the end of the Byzantine Empire in Anatolia. So, sultan reigned over the Seljuk Empire from 1063-1072 A.D.

In his early twenties, Khayyam travelled to Samarkand, where he completed his famous treatise on algebra, a work that is considered one of the most outstanding mathematical achievements of the medieval period. His mathematical writings include a study titled “The difficulties of Euclid’s definitions” (1077)[3]. In these works, Khayyam attempts to classify equations, particularly quadratic and cubic equations. It was then at the age of 26 that Khayyam entered Malik Shah’s service and when he was invited to go back to Iran to build an observatory at Isfahan and reform the Persian calendar. He remained in Iran for the next 18 years, where he was paid an extraordinarily high salary and enjoyed a privileged lifestyle. During Sultan Malik Shah’s life, both shared a great relationship however his luck changed when his successor, Sultan Sanjar entered power. Sultan Sanjar did not favour the scientist, it seems that Omar offended Sanjar while he was still a child, and he was never forgiven. Upon Malik Shah’s death, Khayyam had fallen from favour at court and funding for raising the observatory eventually finished. He went on a pilgrimage to Mecca and visited Baghdad. In his return, he retired to Nishapur, where he appeared to have lived the life of a recluse[5].

No record exists to indicate that Khayyam ever wrote poetry. Certainly, his achievements in mathematics and astronomy eclipsed any in poetry during his own lifetime. Because manuscripts of his quatrains did not appear until two hundred years after his death and because of the differences among the various versions, some scholars doubt that he is the author of the “Rubaiyat”. This argument is strengthened by the fact that the content of the “Rubaiyat” is inconsistent, as some poems are mystical and philosophical, while others are amoral and hedonistic. Having exhaustively studied the work in an effort to determine which of the nearly one thousand quatrains were written by Khayyam, some Persian academics have claimed that only around two hundred and fifty stanzas could be those of Khayyam. Nevertheless, Khayyam’s credibility as a poet appears strong, as numerous translations of the “Rubaiyat” have been published throughout the years[6].

Discovered by English Persian scholar E. B. Cowell at Oxford’s Bodleian Library, a fifteenth-century manuscript of Khayyam’s verse was passed to Edward FitzGerald, who translated 75 of

the 158 quatrains into English. Concerned that the sensual and atheistic aspects of several of the stanzas would offend readers, FitzGerald included those pieces in their original Persian language. When FitzGerald anonymously published his 1859 translation at his own expense, not even a single copy of the book sold. Khayyam returned to Niyshabur and was invited by the Sultan Malik-Shah, the Seljuk Turkish ruler, to join a group of eight scholars assigned to reform the Muslim calendar in 1074. The result, the Jalai solar calendar, is noteworthy because it is more accurate than the Julian calendar and almost as precise as Pope Gregory XIII's revision of the Julian calendar. During this time, Khayyam was also commissioned, along with other astronomers, to collaborate on a plan for an observatory in the capital city of Isfahan. At this time, the city was one of the most important in the world. Records indicate that after the death of Malikshah in 1092, Khayyam, deeply mourning the loss, went on a pilgrimage to Mecca. Translated by Edward FitzGerald, one poem that appears to have been written at this time reads: "Khayyam, who stitched the tents of science / has fallen in grief's furnace and been sudden, burned." Until his death on December 4, 1131, Khayyam spent the rest of his life in the key city of Neyshabur, where he taught astrology and mathematics and predicted future events for the royal court when called upon to do so.

For information, Malikshah succeeded his father, Alp-Arslan, in 1072 under the tutelage of the great vizier Nizam al-Mulk, who was the real manager of the empire until his death. We shouldn't forget one thing, that Nizam-ul Mulk, the grand vizier to the Seljuk sultan's Alp Arslan and Malik Shah was a nearly close friend with Omar Khayyam, and Omar worked as a "dasturchi" in Seljuk's palace.

Malikshah had first to overcome a revolt of his uncle Kavurd and an attack of the Qarakhanids of Bukhara on Khorasan; thereafter he consolidated and extended his empire more through diplomacy and the quarrels of his enemies than by actual warfare. He suppressed the former vassal principalities of upper Mesopotamia and Azerbaijan, acquired Syria and Palestine, and established a strong protectorate over the Qarakhanids and a measure of control over Mecca and Medina, Yemen, and the Persian Gulf territories. His control of the Turkmens of Asia Minor was contested by a rival Seljuq dynasty.

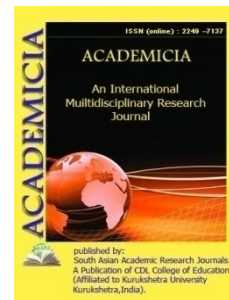
Malikshah displayed a great interest in literature, science, and art. His reign is memorable for the splendid mosques of his capital, Eşfahan, for the poetry of Omar Khayyam, and the reform of the calendar. His people enjoyed internal peace and religious tolerance [5]. In 1963, the Shah of Iran ordered Khayyam's grave exhumed and his remains moved to a mausoleum in Nishapur where tourists could pay their respects [3]. To sum up, facts which were not learnt still about Omar Khayyam, are a lot. Especially, if take into consideration to his works, which were not translated or less translated works, we maybe know more him as a historian. "Beyond the earth, beyond the farthest skies, I try to find Heaven and Hell. Then I hear a solemn voice that says: "Heaven and hell are inside..." writes Omar Khayyam.

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## WAYS TO IMPROVE PERSONNEL POLICY IN IMPROVING THE QUALITY OF FINANCIAL SERVICES PROVIDED BY FINANCIAL INSTITUTIONS

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### ABSTRACT

*Currently, in the context of the process of liberalization of financial institutions of the country, one of the important issues is the successful implementation of personnel policy. This article provides feedback and proposals on ways to improve staffing policies to ensure the quality of financial services provided by financial institutions.*

**KEYWORDS:** *Financial Institution, Financial Service, Employee, Personnel Policy, Bank.*

### INTRODUCTION

Currently, the process of further liberalization of the role of financial institutions in the country is underway. The main purpose of this process is to expand the range of services provided by financial services and increase the confidence of customers in financial institutions.

It is true that the effectiveness of financial services aimed at the development of the country have an impact on the development of all sectors of the economy. Improving the reliability and security of financial services, increasing the speed of service delivery, the development of customers, both quantitatively and qualitatively, bring great benefits to the country.

The development of financial and economic relations in the context of anti-crisis management, changes in the form of ownership and organizational subordination in financial institutions make it necessary to constantly intensify the implementation of an effective mechanism of the concept of financial services. In this regard, the perfect conduct of personnel policy is a topical issue.

## LITERATURE REVIEW

Economist Peter Rose stresses the bank as a financial services firm. It includes such financial services as financial resource management, consumer credit, cash flow management, leasing and other services that reflect banking activities [1].

F. Kotler pointed out that one of our activities (in our case, the bank is any event or service that the bank offers any operation to the other (bank customers). At the same time, financial and banking services are specialized commodity of financial and banking institutions, and as any commercial enterprise, it strives to achieve the maximum volume of its implementation. With increasing competition between commercial banks and certain groups of financial intermediaries, we should raise the issue of developing the system of financial and banking services as a goal-oriented, clearly targeted activity.

According to Z.Ahrorov and others, financial services represent a set of socio-economic relations of legal entities and individuals related to the formation of funds in the banking, insurance, leasing and investment markets, as well as in other financial relationships [3]. Therefore, the effective implementation of financial services provides a positive solution to many processes. In particular, it improves the quality of life of the population through the provision of financial resources to legal entities and individuals, access to savings, insurance of the population and business against various risks and the provision of other important services.

### Main part

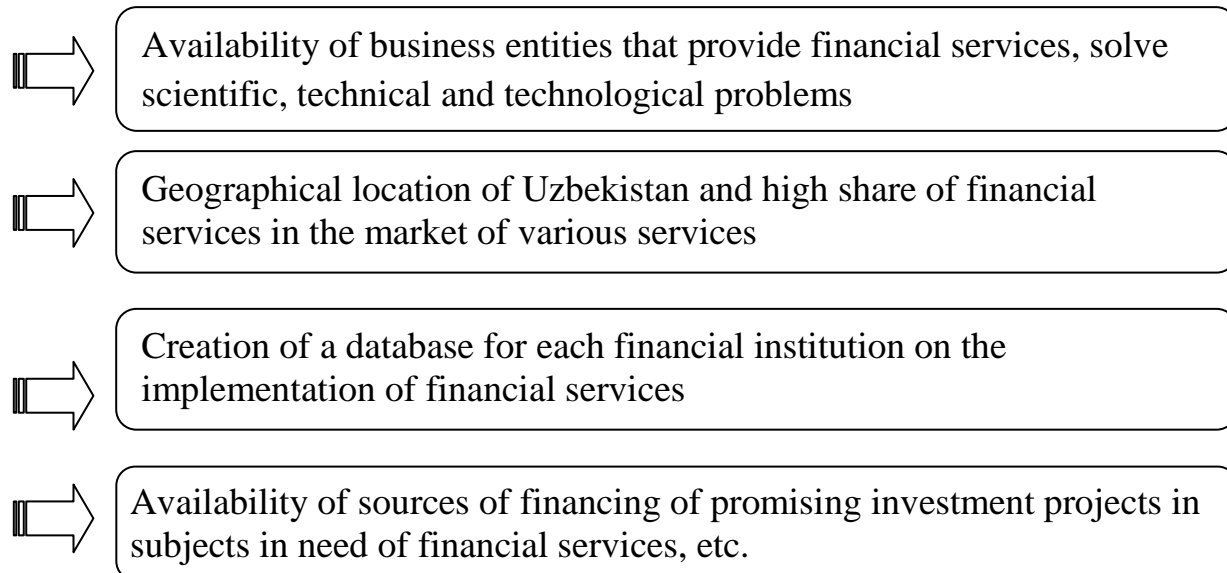
The provision of enterprises of various industries with modern tools and technological equipment, the provision of the volume and quality of services can be done by increasing the activity of financial services in the industry. At the same time, financial institutions should take the initiative, and the organization of systematic service activities of economic entities should be an important issue in this area. As a result, all the work related to the full and quality satisfaction of the demand for the services of a financial institution (finance, banking, insurance, tax, etc.) can be combined into a single set of processes.

Clearly, banks need to expand their asset and liability operations. The banking services associated with the passive operations of the bank, mainly the types of deposits of the bank and their growing number, indicate the development of interaction between banks and customers, especially new customers, mainly the population. Deposit balances in banks across the country are growing from year to year. This indicates that the confidence of the majority of the population in the national currency and the banking system is growing.

The mechanism of effective introduction of financial services determines the effectiveness of individual measures and a set of measures to be taken by the state to ensure the achievement of the goals set by the system of financial institutions.

Financial institutions have sufficient conditions for the implementation of service strategies, and it is expedient to list them (see Fig. 1).

**Adequate conditions for the implementation of the strategy of services in financial institutions**

**Fig. 1. Adequate conditions for the implementation of the strategy of services in financial institutions**

However, despite this, the activity of financial institutions is not observed. There are several specific reasons for this, one of the main of which is that both financial institutions and customers using their services, as well as investors are adequately equipped with modern methodologies for assessing the position, opportunities and investment attractiveness of the financial market [4].

At the same time, one of the biggest tasks facing banks is to bring in additional income after the development of new types of deposits for a certain amount of expenses. In addition, deposits are often duplicated, i.e. the type of deposit introduced by one bank is put into circulation by another bank a month later with some changes. There are some problems in bringing the types of deposits to the attention of customers and explaining their features, because banks do not pay much attention to the advertising of their products.

One of the main systems of bank management is public relations, a system of establishing relationships between the bank and the public, their development and the establishment of good ideas about the bank in the public consciousness. This system is used in the banking system in many countries around the world. Currently, the country is struggling for every customer, especially for financially stable customers, which, in turn, creates the basis for increased interbank competition. Therefore, each bank must operate using management principles so as not to lose competition. Moreover, this does not begin without the use of public relations. The bank is struggling to increase their number and ensure sustainable growth for the customer. In the market of banking services, the republic will offer services or products related to the active operations of commercial banks, mainly short-term and long-term loans.

There are some problems in the commercial banks of the country on this issue, ie the majority of loans are non-repayable. In the activities of banks, it is observed that loans are not issued without analyzing the financial condition of the client or in which market segment he operates and his future position. Similar loans will not be repaid in the end, which will inevitably lead to an increase in bank costs.

It is known that the lending process is one of the specific processes with the highest level of risk. Therefore, this process must be completed with analysis. Bank management is the art of governing power and management, special skills and administrative skills in resource management. In other words, management is the management of resources, the management of people. Knowing how to operate effectively and profit is the process of multiplying it. In this sense, management is a decision-making and monitoring of its implementation, which requires a certain high art and skill.

Personnel management is a system of interconnected organizational, economic and social measures to develop and effectively use the potential of people employed in the enterprise, to create the necessary conditions for their normal operation.

Such management:

Functional - issues directly related to the solution of personnel issues, ie personnel selection, dismissal, training, salaries, etc .;

Organizational management includes all persons and institutions directly responsible for personnel work, ie managers, personnel department, trade unions and others.

A large amount of technical knowledge is required from the heads of departments to help bank employees to work with complex banking products. In addition, management skills are required from these managers to ensure that employees display their best qualities at work.

The main changes in the organization of labor in a modern bank explain the need to take into account aspects of internal and external activities, not only consumer priorities, but also the needs and preferences of employees.

The high level of self-awareness and education of bank employees leads to the fact that the effectiveness of theological methods of labor organization is declining. In particular, the importance of economic components in the motivation of labor activity is declining, while the main part of the population of developed countries in the West is relatively well-off.

Foreign experience shows that there are new opportunities for customer service - innovative services - Internet banking and home banking. In the experience of our country, these forms of services could be provided by the People's Bank, but today our banks do not have any experience in the strategy of the Internet banking market, which in itself does not allow the widespread development of Internet banking. The reasons hindering the development of Internet banking services may be the lack of public confidence in the banking system, insufficient security of transactions via the Internet, the low level of computerization of the population and the widespread use of the Internet. However, there is a problem in the banks themselves, many of them are not able to develop innovative services even after the installation of Internet banking equipment, as a result, it is impossible to hide Internet services to special business managers of projects. In our opinion, the establishment of control over such projects by the staff of the information technology service will help to eliminate the existing shortcomings.

The development of innovative banking services largely depends on the method of pricing for these services, in addition, it is important to take into account the role of banking in the process of their specialization.

**CONCLUSION**

Thus, in the context of economic reforms in the country and the growing interbank competition, the position and future of each bank depends primarily on the personnel working in it. Therefore, in recent years, personnel policy in banks focuses on such important measures as the selection and placement of personnel, the constant recruitment and renewal of young, knowledgeable, economists, filling vacancies with qualified personnel, working with reserves.

This, in turn, will expand the banking services provided by commercial banks to customers and expand the role of banks in the implementation of reforms in the country.

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## CONSOLIDATION FINANCIAL STATEMENTS FOR THE DEVELOPMENT OF INTEGRATION PROCESSES

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### ABSTRACT

*The article discusses issues related to the development of a more modern concept of consolidated financial statements interconnected with business entities, they differ in that the practice of consolidating financial statements has significant national specifics, which makes it relevant to compare the reporting indicators of different interconnected enterprises. By summarizing different accounting approaches, collateral transactions and developing a common conceptual framework, and its reflection in financial statements in accordance with the International Financial Reporting Standard (IFRS), (IFRS) "Business Combinations" (IAS), "Combinations of Companies" with subsequent convergence positions and requirements of IFRS with the provision of final standards for accounting for business combinations.*

**KEYWORDS:** *Business Combination, Consolidated Financial Statements, Financial Dependence, Consolidated Balance Sheet, Principles, Accounting Principles.*

### INTRODUCTION

In a market economy there is often a process of Consolidation and division of economic activities of economic entities. Our Republic has witnessed that integration processes in the economy are gaining tremendous momentum involving various countries regions and sectors of the economy in the process of globalization on a larger and deeper scale during past few decades. At the same time the integration process takes a variety of forms: corporation holdings, conglomerates financial and industrial and baking groups arising from the acquisition by some companies of stakes in other established subsidiaries mergers and mergers in other ways. A common feature characteristic of them is that they are all groups of interconnected companies that combine human and material resources to achieve a specific goal and represent a new

independent economic entity. However, the group is not legally independent participant in civil turnover and member by passing groups individual companies remain independent legal entities.

An equal important change in IFRS-3 is a clearer specification of the objects of consolidated financial statements.

Existing methodological approaches of consolidated financial statements allow us to identify the control criteria as: legal forms control; criteria for possible control without specifying legal forms; sign of actual control. Respectively, following three main concepts if the object of consolidated financial statements can be given:

- a) concept of ownership
- b) concept of control
- c) concept of management.

Evaluation of the consolidated financial statements requires a clear identification of the reporting entity that defines the “boundaries” of the financial statements; for the group, this also requires defining the economic perimeter of the consolidated organization [1].

In the concept of ownership, the criteria for determining the object of consolidated financial statements is the share of voting shares. In the concept of control, the criteria for the object of consolidated financial statements are the legal forms of control as well as the actual control criteria. It is not necessary to have a major of voting shares to control it. Today this type of relationship among companies forms the object of consolidated financial statements. The concept of management considers entities under common joint control and management as an object of consolidated financial statements along with subsidiaries. These legal forms of relationship that determine economic and financial dependence of one company on another can include:

- a) A system of contractual relations distribution of products and franchising services;
- b) An agreement on the provision of modern technology and training of personnel;
- c) An agreement on production, assemble, and mutual deliveries and subsequent to the suppliers;
- d) Patent licensing and franchising;
- e) Strategic partnership, resulting from the conclusion of a cooperation agreement participation interest between several companies for the joint implementation of the project and so on [2].

The essence of this concept is the coincidence of the object of consolidated financial statements with the object of management, the main criteria of which can be defined as existence of a single management of the group.

The next aspect of preparing financial statements for groups of related companies is the identification of accounting consolidation methods. The methods for summarizing the performance of two or more companies in the general financed statements according to certain rules to varying degrees’ companies all or individual balance sheet items of the company. Full consultation method includes fresh start method purchase method and pooling of interest method.

Of the generalization methods listed above consolidation methods should include those that disclose information about structure of ownership of capital or control accrued by assets within

the enterprise in order to ensure the interest of investors and owners when making a decision on participation in the company's capital. Thus consolidation methods and special methods of summarizing accounting data related to the situation when the enterprise is not fully owned by the parent company and there is share of the substance that form the net assets owned by other shareholders.

The recent methods of consolidated financial statements consider two concepts that significantly affect the determination of the minority share and the procedure for offsetting the results of intra-group operations. These include the concept of unity and the concept of interest. It should be noted they define the concept of unity as the only accounting order and do not allow the concept of interest as an alternative.

In accordance with IFRS accounting for business combination is based on the same general accounting concepts that are applied in the recognition and measurement of acquired assets received liabilities issued shares. At the same time the only possible method of preparing consolidated financial statements at the time of group formation is the purchase method i.e. the use of the method of combining interest provided. For in the previous IFRS 22 did not allow this method required mandatory identification of the buyer of the business combinations transaction. Usually the buyer is determined based on the fair value of the net assets parties involved in the transaction and which party:

- transfer cash or other assets.
- determines the financial and operating policies.
- has an advantage in the selection of management personnel of joint structures.
- issue shares or other types of equity instruments with the expectations of situations when a reverse purchase is made in order to gain access to an exchange listing.

In preparing a consolidated report not only article by article consolidation of reports of the group company reporting is performed but also adjustments to reporting indicators aimed at excluding the results of all intra group operations from the consolidated report. Therefore, consolidated balance does not include:

- Mutual financial investments in the authorized capital of the groups enterprises;
- Indicators surrounding intra group accounts debit and credit debts
- Gain and losses from the group transactions included in the carrying amount of property acquisition of a group member;
- Dividends paid by the groups entities to each other;

In order to ensure the consolidated financial statements are presented truthfully, the following principles must be observed when preparing them:

- The principle of a single date of compilations;
- The principle of a single monetary measurements;
- The principle unity of methods for evaluating balance sheet items;
- the principle of the duration of use of consolidation methods;

- The principle of completeness essence of information;
- The principle of rationality.

According to C. Carini and C. Teodori, separate local government financial statements cannot fully account for municipal entities, thus reiterating the need for consolidated financial statements [3].

However, in the consolidated financial statements the application of the known accounting principles is conditional accordingly it has specific features. Consolidated financial statements differ from separate financial statements of business entities in the context of interpretations and applications of accounting principles including the principles of recognition and measurement of assets and liabilities as well as the principles of income and expenses. The main differences are the following:

- a) Negation of the legal concept of a consolidated balance sheet which assumes in property balance that is only under the control of group's own property is reflected in the balance sheet
- b) Conditional application of the implementation principle recognition of income and the emergence of a new concept and interpretation of unrealized profits from intra group operations
- c) Valuation of assets and liabilities in consolidated financial statements.

It should be emphasized that various methods of consolidated reporting have their own systematic assessment. For example, in method of purchase the consolidated financial statements assets and liabilities subsidiaries are carried at fair value at the date of purchase assets and liabilities of the parent companies at the fair value. It may happen that assets acquired in the same period of time may be reported on different valuation bases. On the other hand, according to the method of combining interests' assets and liabilities are reflected in historical cost.

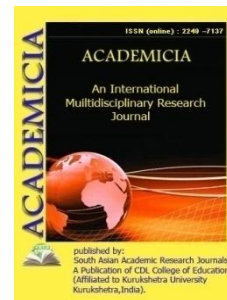
- d) Possibility of recognition of additional assets and liabilities when using purchase methods;
- e) Application of the business continuity principle in the context of differences in recognition of financial results of merged entities in the consolidated financial statements.

## CONCLUSION

In our opinion the main issues discussed in this article are related to the conceptual aspects of defining groups of interconnected companies, as well as reflection of business acquisition transactions consolidated financial statements at various accordance IFRS are undoubtedly key to choosing an approach when developing normative documents regulating the issues of primary consolidation of unification process.

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## DEVELOPMENT OF TRADITIONS AND ITS DURATION OF WOODCARVING IN CENTRAL ASIA

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### ABSTRACT

*The article provides information on the history of the development of woodcarving in Central Asia. In particular, there are sources about the development of the Timurid period, the activities of the schools of woodcarving and its mature representatives, their heirs today. There is also information about the technology used by the craftsmen. This is a priceless work of Uzbek wood carving. Each oasis had its own unique style and methods of wood carving. For example, the monumentality of the Khiva wood carving differs from others in that it preserves the natural color of the wood.*

**KEYWORDS:** Wood Carving, Applied Decorative Arts, Art Table, Table, Box, Frame, National Handicrafts.

### 1. INTRODUCTION

Wood carving is one of the most widespread forms of Uzbek folk decorative arts. In this case, a pattern or image is drawn, cut, carved and processed on a wooden or wooden object. This type of art has existed in almost all nations. This art, which is widely used in the architecture of the ancient world of the ancient East, has developed over time and has acquired a unique artistic style.

Similarly, in Central Asia, wood carving has long been developed and widely used in household items and architecture. This sculpture has been used in the decoration of doors, gates, columns, various colors, tables, countertops, boxes, frames, pens and other items of ancient architecture.

The works created by the people amaze the mind with their subtlety, the complexity of their patterns, the naturalness of their objects. Unfortunately, despite the quality of the wonderful wood carvings, over the centuries, they rotted away and could not withstand the moisture. This is evidenced by the samples found and still being found in archeological excavations.

## 2. Main part.

In the V-VI centuries, specimens of wood carvings were found at the foot of the Yumalak hill in the Surkhandarya oasis. According to our scientists, 1-15,000 years ago, carving was the art of carving in this place, and it was proved that it was very well developed. Such unique finds are found in archeological excavations in Samarkand, Bukhara, Khiva, Shakhrisabz and other cities.

By the end of the 7th century, woodcarving was developing rapidly among the local Uzbek population.

“... before the Arab conquest of Central Asia, wooden statues of local goddesses were found in the homes of local people. Each family had its own goddess (God) according to its position and wealth in the community. This goddess was usually placed on the doorstep. The owner of the house was buying and replacing a new wooden goddess with a case. From this it is clear that the art of wood carving is an ancient art. As a result of the Arab conquest, the production of wooden sculptures, as well as many other forms of fine art, completely disappeared.<sup>1</sup>

As noted above, the influx of Islam into Central Asia in the 7th century did not completely eliminate the statues in this art, although they did. Maybe it has a new look in terms of religion. In other words, master carpenters demonstrated their art by expressing the reflection of trees and flowers, creating complex geometric shapes from simple lines. The art of masters has been passed down from father to son, from generation to generation.”

In the IX-X centuries the culture in Central Asia developed a lot. There was a new turn in folk culture. During these centuries, great scientists, philosophers and writers emerged. They are Abu Ali Ibn Sina, Rudaki, Firdausi, Beruni and others. Incredible architectural monument, including. The construction of the world-famous mausoleum of Ismail Somoni is a proof of our idea. The development of culture has led to the further development of wood carving. Doors, buildings, columns, arches and various tables were decorated with wood carvings. In the XI-XX centuries, folk applied art flourished again. Geometric pattern, which is a complex pattern, that is, the introductory pattern, took the lead in decoration. Architectural household items were also decorated in an artistic and elegant way. For example, HP painted centuries-old wood carvings on the doors of the Shohi-Zinda complex in Samarkand, and is distinguished by its artistic elegance and natural workmanship. The decline of this art was influenced by political changes, and in the twentieth century, thanks to the invasion of Genghis Khan, not only art but also cultural life was completely destroyed.

During the reign of Timur and the Timurids, along with all kinds of art, folk applied art developed very rapidly. In particular, wood carving has risen to the top. Amir Temur contributed to the development of Central Asian culture and art.

Along with working for the construction and beautification of his capital (Samarkand), Amir Temur gathered in the capital the most famous craftsmen and artists from Khorasan (Afghanistan), Iran, Transoxiana. They have been used effectively in the development of fine arts such as painting, architecture, architecture and calligraphy.”



In the XI-XV centuries, local and foreign artists, craftsmen and engineers gathered in Samarkand and took an active part in the construction of mosques, madrassas, khanaqahs, palaces and other large structures. They have devoted all their knowledge, craft, art and skills to the cause. ”2

In the middle of the 14th century, a wooden carving was found on the tomb of Sheikh aifuddin Bukhari. The carvings on the wooden board at the top of the dahma are carved in such a way that the elegance of the carved pattern, its complexity, naturalness, dynamism in composition, and high-quality carving are astonishing. It is obvious that the master who made the house was a very sensitive, strong theorist and practitioner, a mature master. The free, delicate movement of the characters in it lifts the human spirit.

During the reign of Timur and the Timurids, one could see not only Islamic and intricate patterns, but also patterns depicting living creatures. The culture of the civil wars of the Timurid princes of the XV-XVI centuries had a negative impact on the development of our folk art.

At the end of the 18th century and the beginning of the 19th century, this art flourished again, and in Bukhara, Khiva, and Kokand khanates, along with mature literary figures, masters of folk applied art emerged. Not only wood carving, but also pottery, coppersmithing, pottery, and pottery flourished.

In the XIX-XX centuries, wood carving was so developed that each city had its own schools of wood carving. Khudoyorkhan Palace in Kokand, Prince NK Romanov's Palace in Tashkent and AA Polovtsev's House, Zayniddinboy's House in Kuva, Saidakhmadkhu in Margilan At the Sitorai Mohi-Khosa in Bukhara, a wonderful wooden sculpture was created. This is a priceless work of Uzbek wood carving. Each oasis had its own unique style and methods of wood carving. For example, the monumentality of the Khiva wood carving differs from others in that it preserves the natural color of the wood. Bukhara wood carving is distinguished by the charm of the carved pattern, the quiet patterns are decorated with gold and silver water, and the use of colors in the pattern. Margilan wood carvers used flat carvings with deep soils. Kokand carving, on the other hand, used short embossing and flat carving. In Tashkent, on the other hand, flat-embossed, groundless drawing carvings are widespread. There are schools in Kokand, Khiva, Samarkand and Tashkent, each of which is unique.

In the Khorezm school of wood carving, the craftsmen, first of all, pay special attention to the preparation of wood, and in the process of work they work to the best of their ability. Indeed, Khorezmian wood carvers in the past mainly soaked the wood of gujum, poplar and other trees in water for up to 6 months and then dried it in the shade. After processing with linseed and cottonseed oil, they began to embroider. The patterns are sealed in wood at different depths, so great accuracy is achieved.

In the Khiva woodworking schools, more than a hundred types of patterns were used, such as almagul, circular patterns, ropes, nails and other names. The masters tried not to repeat one pattern, not to copy from another. That is why the carvings on wood are so perfect that they have symbolic meanings. For example, the carved doors, gates, pillars and stone carvings on the monuments of Khiva can be traced back to the century. The Khiva School of Wood Carving differs from other schools in the smallness, surface area, lack of space, density and artistic structure of the patterns, as well as their playfulness (movement, dynamism), ie the spiral shape of the branches. The masters of Khiva carving often used larch, poplar and maple wood, and while maintaining the natural color of the wood, cotton and linseed oil were applied to its surface

and soil. The Khiva school of wood carving is famous for its monumentality. The beauty of the Khiva pattern is that it achieves great clarity and harmony by carving the pattern at different depths. The masters tried to preserve the natural appearance of the wood and did not use polishing or painting the surface of the new carving.

One of the representatives of Khiva school is Ota Polvon. Ota Polvonov, a well-known master craftsman, has a special place in the development of the Khorezm school of wood carving. The wooden pole, made in 1937 with the help of painter Abdulla Boltaev together with the famous master's student Sapo Bogbekov, was awarded a gold medal and a first-class diploma at the International Exhibition in Paris. He took part in the reconstruction of the Bukhara Arch, Tashkhovli, Nurillaboy Palace and other ancient buildings. Father Polvonov and painter Abdulla Boltaev's collaboration has been very successful. In 1937, at the Art Exhibition in Paris, Father Polvonov's A. On the basis of the size of the pattern prepared by Boltaev, the carved pillar, which worked with elegance, high skill and vision, was highly valued. The doors to the foyers of the Khiva Hall of the Alisher Navoi Grand Academic Opera and Ballet Theater in Tashkent, built in 1940 for seven years, are decorated with attractive and beautiful paintings. In 1962, he decorated the 2nd and 4th floor doors for the Urgench railway station, the Directorate of Art Exhibitions, and the columns with unique Khiva-style wood carvings. C. Bagbekov continued the traditions of his school as a worthy student. C. Bogbekov made carved doors, pillars, gates, and boxes of furniture, tablets, counters, chairs, and a number of other household items for many community and residential buildings, and participated in the renovation of many architectural monuments in Khiva. Even today, the master's disciples continue his work.

### 3. CONCLUSION.

Haitmat Bogibekov, People's Master of the Republic of Uzbekistan, is one of the masters of the Khiva woodcarving school, which preserves and develops the traditions of the school. He learned the secrets of wood carving from his father Safo ota Bogibekov. Haitmat Bogibekov, who has contributed to the preservation and development of Khiva's classic wood carving art, will continue to contribute to the development of the art of painting, wood carving, carpentry and calligraphy.

This is how the wood carving, which has been developing for centuries, developed, sometimes it was burned, sometimes it was broken, sometimes it flourished. But to this day, the role of art schools and master craftsmen in the development of this art is invaluable. After the independence of our country, along with all areas of our national culture, special attention was paid to the restoration, development and promotion of handicrafts, their traditions and schools. In recent years, in order to preserve our rich cultural heritage, to further develop the folk art and applied arts, to encourage the hard work of skilled craftsmen who have consistently continued the historical traditions, appropriate orders and privileges have been issued. Today, masters and masters of handicrafts are achieving great successes and results in combining ancient traditions with modern experience and innovations in various fields of folk crafts. Hard-working masters who make a worthy contribution to the development of national crafts, nurture talented students and create their own creative school are encouraged and recognized for their work.

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## ACTIVITIES OF DOCTORS IN THE FERGANA VALLEY (LATE 19TH - EARLY 20TH CENTURIES)

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### ABSTRACT

*The article analyzes the formation of European medical institutions in the Fergana region in the late 19th - early 20th centuries, their types and activities, the use and attitude of the local population to these medical services. The reasons for the increase in the number of people visiting them from every year, the attitude of European health workers to traditional medicine are also discussed. Also, problems were identified in the work of medical institutions.*

**KEYWORDS:** *Medicine, Dispensaries, Doctor, Folk Medicine, Colony, Fergana Region, Turkestan, Russian Empire.*

### INTRODUCTION

At the end of the 19th century, some changes in the provision of medical care took place in the life of the population. European modern medicine is a novelty for the Muslims of the country. Although these sanatoriums, which at first were completely alien to the population, were difficult to accept, later they saw their advantages and began to turn to them for medical help. In the 60s-70s of the XIX century, medical services for the population developed very slowly. For example, in 1876, as in 1867, in the "new" part of Tashkent, there was one doctor and two paramedics for the entire population[1.196].

In 1876 a doctor and a paramedic were appointed to provide medical services to the population of Kokand, and in 1881 a separate doctor was appointed for the region and the city [2. 31].

Since the 80s of the last century, hospitals for the local population began to open in Turkestan. Taking into account the conditions of that period and the mentality of the population, separate clinics for women and children, and separate clinics for men were opened. In 1883, the first local women's and children's hospital was opened in Tashkent, later similar hospitals were opened in other cities of the country. In particular, such hospitals began to operate in cities such as Andijan (1888), Namangan (1889), Kokand (1887), Margilan (1891). On September 1, 1887, the fourth outpatient clinic in the country and the first outpatient clinic in the Fergana Valley were opened in Kokand. Shishova was appointed as a director. On February 9, 1888, a women's and children's polyclinic was opened in Andijan with the participation of a doctor O.I. Solnyshkina. In 1903, a young doctor M.S. Goloshevskaya began to work in this dispensary.

On May 30, 1889, he was allowed to open a local women's and children's dispensary in Namangan, and on September 23, 1889, he began working under the direction of Dr. M.K. Filippova. M.A. Geishtor started working [3. 49-50].

### **The Main Findings and Results**

The number of women and children seeking medical care at these dispensaries has been increasing year by year. For example, in 1887-1897. 71,961 patients were treated in the women's and children's polyclinic in Kokand, of which 57,128 were local women and children, 5,154 were Russians, 3,142 were Jews. Of these, 47,841 are women and 24,120 are children [4].

The hospital was attended only by female nurses. Women and children who sought help were provided free care, including medicines, water treatments, simple surgery, and dressings. The tasks of female doctors include not only providing medical care to local women, but also working with Muslim women. In Muslim society, female doctors are responsible for working with women and influencing their worldview.

On the other hand, the situation with the rural population, which constitutes the majority of the country's population, was different. Rural women consulted Russian-speaking doctors only as an exception.

A comparative analysis of the number of doctors and paramedics in Turkestan and Russia at the end of the 19th century shows that there were 25 doctors and 60 paramedics in three regions of Turkestan, and 243 doctors, 399 paramedics and 642 medical workers in three regions of Russia. In other words, there is one doctor for 135,500 people in Syrdarya region, 97,100 people in Samarkand, 100,000 in Fergana, 18,000 in Tula, 35,000 in Vyatskaya and 21,000 in Kharkiv. According to archival documents, in 1908 there was one doctor for 53,017 people in Fergana region, which means that the number of medical workers in the country has increased over 13 years. In 1908, 9% of the population of Fergana region sought medical help. In 1908, 9 doctors, 4 paramedics, 8 midwives and 25 midwives provided medical assistance to women in Fergana region [5. 299].

If we also compare the number of paramedics, it turns out that the provinces of the region are far behind the provinces of the central part of the Russian Empire. In particular, 31,300 people in the Syrdarya region, 34,000 in Samarkand, 30,770 in Fergana, 7,512 in the Tula province, 13,880 in Vyatskaya and 1 paramedic in 7,150 people in Kharkiv [6. 62]. One of the authors of the period

wrote: “Firstly, given the large territory of Turkestan, and on the other hand, city and district doctors have other responsibilities, in addition to providing medical assistance to the population, imagine the deplorable state of health in Turkestan[6. 62].

In 1895, N. Vasilev wrote in several issues of the newspaper “Okraina” in an article “Our common tragedy and ways to solve it” that the reason for such a low turn of the local population to a Russian doctor or paramedic was not distrust of Russian medicine, but the lack of medical staff”[6]. This view is also confirmed by local administrators [7. 88].

In addition, some changes in medicine in Turkestan have further complicated the situation. In 1905, in Syrdarya, Samarkand and Fergana regions, 44 posts of district doctors were established, the responsibility of forensic doctors was added to the duties of district doctors, and they were not allowed to travel on business trips. The salaries of district doctors were set higher than those of county doctors. Therefore, although the position of district doctors was lower, he began to move to the district doctor. The position of county doctor has been vacant for two years in some counties, and there are no medical staff willing to work there.

According to the Turkestan Law of 1886, the position of a district doctor was approved in 14 counties. Until the early twentieth century, they were the only medical personnel in the small cities of the country. 1,500 rubles a year to county doctors. wages were fixed, and in addition to them until 1906 300 rubles were allocated for additional travel expenses. Since the end of 1905, 44 district doctors have been appointed in the Syrdarya, Samarkand and Fergana regions, who have been paid a salary of 2,200 rubles and 59.5 coupons a year, and 240 rubles have been allocated for travel expenses [8]. When this rule came into effect, county doctors would only be responsible for the judicial and forensic police units and would not receive travel funds. Therefore, although the position of district doctors was lower, they began to move to district medicine, and some posts of district doctors remained vacant for two years. At the end of the 19th century, there were 10 hospitals in the Fergana region, two of which were located in Kokand. The city hospital had 20 beds, and the local hospital had 10 beds[9. 93].

If in the second half of the 19th century there were several doctors in the city, by the beginning of the 20th century the number of doctors and other medical personnel increased significantly. During this period, doctors with higher education came to the country, including Fergana region, and contributed to the provision of medical services to the population. In particular, in 1895-1911. A graduate of the St. Petersburg Medical-Surgical Academy of Mali Antonin Vatslovich (born 1864) served as a city doctor in Andijan, he was also a member of the Fergana Medical Society. Doctor Koshurnikov Vasily Vasilievich (born in 1878) began working as a city doctor in Margilan in 1910, and in 1911 in Andijan instead of A.V. Mali.

In addition, the spouses Alexander Polikarpovich Shishov and Maria Ivanovna Shishova also provided medical assistance to the population of Kokand for some time. They not only provided practical medical services to the population, but also raised the problems of medical institutions in the press. In particular, A.P. Shishov, who worked in the Kokand city hospital, in his correspondence considered it wrong to locate the infectious diseases department in the city center, since natural factors must be taken into account during the construction of the hospital. It could be a source of unpolluted land and water for a hospital and a place with fresh air. Orde said it blocks the wind and makes it difficult for fresh air to enter the hospital. In addition, science notes that such a hospital negatively affects the health of the surrounding population. Such data



were first collected in London, and in 1877 an infectious diseases hospital was opened in Fulham, London. There was a smallpox outbreak in London and especially around this hospital at that time. Residents blamed the hospital for the spread of the disease, a lawsuit was filed and the hospital was temporarily closed. Sanitary doctor Rover, on assignment, examines this situation and comes to the following conclusions: 1) the disease is indeed more prevalent in the peripheral part of the hospital than in other parts of the city; 2) the number of homes affected by the disease has decreased as they move away from the hospital; 3) People living in houses close to the hospital also made up the majority when it was at a minimum in another part of the city. Rover's views have been confirmed by other doctors based on their own observations. In addition, a ditch leaked from the city hospital, from which the population drank water. A. Shishov said that he had heard that local residents were frightened when he participated in the work of the commission on the assessment of houses that will be purchased from local residents. In addition, the fact that the bodies were brought in a carriage for forensic examination to the hospital, and even worse, on a camel, had a negative impact on the surrounding population. Based on the above, A. Shishov concludes that the construction of an infectious diseases hospital in the city center is impractical and can become a source of transmission of various diseases to the surrounding population. Therefore, on an empty site near the city walls, it was decided to create a hospital and surround it with a "sanitary belt" – trees [10].

Maria Ivanovna Shishova (1859-1949), a gynecologist and pediatrician who graduated from the Women's Higher Medical Courses in Russia in 1886, initiated the opening of a local women's outpatient clinic in Kokand. The number of patients visiting this polyclinic has increased. For example, in 1887-1897. 71,961 patients were treated in the women's and children's polyclinic in Kokand, of which 57,128 were local women and children, 5,154 were Russians, 3,142 were Jews. Among them, 47,841 were women and 24,120 were children [4].

In 1881-1891, Doctor of Medical Sciences of the Fergana region, Valerian Yustinovich Kushelevsky, conducted medical research for 10 years, as well as three volumes entitled "Data on sanitary characteristics and medical statistics of the Fergana region" wrote the case.

Nikolai Mikhailovich Dranitsin, a graduate of the St. Petersburg Military Medical Academy, was first sent to work in 1885 as a junior doctor at the Kattakurgan Military Hospital. After returning from advanced training at the St. Petersburg Medical and Surgical Academy in 1893-1894, he was sent to New Margilan, where he also worked in a hospital and served as secretary of the Fergana Medical Society (1894-1897).

The first European resort for the treatment of diseases was founded in 1881 in Pedau (Kokand region) by I. Bunin, who worked as a doctor in the "new" Margilan and Andijan in Central Asia. Dr. Bunin first visited these places in 1878, and visited them after the healing effects of bathing in this spring became known to patients.

I. Bunin receives a small subsidy from the state for the establishment of this resort, but uses the main funds at his own expense. In Pedau, he built a 3-frame wooden house consisting of 8 baths and 28 small rooms in an alkaline sulfuric spring. About 12 thousand different trees have been planted on the territory of the hospital. The sanatorium operated until the death of I. Bunin in 1883. In 1885, the Jalal-Abad-Ayub military sanitary station was built here.

Dmitry Konstantinovich Geishtor is a senior physician at the Namangan local infirmary. His contemporaries recall that he was a very devoted physician and did not expect material gain for

his labor. In Namangan, almost everyone knew him. Due to the death of a county doctor during the plague epidemic in 1892, he also worked as a county doctor. Among the patients suffering from plague without fear, he was able to provide them with medical care with ease. In the last days of his life, he suffered from a mental illness and died in April 1905 in Namangan [TV. - 1905. - №72.]

A graduate of the St. Petersburg Medical-Surgical Academy (1876), Doctor of Medical Sciences (1879) Birkin Nikolai Davidovich worked as a doctor in the Kokand district in 1883-1906, in 1906 - as a doctor in the Besharik rural medical center of the Fergana region, since 1908 - a doctor of the city of Kokand.

After graduating from the St. Petersburg Medical and Surgical Academy in 1871, Evgeny Ivanovich Gradusov was sent to the Tashkent District Military Hospital for an internship. He worked in Kokand, New Margilan, Tashkent. In 1887 he received his doctorate in medicine. In 1891 he was appointed doctor of the Fergana region. In 1892-1899 he was the first chairman of the Fergana Medical Society.

In the early twentieth century, doctors began to open private hospitals. For example, in 1914 in Kokand the first private hospital was opened by Ch. Yu. Norvillo and N. S. Kachkhoev. It treated all diseases except infectious, even obstetric [11]. But the above hospitals were used more by the townspeople. The rural population, which made up the majority of the population of Turkestan, was excluded from the health care system until the end of the 19th century. It was also not enough to provide assistance to the population only through polyclinics. Due to the large number of patients seeking outpatient care, the doctor could not physically examine them thoroughly. The fact that Russian-speaking doctors do not know local languages and often do not have interpreters was also one of the factors that made it difficult to provide medical care to the local population.

## CONCLUSION

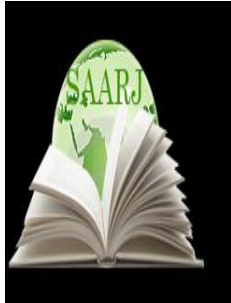
In a word, at the end of the 19th century, modern hospitals of the European type were opened in the country, the first of which was intended for women and children, depending on the conditions in the country. Although the number of hospitals increased from year to year, their number did not match the level of demand and they were in dire financial straits. Nevertheless, outpatient treatment of the local population was widespread in Turkestan and was almost the only option for providing modern medical care to the population of the region. Russian-speaking doctors with higher education, paramedics with secondary education and translators worked in the hospitals established in the Fergana region. Some doctors have been providing medical care to the inhabitants of the valley for many years.

In addition, in the late nineteenth and early twentieth centuries, the possibility of outpatient treatment in polyclinics and, conversely, in hospitals appeared. The newspaper also published advertisements about the activities of private medical institutions in Fergana region. In general, most of the doctors working in the country worked in private hospitals in the early twentieth century. However, in the early twentieth century, private hospitals in the country were often opened by doctors who worked in public hospitals. During this time, no local doctor was trained, but local specialists were trained in vaccination against certain infectious diseases.

Lack of state funding for medical institutions and poor financial situation, shortage of medical personnel, their number is very small in comparison with other provinces of the Russian Empire, as well as doctors' lack of knowledge of the local language created a number of difficulties in providing medical services to the population.

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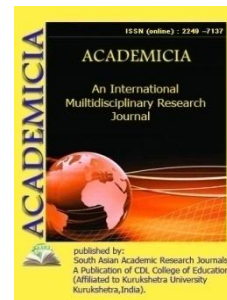
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## INFLUENCE OF SOWING TIME ON GROWTH, DEVELOPMENT, AND YIELD OF SOYBEAN IN THE CONDITIONS OF THE ARAL REGION

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### ABSTRACT

*In order to develop the optimal sowing time, ensuring high and stable soybean yields in the Aral Sea region, field experiments were carried out on the experimental site of the Karakalpak Scientific Experimental Station of the Research Institute of Grain and Leguminous Crops. The experience is multi-factorial. Sowing was carried out with seeding rates of 50-60-70 kg per 1 ha, in three seeding dates: 1st, 2nd, and 3rd ten days of April. The results of the study showed that when cultivating soybeans of the "Nafis" variety in the Aral Sea region, to obtain the highest grain yields, sowing should be carried out in the first decade of April at a seeding rate of 60 kg/ha.*

**KEYWORDS:** Variety, Soybeans, Sowing Time, Yield, Grain, Optimal, Sowing.

***Formation of soybean leaves area depending on sowing terms***

*Most grain accumulation in beans observed in the sowing term of April the first decade. Plant structure analysis showed that this sowing term positive impact on bean length, grain quantity, and weight of grains. Early or late sowing terms than the above-mentioned lead to a noticeably decrease of these characteristics.*

**INTRODUCTION**

In the decree of the President of the Republic of Uzbekistan dated March 14, 2017, No. PP-2832 "On measures to organize the sowing of soybeans and increase the cultivation of soybeans in the republic for 2017-2021", it is indicated that a further increase in the volume of sowing and cultivation of soybeans, a more complete satisfaction of the need population in vegetable oil, livestock, and poultry farms in nutritious feed, as well as the effective use of production capacity of processing enterprises [1].

Soybean was always high on the list in the production of grain. The Bean is a good source of protein, it is easier acquired, contains many micronutrients, celluloses, they are cheaper meat and therefore is available to most part of the population. Incorporating big percent of protein, bean contain not enough fat and timely cholesterol lechena it does bean by a fine dietary product.

The most widespread variety of legume family in our country are soybeans, chickpeas (chickpeas), peanuts, and mung bean. Legumes are consumed in any form: raw, boiled, canned. Soy is a source of natural vegetable protein. Under favorable conditions, from 500 to 700 nodules are formed on the roots of only one plant of leguminous plants. As a result, after harvesting, an enriched soil remains. During the season, it accumulates up to 44 grams of nitrogen per 10 square meters.

In recent years, in connection with the need for a constant increase in the production of food and feed for animals, the expansion of soybean grain production has been caused. The main products from soy are soy flour and soybean oil. Flour is used in food for the preparation of confectionery, fillers, for the production of substitutes for meat, milk, cheese, diabetic products.

Soy is a crop of very diverse uses. This is due to the chemical composition of its seeds, which contain 30-52% complete protein, balanced in amino acids, 17-27% fat, and about 20% carbohydrates. By cultivating soybeans, farms get two full-value crops - protein and vegetable oil. Soybean oil is very popular and occupies a leading position among other oils.

The favorable combination of nutrients allows soybeans to be widely cultivated as food, fodder, and industrial plants. Previously, soybeans were cultivated for green fodder, which animals readily eat, as well as for ensiling (mixed with corn). Soybeans are now cultivated mainly for seeds. Soy can grow on various soils, except for acidic, highly saline, or waterlogged soils.

Soybeans are an important protein-oilseed crop, which is needed by all regions where animal husbandry is developed. It is in connection with the development of poultry that the popularity of this culture will only grow in the coming years. It is possible to achieve a high-quality harvest only by cultivating correctly selected varieties (they must be zoned) and observing all technological stages, and this can really be done by eliminating the human factor.

According to Kh.N. Atabaeva [2], the advantage of a later sowing period and a higher density of agroecoses for early-ripening varieties compared to mid-ripening ones. The choice of the

optimal sowing time for soybean varieties is very significant because it allows you to increase the seed yield by 1.4-2.0 times compared to early or late terms.

Soybean full-fledged proteins, practically not inferior in nutritional value and nutritional value to proteins of animal origin, a magnificent ensemble of completely unique biologically active components, including lecithin and choline, indispensable in nutrition, vitamins A, B and E, macro and microelements and a number of other substances, in it no cholesterol and lactose. It is especially necessary to emphasize that this product is ideally balanced in terms of calorie content and the content of basic nutrients and biologically active substances.

Sowing time is a production factor that does not require additional costs and has a significant impact on the productivity of soybeans. Sowing too early or too late results in a sharp drop in yield. For seed germination and emergence of soybean seedlings, soil and air temperatures of 13–16 ° C are required, but a further increase in temperature to about 30 ° C will be optimal. The sowing time is determined based on such factors as weather parameters (for example, minimum and maximum temperatures, photoperiod, relative humidity, precipitation) during the growing season of crops, ripeness group, soil type, moisture supply during sowing, etc.

In different places, the optimal time for sowing soybeans may differ due to different climatic conditions. So, for example, in the southern regions of the Republic of Uzbekistan 3-decade of March is the optimal sowing period, while the period from 1-decade of April to 3-decade of April is optimal for the Northern regions[2].

In the absence of problems such as drought, high pest, and disease proliferation, or lodging, early sowing will usually yield higher yields than late sowing. A higher yield of soybean agrocenoses, sown at the optimal time, may be associated with better plant growth and optimal parameters of the yield structure, longer ripening duration, and higher agro-climatic indicators. Low yields of late sowing can be attributed to a number of reasons (lower temperatures and direct sunlight), less moisture in the soil, and a shorter growing period.

According to A.A. Nichiporovich [3], crops with an optimal structure and a good course of its development are considered to be those in which the leaf area as quickly as possible grows up to 40-50 thousand m<sup>2</sup> / ha and, possibly, remains in an active state for a long time. The dynamics of growth of the leaf surface should best correspond to the dynamics of the arrival of solar radiation.

In connection with the need to constantly increase the production of food and animal feed in recent years, attention is paid to the expansion of soybean grain production. Based on the tasks set, it is necessary to more widely introduce soybean culture into production, taking into account its valuable properties. Along with this, this culture belongs to ecologically valuable plants, contributes to an increase in soil fertility (accumulates biological nitrogen in the soil up to 100 kg/ha and more, in addition, it leaves crop and root residues), saves mineral nitrogen fertilizers. It is widely used in feed production.

**The relevance of research** is due to the fact that legumes have always occupied one of the first places in grain production since they are a good source of protein, are easier to digest, contain many micro-nutrients, fiber, they are cheaper than meat and therefore are available to most of the population and are completely cholesterol-free. This makes legumes an excellent dietary product. Legumes contain: isoflavones, have metabolic and ant carcinogenic properties, and have a

beneficial effect on the cardiovascular system and skin; saponins, which have a hemolytic effect on red blood cells; glycosides. The consumption of legumes provides the population with this valuable crop.

**The purpose of the research** is to study the biological characteristics of the soybean variety "Nafis" at different sowing dates and seeding rates.

## METHODOLOGY

During vegetation, it was made phenological observations, defined field viability, and survival of a plant to cleaning. Beginning from shoots before maturing determined dynamics of formation of a sheet surface plant by A.A. Nichiporovich's technique (1961). When determining stability of the studied soy grades susceptibility to infection to diseases and wreckers used a technique of ocular assessment on 5 to a ball scale by a technique of State commission on a crop variety testing (1971). The structure of a harvest was defined by the selection of trial sheaves with the subsequent analysis. Defined: height of plants at the time of cleaning, number of beans in a plant, number, and mass of grain from a bean, the mass of 1000 seeds. Harvesting was carried out manually. Weighing was carried out on electronic scales. Statistical processing of a harvest was carried out by method of the dispersive analysis (B.A. Armor., 1979).

## RESULTS

The soils of the Aral Sea region are characterized by varying degrees of salinization, a rise in the level of ground mineralized waters throughout the irrigated area. For this reason, there is a decrease in the yield of legumes and other crops, the death of tree plantations. Therefore, it is important to select and introduce into production new varieties of grain and legumes that are resistant to salinization, the most productive and valuable in terms of quality, and on this basis the development of complex agrotechnical methods for their cultivation. Of particular importance is the correct choice of sowing dates, predecessors, doses of fertilizers, and the introduction of appropriate crop rotations.

In order to develop the optimal sowing time, ensuring high and stable soybean yields in the Aral Sea region, field experiments were carried out on the experimental plot of the Karakalpak scientific experimental station of the Scientific Research Institute of Grain and Leguminous Crops. The soil of the experimental site is irrigated, meadow, medium saline, medium loamy. The experiments were based on the method of mathematical planning. The soybean variety "Nafis" was studied. The experience is multifactorial. Sowing was carried out with seeding rates of 50-60-70 kg per 1 ha, in three seeding periods: 1st, 2nd, and 3rd ten days of April.

During the observation, it was found that the height of plants and the dynamics of their growth depend on the biological characteristics of the variety and environmental factors. By the growth of plants, one can judge how favorable the environmental conditions are. Plant height varies depending on the variety, feeding area, soil, and air temperature, and other factors.

In our studies, the height of soybean plants was significantly influenced by both the sowing time and the standing density. So, in experiments, the height of the stems of the variety "Nafis" when sowing on April 10, at a seeding rate of 60 kg/ha in the budding phase was 35 cm, in the second variant (20.04., 60 kg/ha) was 39 cm, which is higher than the first variant by 4 cm; in the third variant (30.04., 60 kg/ha), the height of the stems was 42 cm, which is 7 cm higher than the first variant.



At the onset of the flowering phase, the height of the stems of the Nafis variety during sowing on April 10 was 52 cm, in the second variant it was 54 cm, which is 2 cm higher than the first variant; in the third variant, the height of the stems was 58 cm, which is 7 cm higher than the first variant.

At the onset of the bean formation phase, the height of the stems of the "Nafis" variety during sowing on April 10 was 91 cm, in the second variant it was 92 cm, which is 1 cm higher than the first variant; in the third variant, the height of the stems was 86 cm, which is 5 cm lower than the first variant (Table 1.)

**TABLE 1. GROWTH DYNAMICS OF PLANTS OF THE "NAFIS" VARIETY (CM)**

№	Options		Development phases		
	Term sowing	Seeding rate kg / ha	budding	bloom	forming beans
1	10.04	50	34	50	90
2		60	35	52	91
3		70	36	50	90
4	20.04	50	37	51	92
5		60	39	54	92
6		70	39	53	91
7	30.04	50	42	56	83
8		60	43	59	86
9		70	40	58	87

From the data in the table, it can be seen that with a delay of sowing by 10 days, with an increase in temperature, the height of the plant also rises, also with a thickening of sowing to 70 kg/ha, an increase in plant height is observed in the budding phase, starting from the flowering phase for the growth and development of soybean plants is optimal. is the seeding rate of 60 kg/ha of seeds.

The formation of a high yield is facilitated by environmental factors that provide better plant foliage. The yield depends on the formation of leaves, their development, and preservation, because the better the leaves are, the higher the productivity of photosynthesis.

The results of these researches show that terms of sowing and density of standing of plants have a significant effect on the formation of leaves. The number of leaves decreases at late terms of sowing and at consolidation of crops. So, when sowing on April 10 in a budding phase the number of leaves in the first option made 5.5 pieces, in the second option of 4.8 pieces that less first option on 0.7 pieces; in the third option the number of leaves made 4.0 pieces that below the first option on 1.5 pieces. In general, the number of leaves decreased from 5.5 to 4.0 pieces in process of increase in density of standing of plants at the first term of sowing. When sowing on April 20, the number of leaves in the first option was 5.0 pieces, in the second option 4.3 pieces, which is 0.7 pieces less than the first option; in the third version, the number of leaves was 3.9 pieces, which is 1.1 pieces lower than the first option. In general, during the second sowing period, the number of leaves decreased from 5.0 to 3.9 pieces as the plant density increased. In addition, when sowing on April 30, the number of leaves in the first option was 4.5 pieces, in the second option 4.2 pieces, which is 0.3 pieces less than the first option; in the third variant, the number of leaves was 3.7, which is 0.8 units lower than in the first variant. In general, during the

third sowing period, the number of leaves decreased from 4.5 to 3.7 as the plant density increased.

The number of leaves increased significantly towards the flowering phase. In this phase, the influence of the sowing time and plant density became more significant. The number of leaves increased to 12.0 pieces. During the flowering phase, the effect of sowing time on leaf formation was observed.

In the experiments, we carried out observations of the formation of the leaf surface of the soybean plant, depending on the timing and seeding rates.

The results obtained showed the advantage of the first sowing period with a seeding rate of 60 kg/ha, getting earlier and more friendly seedlings, intense green color of plants, and higher rates of photosynthesis and accumulation of dry matter.

The largest leaf area is observed in the crops of the Nafis soybean variety during the germination period, the maximum leaf surface is formed when the sowing date is April 10 and at a seeding rate of 60 kilograms per 1 ha. With an increase in the seeding rate at the first stages of plant growth, it slows down the development of the leaf blade and when sowing on April 30, the leaf surface in the germination phase is 1.0-1.5 times less than when sowing on April 10.

The plant density also influenced the size of the leaf area. In a blossoming phase, the area of leaves of one plant considerably increases. The leaf surface of soybeans reaches its maximum development in the phase of bean formation. A slight decrease in leaf area indicators was noted in the grain filling phase. The obtained data show that the leaf area of one plant of the "Nafis" variety in the budding phase when sowing on April 10 in the first variant was 276 cm<sup>2</sup>, in the second variant it was 268 cm<sup>2</sup>, which is 8 cm<sup>2</sup> lower than the first variant; in the third variant it was 261 cm<sup>2</sup>, which is 15 cm<sup>2</sup> lower than the first variant (table 2). When sowing on April 20, the leaf area of one plant in the first variant was 256 cm<sup>2</sup>, in the second variant it was 249 cm<sup>2</sup>, which is 7 cm<sup>2</sup> lower than the first variant; in the third variant, the leaf area of one plant was 237 cm<sup>2</sup>, which is 19 cm<sup>2</sup> lower than the first, and when sowing on April 30, in the first variant, the indicator was 229 cm<sup>2</sup>, in the second variant - 222 cm<sup>2</sup>, which is 7 cm<sup>2</sup> lower than the first variant; in the third variant, the leaf area of one plant was 217 cm<sup>2</sup>, which is 12 cm<sup>2</sup> lower than the first variant.

As can be seen from these data, the leaf area of one plant of the "Nafis" variety decreased by 8-15 cm<sup>2</sup> when sowing on April 10, 7-19 cm<sup>2</sup> when sowing on April 20, and 7-12 cm<sup>2</sup> when sowing on April 30. Thickening of crops causes a decrease in the leaf area of one plant.

**TABLE2. FORMATION OF THE LEAF AREA OF THE SOYBEAN VARIETY "NAFIS" DEPENDING ON THE TIMING AND SEEDING RATE**

№	Options		Leaf area by developmental phase, cm <sup>2</sup> / plant		
	timing sowing	seeding rates, kg/ha	budding	bloom	Forming beans
1	10.04	50	276	1187	1418
2		60	268	1157	1462
3		70	261	1117	1390
4	20.04	50	256	1067	1264
5		60	249	1189	1292

6		70	237	1123	1243
7	30.04	50	229	1017	1250
8		60	222	1050	1231
9		70	217	1010	1154

A decrease in leaf area occurs due to changes in the microclimate of the field at different planting densities. When crops are compacted, illumination decreases, which negatively affects the formation of leaves and their surface area.

When sowing on April 10, the indicator was 1418-1390 cm<sup>2</sup>, when sowing after 10 days, 1264-1243 cm<sup>2</sup>, and when sowing after 20 days, 1250-1154 cm<sup>2</sup> (Table 2). Due to the late sowing dates, the leaf area decreased by 154-170-147 cm<sup>2</sup> when sowing on April 10 and by 14-61-89 cm<sup>2</sup> when sowing on April 20 compared with sowing on April 30.

In the course of the research, the biometric indicators of the soybean variety were determined depending on the sowing time and the seeding rate. Biometrics varied significantly across experience options. The height of the laying of the first bean increases as the crops of soybean varieties are compacted from 20 to 27 cm; branching, the number of beans and seeds, and the mass of beans and seeds decrease with late sowing and with compaction of crops.

In the course of observation, we determined that in the soybean variety "Nafis" with a delay in sowing in the ripening stage, the content of vegetative organs in the plant decreases: the height of the stem, the weight of the plant, beans, and leaf area are less. The greatest bean formation was observed at the sowing date in the first ten days of April. Analysis of the structure of plants showed that this sowing time has a positive effect on the length of the pod, on the yield of grain, and the weight of seeds. Early or late sowing than this period leads to a noticeable decrease in these indicators.

The number of beans when sowing on April 10 in the first version was 64 pieces, in the second and third versions - 68 pieces, which exceeds the first option by 4 pieces. When sowing on April 20, the number of beans in the first option was 65 pieces, in the second option - 65 pieces, and there is no difference with the first option; in the third variant, there are 64 beans, which is 1 piece less than the first variant. When sowing on April 30 beans in the first version there were 63 pieces, in the second version 63 pieces, and there is no difference with the first option; in the third variant of the beans, there were 62 pieces, which is less than the first variant by 1 piece (Table 3). As the crops became more compact and the sowing dates were postponed to later dates, the number of beans decreased. This was reflected in the weight of the beans, which decreased from 15.3 to 23.1 grams. These changes took place as the crops thickened and at late sowing dates. In the first sowing period, the mass of beans varied from 20.2 to 23.1 g. The mass of beans due to compaction decreased by 1.4-2.9 g. In the second sowing period, the mass of beans varied from 15.3 to 18.7 g.

**TABLE 3 BIOMETRIC INDICATORS OF SOYBEAN VARIETY "NAFIS"**

№	Sowing dates	Seeding rates	Height of the first bean bookmark, cm	Number of branches	Number of beans, pcs	Bean weight, g	Number of seeds, pcs.	Grain weight, g
1	10.04.	50	26	4,0	64	20,2	120	18,0
		60	26	4,0	68	23,1	132	21,0
		70	26	4,0	68	21,6	130	20,0
2	20.04.	50	23	4,0	65	15,3	120	18,0
		60	25	4,0	65	18,7	130	20,0
		70	25	4,0	64	18,0	128	18,0
3	30.04.	50	20	3,0	63	18,3	119	18,0
		60	20	3,0	63	18,8	130	19,0
		70	20	3,0	62	18,1	128	18,0

Due to compaction, the mass of beans decreased by 2.7-3.4 g. In the third sowing period, the mass of beans varied from 18.1 to 18.8 g. Due to compaction, the mass of beans decreased by 0.2-0.7 g.

On average, a soybean has 3 grains, but single-seeded beans are common. In our studies, the number of seeds in the first sowing period according to the variants of the density of the standing of the experiment was 120-132 seeds per plant. The number of seeds decreased as the crops thickened by 2-12 pieces. The number of seeds in the second sowing period, according to the variants of the density of the experiment, was 120-130 seeds per plant. The number of seeds also decreased as the sowing thickened by 2-10 pieces and the late sowing dates the number of seeds was 128-130 pieces. The number of seeds decreased as the crops thickened by 2-15 pieces. The mass of grain per plant was at sowing on April 10, 18; 21; 20 g depending on the plant density. When sowing on April 20, the mass of seeds decreased by 8; 10 depending on the density of standing; when sowing on April 30 - by 9; 11 g

The largest number of seeds (132-120 pcs / plant) is observed during sowing on April 10 with a seeding rate of 60 kg/ha. The greatest accumulation of grains in the beans was observed during the sowing period in the first ten days of April. Analysis of the structure of plants showed that this sowing time has a positive effect on the length of the bean, grain yield, and seed weight. Late sowing leads to a noticeable decrease in these indicators. In full ripeness, the grain harvest in the first variant was 32 c / ha; on the second option 30c / ha and on the third option 29c / ha.

Yield of soybean variety "Nafis" depending on the sowing time and seeding rates, 2017

№	Sowing dates	Seeding rates kg / ha	Repetitions				Average
			I	II	III	IV	
1	10 <sup>th</sup> april	50	28,3	28	27,6	27,4	27,8
2		60	30	29,8	29	29,1	29,4
3		70	29,1	28,1	27,4	26	27,6
1	20 <sup>th</sup> april	50	25,2	25,1	24,9	23,5	24,9

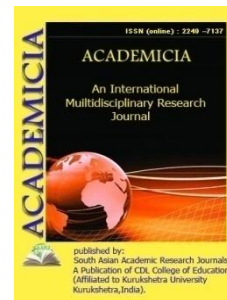
2	30 <sup>th</sup> april	60	28,5	28	27,6	27,3	27,8
3		70	26,4	26,1	25,8	25,5	25,9
1		50	22	21,8	21,5	21,2	21,6
2		60	23,2	23	22,8	22,0	22,7
3		70	22,6	22,1	22,4	22,0	22,0

## CONCLUSION

1. With a delay of sowing by 10 days and with an increase in temperature, the height of the plant also rises, also with a thickening of sowing to 70 kg/ha, an increase in plant height is observed in the budding phase, starting from the flowering phase for the growth and development of soybean plants, the seeding rate of 60 kg/hectares of seeds.
2. Sowing timing and plant density have a significant impact on leaf formation. The number of leaves decreases with late sowing and when crops are compacted.
3. The effect of sowing time on leaf formation is observed in the flowering phase.
4. The largest number of seeds (132-120 pcs / plant) is observed during sowing on April 10 with a seeding rate of 60 kg/ha. The greatest accumulation of grains in the beans was observed during the sowing period in the first ten days of April. Analysis of the structure of plants showed that this sowing time has a positive effect on the length of the bean, grain yield, and seed weight. Late sowing leads to a noticeable decrease in these indicators.
5. On the saline soils of the Aral Sea region, the optimal sowing time for the Nafis soybean variety is the first decade of April at a seeding rate of 60 kg/ha.

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## CARDIAC STRUCTURE AND VASCULAR SYSTEM

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### ABSTRACT

*This article discusses the heart, its structure, physiology, function, and the blood vessels associated with the heart, which are of great importance for human life. There is an ear-shaped structure in the upper right atrium called the right atrial appendage, or auricle, and another in the upper left atrium, the left atrial appendage. The right atrium and the right ventricle together are sometimes referred to as the right heart. These contractile cells are connected by intercalated discs which allow a rapid response to impulses of action potential from the pacemaker cells. The intercalated discs allow the cells to act as a syncytium and enable the contractions that pump blood through the heart and into the major arteries.*

**KEYWORDS:** Cardiac, Vascular, Ventricular, Myocardial, Pericardial, Epicardial, Cardiac Structure.

### INTRODUCTION

The human heart is situated in the middle mediastinum, at the level of thoracic vertebrae T5-T8. A double-membraned sac called the pericardium surrounds the heart and attaches to the mediastinum. The back surface of the heart lies near the vertebral column, and the front surface sits behind the sternum and rib cartilages. The upper part of the heart is the attachment point for several large blood vessels—the venae cavae, aorta and pulmonary trunk. The upper part of the heart is located at the level of the third costal cartilage. The lower tip of the heart, the apex, lies to the left of the sternum (8 to 9 cm from the midsternal line) between the junction of the fourth and fifth ribs near their articulation with the costal cartilages.

The largest part of the heart is usually slightly offset to the left side of the chest (though occasionally it may be offset to the right) and is felt to be on the left because the left heart is stronger and larger, since it pumps to all body parts. Because the heart is between the lungs, the



left lung is smaller than the right lung and has a cardiac notch in its border to accommodate the heart. The heart is cone-shaped, with its base positioned upwards and tapering down to the apex. An adult heart has a mass of 250–350 grams (9–12 oz). The heart is often described as the size of a fist: 12 cm (5 in) in length, 8 cm (3.5 in) wide, and 6 cm (2.5 in) in thickness, although this description is disputed, as the heart is likely to be slightly larger. Well-trained athletes can have much larger hearts due to the effects of exercise on the heart muscle, similar to the response of skeletal muscle.

The heart has four chambers, two upper atria, the receiving chambers, and two lower ventricles, the discharging chambers. The atria open into the ventricles via the atrioventricular valves, present in the atrioventricular septum. This distinction is visible also on the surface of the heart as the coronary sulcus. There is an ear-shaped structure in the upper right atrium called the right atrial appendage, or auricle, and another in the upper left atrium, the left atrial appendage. The right atrium and the right ventricle together are sometimes referred to as the *right heart*. Similarly, the left atrium and the left ventricle together are sometimes referred to as the *left heart*. The ventricles are separated from each other by the interventricular septum, visible on the surface of the heart as the anterior longitudinal sulcus and the posterior interventricular sulcus.

The cardiac skeleton is made of dense connective tissue and this gives structure to the heart. It forms the atrioventricular septum which separates the atria from the ventricles, and the fibrous rings which serve as bases for the four heart valves. The cardiac skeleton also provides an important boundary in the heart's electrical conduction system since collagen cannot conduct electricity. The interatrial septum separates the atria and the interventricular septum separates the ventricles. The interventricular septum is much thicker than the interatrial septum, since the ventricles need to generate greater pressure when they contract.

The heart has four valves, which separate its chambers. One valve lies between each atrium and ventricle, and one valve rests at the exit of each ventricle.

The valves between the atria and ventricles are called the atrioventricular valves. Between the right atrium and the right ventricle is the tricuspid valve. The tricuspid valve has three cusps, which connect to chordae tendinae and three papillary muscles named the anterior, posterior, and septal muscles, after their relative positions. The mitral valve lies between the left atrium and left ventricle. It is also known as the bicuspid valve due to its having two cusps, an anterior and a posterior cusp. These cusps are also attached via chordae tendinae to two papillary muscles projecting from the ventricular wall.

The papillary muscles extend from the walls of the heart to valves by cartilaginous connections called chordae tendinae. These muscles prevent the valves from falling too far back when they close. During the relaxation phase of the cardiac cycle, the papillary muscles are also relaxed and the tension on the chordae tendinae is slight. As the heart chambers contract, so do the papillary muscles. This creates tension on the chordae tendinae, helping to hold the cusps of the atrioventricular valves in place and preventing them from being blown back into the atria.

Two additional semilunar valves sit at the exit of each of the ventricles. The pulmonary valve is located at the base of the pulmonary artery. This has three cusps which are not attached to any papillary muscles. When the ventricle relaxes blood flows back into the ventricle from the artery and this flow of blood fills the pocket-like valve, pressing against the cusps which close to seal the valve. The semilunar aortic valve is at the base of the aorta and also is not attached to

papillary muscles. This too has three cusps which close with the pressure of the blood flowing back from the aorta.

The right heart consists of two chambers, the right atrium and the right ventricle, separated by a valve, the tricuspid valve.

The right atrium receives blood almost continuously from the body's two major veins, the superior and inferior venae cavae. A small amount of blood from the coronary circulation also drains into the right atrium via the coronary sinus, which is immediately above and to the middle of the opening of the inferior vena cava. In the wall of the right atrium is an oval-shaped depression known as the fossa ovalis, which is a remnant of an opening in the fetal heart known as the foramen ovale. Most of the internal surface of the right atrium is smooth, the depression of the fossa ovalis is medial, and the anterior surface has prominent ridges of pectinate muscles, which are also present in the right atrial appendage,

The right atrium is connected to the right ventricle by the tricuspid valve. The walls of the right ventricle are lined with trabeculae carneae, ridges of cardiac muscle covered by endocardium. In addition to these muscular ridges, a band of cardiac muscle, also covered by endocardium, known as the moderator band reinforces the thin walls of the right ventricle and plays a crucial role in cardiac conduction. It arises from the lower part of the interventricular septum and crosses the interior space of the right ventricle to connect with the inferior papillary muscle. The right ventricle tapers into the pulmonary trunk, into which it ejects blood when contracting. The pulmonary trunk branches into the left and right pulmonary arteries that carry the blood to each lung. The pulmonary valve lies between the right heart and the pulmonary trunk.

### ***Left heart***

The left heart has two chambers: the left atrium and the left ventricle, separated by the mitral valve.

The left atrium receives oxygenated blood back from the lungs via one of the four pulmonary veins. The left atrium has an outpouching called the left atrial appendage. Like the right atrium, the left atrium is lined by pectinate muscles. The left atrium is connected to the left ventricle by the mitral valve.

The left ventricle is much thicker as compared with the right, due to the greater force needed to pump blood to the entire body. Like the right ventricle, the left also has trabeculae carneae, but there is no moderator band. The left ventricle pumps blood to the body through the aortic valve and into the aorta. Two small openings above the aortic valve carry blood to the heart itself, the left main coronary artery and the right coronary artery.

The heart wall is made up of three layers: the inner endocardium, middle myocardium and outer epicardium. These are surrounded by a double-membraned sac called the pericardium.

The innermost layer of the heart is called the endocardium. It is made up of a lining of simple squamous epithelium and covers heart chambers and valves. It is continuous with the endothelium of the veins and arteries of the heart, and is joined to the myocardium with a thin layer of connective tissue. The endocardium, by secreting endothelins, may also play a role in regulating the contraction of the myocardium.

The middle layer of the heart wall is the myocardium, which is the cardiac muscle—a layer of involuntary striated muscle tissue surrounded by a framework of collagen. The cardiac muscle pattern is elegant and complex, as the muscle cells swirl and spiral around the chambers of the heart, with the outer muscles forming a figure 8 pattern around the atria and around the bases of the great vessels and the inner muscles, forming a figure 8 around the two ventricles and proceeding toward the apex. This complex swirling pattern allows the heart to pump blood more effectively.

There are two types of cells in cardiac muscle: muscle cells which have the ability to contract easily, and pacemaker cells of the conducting system. The muscle cells make up the bulk (99%) of cells in the atria and ventricles. These contractile cells are connected by intercalated discs which allow a rapid response to impulses of action potential from the pacemaker cells. The intercalated discs allow the cells to act as a syncytium and enable the contractions that pump blood through the heart and into the major arteries. The pacemaker cells make up 1% of cells and form the conduction system of the heart. They are generally much smaller than the contractile cells and have few myofibrils which gives them limited contractibility. Their function is similar in many respects to neurons. Cardiac muscle tissue has autorhythmicity, the unique ability to initiate a cardiac action potential at a fixed rate—spreading the impulse rapidly from cell to cell to trigger the contraction of the entire heart.

There are specific proteins expressed in cardiac muscle cells. These are mostly associated with muscle contraction, and bind with actin, myosin, tropomyosin, and troponin. They include MYH6, ACTC1, TNNI3, CDH2 and PKP2. Other proteins expressed are MYH7 and LDB3 that are also expressed in skeletal muscle.

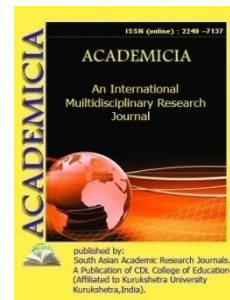
### Pericardium

The pericardium is the sac that surrounds the heart. The tough outer surface of the pericardium is called the fibrous membrane. This is lined by a double inner membrane called the serous membrane that produces pericardial fluid to lubricate the surface of the heart. The part of the serous membrane attached to the fibrous membrane is called the parietal pericardium, while the part of the serous membrane attached to the heart is known as the visceral pericardium. The pericardium is present in order to lubricate its movement against other structures within the chest, to keep the heart's position stabilized within the chest, and to protect the heart from infection.

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## THE EFFECTIVENESS OF DRIP IRRIGATION WHEN GROWING FINE-FIBER COTTON IN VARIOUS MINERAL RATES FERTILIZERS

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### ABSTRACT

*The article explains methods of irrigation, automation of the irrigation process, which maintains an optimal irrigation regime. The use of nanotechnology in agriculture and the study of drip irrigation with laser-treated water of cotton, cultivated with ridge sowing of various rates of mineral fertilizers*

**KEYWORDS:** *Agriculture, Sowing, Water Resources, Drip Irrigation, Laser Radiation, Cotton, Fertilizers, Mineral Fertilizers*

### INTRODUCTION

One of the main tasks of agriculture is the transition to non-traditional methods and technologies of irrigation, which make it possible to obtain high yields of agricultural crops with low consumption of irrigation water. Therefore, the leadership of the Republic has set tasks for scientists and specialists involved in cotton growing to develop and introduce non-traditional methods of irrigating cotton.

With the growth of the population, the need for agricultural products and raw materials will increase, which will inevitably increase the shortage of water resources. In conditions of limited water availability, it is necessary effectively use water resources, which should be largely facilitated by water-saving technologies for irrigating agricultural crops.

One of the most exact methods of irrigation is drip irrigation, which allows you to fully automate the irrigation process, maintain an optimal irrigation regime, soil fertility, and preservation of the environment.

The study of drip irrigation of cotton with water treated with a laser beam on the bald-meadow soils of the Surkhan-Sherabad steppe is based on field experiments, in which three options are laid (Table 1). The experiment was carried out according to the method of UCRI in three replications on a plot of 3 hectares. The plot area was 320 sq.m. The row spacing is 90 cm. The fertilizer rate is nitrogen 250,200 kg, phosphorus 175,140 kg and potassium 125,100 kg. per hectare.

Furrow irrigation was carried out according to the 1-2-2 scheme, and in the case of drip irrigation, they were carried out according to the 2-4-3 scheme. Cotton furrow irrigation is not acceptable for drip irrigation.

Since with drip irrigation, inter-row cultivation of cotton is not carried out, therefore it is possible to irrigate cotton with small rates and a large number of irrigations.

Based on this, the planning of the irrigation regime for cotton was carried out on the basis of the following prerequisites:

Before flowering, the timing of irrigation was set according to the moisture content of the calculated soil layer of 0-30 cm, irrigation rates for the moisture deficit of the layer 0-50 cm;

In flowering-fruit formation, respectively 0-50 cm, 0-50 cm;

In the phase of cotton maturation, the calculated soil for establishing the timing and rates of irrigation was taken equal to 0-40 cm.

The experimental site is equipped with tensiometers to control soil moisture, soil thermometers to measure soil temperature.

**TABLE 1. FIELD EXPERIMENT SCHEME**

No. Option experience	Way glaze	Pre-irrigation humidity soil, % NV	Mineral rate fertilizers, kg / ha		
			Nitrogen	Phosphorus	Potassium
1.	Furrow irrigation - the control	70-75-65	250	175	125
2.	Drip irrigation with plan water	70-75-65	200	140	100
3.	Drip irrigation with laser - irradiated water	70-75-65	200	140	100

Water accounting for drip irrigation was carried out using a STVG-1-80 water meter, and on the variants of furrow irrigation with a Thomson spillway. Polyethylene humidifier tubes with a diameter of 16 mm with droppers available in them were placed in each furrow. Water treatment was carried out using laser devices LVOV-1.

In all the years of research, soluble nitrogen fertilizers were applied through a drip irrigation system with the help of a hydropower fertilizer, and hardly soluble phosphorus and potassium fertilizers were applied once under a plow. Plowing was carried out to a depth of 35-40 cm in early spring; on the experimental plot, chisel-growing, milling was carried out, and ridges with a height of 28-30 cm were cut.



All agro technical measures were carried out according to the method of UCRI. The following observations, investigations and accounting were carried out experimentally: the mechanical composition of the soil of the experimental plot was determined by the pipette method; the volumetric mass of the soil by the method of cutting rings in 10 cm layers before laying the experiment, annually at the beginning and end of the growing season to a depth of 1 m; water permeability of the soil at the beginning and end of the growing season by filling short sections of furrows; soil moisture by thermostatic weighting method, neutron moisture meter VNP-1 "Electronics", tensiometer to the depth of the calculated layer; the lowest moisture capacity (LMC) of the soil by flooding the sites before laying the experiment.

Agrochemical parameters of the soil were determined at the beginning and end of the growing season, before and after irrigation; humus content according to Tyurin; nitrogen - Granvald-Lyazhu and Kononova, gross phosphorus by the colorimetric method; mobile phosphorus and exchangeable potassium according to Machigin's method. Standing density phenological observations of the growth and development of cotton, the average raw weight of one box, the technological properties of the fiber were determined by the method of UCRI.

Mathematical processing of crop data was carried out by the method of analysis of variance according to V. Peregudov.

The use of drip irrigation in cotton growing reduces the costs of irrigation water, increases the yield of cotton, and prevents salinization of irrigated lands. With drip irrigation, laser-treated water and mineral fertilizers are delivered directly to the root zone of plants, which has a positive effect on the growth, development and yield of cotton. On the bald-meadow soils of the Surkhandarya region, the timing of irrigation, irrigation rates, doses of mineral fertilizers during drip irrigation of fine-fiber cotton with activated water with dissolved mineral fertilizers, the development of water-saving technologies has not been studied. Therefore, the study of drip irrigation with treated water by a laser beam is of great scientific and practical importance.

The use of drip irrigation ensures the efficient use of irrigation water, reduces water consumption by 50 percent. This increases the productivity of the irrigator by 2-3 times, improves the land reclamation state, eliminates the processes of irrigation soil erosion, reduces the number of inter-row soil treatments, improves the agrophysical properties of the soil, and increases efficiency mineral fertilizers by 20-25 percent. It was found that the treatment of irrigation water with dissolved nitrogen fertilizers with a laser beam changes the physical and chemical properties of the water, which contributes to better growth and development of plants. Compared to furrow irrigation, the increase in the yield of raw cotton with drip irrigation with ordinary water averaged 4.4 c / ha or 13.5 percent over three years, for drip irrigation with laser-treated water, compared with drip irrigation with ordinary water 2.3 kg / ha or 5 percent.

In recent years, the lack of irrigation water during the growing season of agricultural crops has been sharply reflected. The focus of water supply for the country's agriculture has especially increased in recent years, when the republic did not provide water within the limits of irrigation norms annually about 1.5 million hectares, of which 500,000 hectares are below 70% of the plan. Therefore, the need has come for a path of economical and rational use of water resources in all sectors of the national economy, and especially in irrigated agriculture.

For the conditions of the Sherabad steppe, there are no scientifically grounded recommendations on the use of various irrigation regimes for fine-fiber cotton, depending on the level of mineral

nutrition with drip irrigation. In this regard, the formulation of this problem has not only theoretical but also great practical importance.

The purpose of the research ended in the study of irrigation regimes for current-fiber cotton depending on the level of mineral nutrition during drip irrigation

According to the results of ten-year studies in the variants of the experiment with drip irrigation, the water consumption was 50% less than in the control variant with furrow irrigation.

To maintain different levels of pre-irrigation soil moisture, it was required to carry out a different number of irrigations.

The smallest number of irrigations was carried out on production control 5 irrigations with irrigation rates of 860-1270 m<sup>3</sup> / ha and irrigation rates of 5260-5770 m<sup>3</sup> / ha. The watering period was 20-25 days.

The largest number of irrigations 10 were carried out in 1-3 variants with maintaining the pre-irrigation humidity at the level of 70-75-65% of the PPV according to the scheme 2-4-4. The irrigation rate, depending on the period of growth and development of cotton, ranged from 225 to 325 m / ha. The watering period was 10 to 12 days. The irrigation rate was 2775-2826 m<sup>3</sup> / ha.

The surveys carried out on September 1 showed that different levels of pre-irrigation soil moisture, rates of mineral fertilizers with drip irrigation have a significant impact on the growth, development and productivity of cotton.

According to the results of phenological observations, the best indicators were obtained with drip irrigation with the maintenance of pre-irrigation soil moisture 70-75-65% of the Aisle of Field Humidity(AFH), with the introduction of mineral fertilizers NPK 250,175,125 and NPK 200,140,105 kg / ha (a.i.) and on August 1 were: the height of the main stems 85.5 - 85.6 cm, number of fruit nodes 18.0-18.5 pcs, number of bolls 18.5-19.5.

Similar data in the production control variant were: 80.5- 78.5; 17.0-18.0; 15.5-17.0. The highest yield was obtained with drip irrigation and the increase in the yield of raw cotton in comparison with the control variant was with the maintenance of soil moisture at the level of 70-75-65% of AFH 5.1; 9.1 kg / ha (Table 2). The highest yield of raw cotton - 44.3 c / ha was obtained with the introduction of nitrogen 200 kg for phosphorus 140 kg / ha, potassium 105 kg / ha with drip irrigation mode 70-75-65% of the AFH and with drip irrigation with laser-irradiated water.

**TABLE 2 COTTON CROP WITH THE METHOD OF IRRIGATION WITH DIFFERENT PRE-IRRIGATION MOISTURE AND THE RATE OF MINERAL FERTILIZERS**

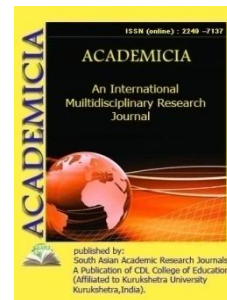
FERTILIZERS					
Options	Yield, average over 3 years, c / ha	Increase in yield due to irrigation method		Increase in yield due to mineral fertilizers	
		c / ha	%	c / ha	%
Pre-irrigational soil moisture 70-75-65 % AFH					
1	35,2	3,9	12,5	The control	The control

2	40,3	9,0	28,7	5,1	14,5
3	44,3	13,0	41,5	9,1	25,9

Based on the study of the effect of drip irrigation of cotton on the growth, development and productivity of fine-fiber cotton varieties Termez-31, it should be noted that drip irrigation has a positive effect on the agrophysical and agrochemical properties of the soil. Contributes to the maintenance of a favorable water regime of soils, while there are no inter-row cultivation with row-crop tractors and non-productive water losses, which can save up to 50 percent of irrigation water, 20-25 percent of mineral fertilizers, and as a result, with an optimal diet, you can increase the yield of raw cotton by 30-40 percent.

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## METHODS OF IMPLEMENTATION OF CONTINUOUS ENVIRONMENTAL EDUCATION

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### ABSTRACT

*The paper considers topical issues of ecology, which are considered today a global and worldwide problem. Climate change and related issues were discussed. The concept of environmental education is comprehensively discussed. Ecology is not included in the curricula of existing professional colleges and academic lyceums, and a small number of hours are allocated for ecology taught in some colleges. Therefore, most students who come to university today do not even know the basics of ecology. Because environmental education is an important pedagogical problem, the future of mankind depends on how effectively this problem is solved. It is also important to ensure the continuity between the content of education as defined in the curriculum in the implementation of environmental education continuity.*

**KEYWORDS:** *Ecology, Nature, Land Resources, Global, Climate, “Club Of Rome”, Law, Ecological Culture, Ozone Shell, Ecological Education.*

### INTRODUCTION

The rapid development of science, engineering and technology raises the level of coordination of the conservation and use of natural resources. Mankind began to influence nature in order to meet its needs, and as a result, environmental problems arose. In particular, people's mistreatment of nature has led to a sharp decline in natural resources, that is, underground and surface resources. Therefore, environmental problems have become a topical and global problem of today. This is because if a number of environmental problems are not addressed in a timely manner, a number of other environmental problems will inevitably follow.

At a time when environmental issues have become a matter of life and death, the subject of ecology, which was included in the curriculum of general secondary education, was removed from the list of compulsory subjects a few years ago. Ecology is not included in the curricula of existing professional colleges and academic lyceums, and a small number of hours are allocated for ecology taught in some colleges. Therefore, most students who come to university today do not even know the basics of ecology. This makes it difficult for students to gain a deeper understanding of complex processes and events in ecology, and has a negative impact on their development as full-fledged human beings with an ecological culture.

Environmental problems around the world were discussed at the first meeting of the Club of Rome, founded in Rome in 1972, which was attended by renowned mathematician, Professor Donella Medouz, with a lecture entitled "The Limits of Growth." In a context of limited land resources and the gradual depletion of natural resources, the author has set himself the goal of defining the limits of economic and demographic growth of human civilization. He used the data available so far to present the situation on Earth between 1900 and 2100 in the form of a computer model (Figure 1). The main purpose of the model was to mathematically calculate the state of the universe as it approaches the limits of growth and to find the optimal (stable) scenario of human development [1, p. 342].

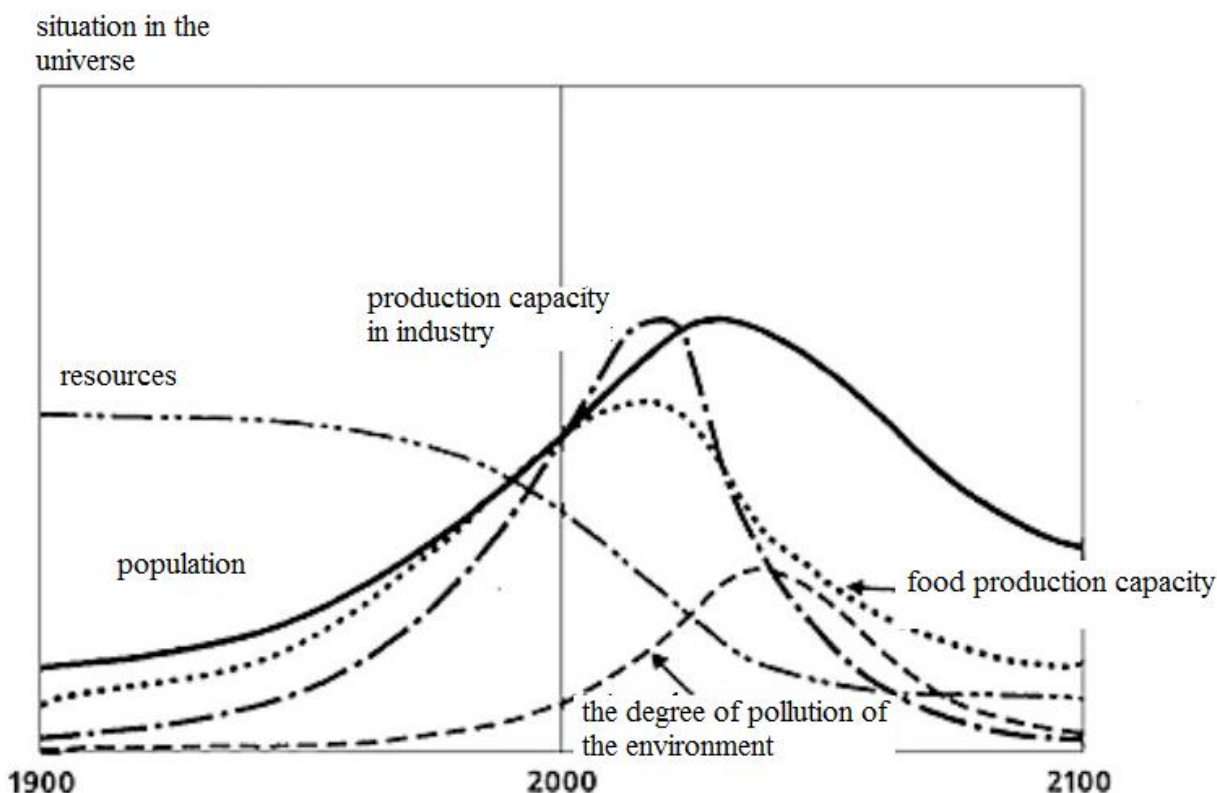


Figure 1. Situation in the world: 1. The level of environmental pollution. 2. Volume of industrial production. 3. Volume of food production. 4. Population. 5. Resources.

This picture shows that the decline in natural resources is accompanied by a decline in industrial and food production, as well as the level of environmental pollution. They, in turn, affect the

demographic situation, that is, there is a decrease in population. If we take into account climate change, global warming, we are once again convinced of the urgency of the problem under consideration. Due to the urgency of the problem, the United Nations has organized an annual International Summit on Climate Change in Paris. Given that the temperature has risen by 1 degree since 1850, the summit, with the participation of more than 190 countries, agreed not to raise the temperature above 2 degrees Celsius, to reduce the "greenhouse effect" and other issues. This is the world community's first agreement on a global climate that will usher in a new era. This is the world community's first agreement on a global climate that will usher in a new era. A lot of work is being done in our country in this area [2, p. 18].

At the present time, humanity is witnessing global environmental cataclysms (catastrophic events) in society and nature. For example, the depletion of the ozone layer, the melting of glaciers in the North and South Poles due to global warming, floods in many countries, earthquakes, hurricanes, forest fires, pollution of air and water bodies by toxic substances, drinking water declining, man-made disasters, and so on. Such events happened even a few 100-200 years ago. But the main cause of environmental disasters today is anthropogenic factors, i.e. people do not have a deep knowledge of the laws of nature. The low level of environmental culture leads to the emergence of negative attitudes towards the environment in humans. That is why today environmental education is one of the most pressing issues in the world. Article 4 of the Law of the Republic of Uzbekistan "On nature protection" entitled "Achieving nature protection goals": "In order to achieve the goals of nature protection, local authorities, ministries and departments, enterprises, institutions, organizations, farmers and cooperatives, as well as individuals in the implementation of economic, managerial and other activities must follow the following rules: ... all Mandatory teaching of ecology in educational institutions of this type ... "[3] Also, despite the fact that in accordance with the Resolution of the Cabinet of Ministers No. 466, a continuous environmental concept has been prepared and published, its requirements are poorly implemented. Therefore, the understanding of the majority of the population about environmental law, environmental issues, environmental education and upbringing is very low.

This, in turn, shows the need to integrate the mechanism of future environmental problems in the education system and develop modern forms and methods of teaching them to young people. Because environmental education is an important pedagogical problem, the future of mankind depends on how effectively this problem is solved. It is also important to ensure the continuity between the content of education as defined in the curriculum in the implementation of environmental education continuity.

The main goal of environmental education is to form a conscious attitude to all segments of the population, including schoolchildren, to the environment and its problems. To do this, all segments of the population must be educated at the level of state requirements for ecology, have sufficient skills and qualifications. Man has an ecological worldview that implies his involvement in the ecosystem, an understanding of the positive and negative effects of individual and collective consciousness on the environment:

- The formation of the content of knowledge that helps to realize the essence of natural processes, the responsibility of man for nature protection:
- Formation of public confidence in the need for practical action to prevent damage to nature, protection and preservation of the environment:



- It is necessary to cultivate environmental activism, to understand that the solution of environmental problems is a constant duty of man, and to ensure the active participation of everyone in it.

In order to inculcate environmental education in the human mind, it is necessary to introduce continuous environmental education in the following order: in the family → in preschool education → in schools → in academic lyceums and vocational colleges → in higher education → in the system of training and retraining → senior in the adult education system.

It is easy to implement continuous environmental education in secondary schools, AL and KHK. In this case, the formation of environmental awareness and culture of students is determined by the following factors:

-Secondary schools, schools and colleges are the main and most important link in the system of continuing education, which forms the general consciousness of man;

- Ecological education - the integration of different disciplines in the field of nature protection is a means of strengthening and expanding the scientific and practical relations of school disciplines;

- The content of general secondary education will be focused on the implementation of students' environmental skills;

- Curricula include practical skills development activities;

- The organization of an independent and extracurricular education system for students in the field of environmental protection, which develops non-traditional forms of education;

- Environmental classes are organized to better organize the work and leisure of students;

- Ecological clubs and associations of free-thinking youth will be established depending on the interests of students;

- public works will be organized. For example, conferences and performances should be organized.

The main task of man in the field of nature management is the implementation of environmentally sound measures, which is achieved through the establishment of a single system of continuous education for many years to protect the environment.

There are specific shortcomings in the implementation of environmental education in secondary schools. That is:

- Environmental education is recognized as part of general education;

- The scope of the content of the system of ecological knowledge, which students need to know step by step on the basis of state requirements, is not defined;

- Implementation of the system of environmental education is not provided with technical means;

- The work experience of advanced teachers and the work experience of advanced countries have not been studied, generalized and put into practice;

- The experience of our ancestors is not used, and so on.

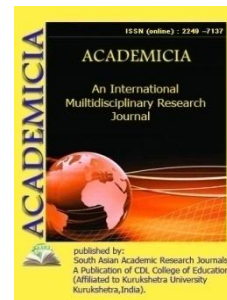
Difficulties in the organization of environmental education, the mass media, forms of environmental education and their levels of development are not always integral, that is, they have internal contradictions, and are manifested in the following:

- Lack of scientific and methodological coverage of the theoretical foundations of environmental issues in the disciplines;
- The knowledge of teachers in the field of ecology lags behind the practice of the general theory of ecology;
- Lack of textbooks and methodological literature on ecology for teachers of various disciplines;
- There is no special place for the widespread promotion of environmental education through the media;
- Lack of special author's courses for those interested in ecology; - the fact that our ecological values of the past, especially the exemplary ecosystems of Islamic teachings, have not been studied and put into practice; - Lack of study and generalization of the experience of advanced teachers, methodologists and scientists; - The experience of developed countries is not studied and used.

In short, in environmental education, our work will be effective if the natural resources, the number of people, eco-mobility, problems, "yesterday-today-tomorrow" are represented graphically, and students are provided with statistics. Because what awaits us tomorrow will not leave anyone and the reader indifferent. It is even possible to study environmental problems, environmental education, the development of the eco-consciousness of the population, express it in graphs, to study in advance the level of ecological consciousness of the population over the years and take the necessary measures.

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## THE INNOVATIONS IN EDUCATION: A WAY TO DEVELOP IN A GLOBAL CRISIS

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### ABSTRACT

*This article provides information on innovations in the education system and their use in development during the global crisis, as well as innovations in this area. We need people to run the systems. The human factor as a source of economic growth should be the basis of innovative technologies in education. In a multicultural society, the development of adaptive qualities of the individual becomes a strategic task of education. Confucius proved the central role of education in the evolution of society. Innovations in education should be the basis for the modernization of Russian society. Current development trends and the Bologna process focus on the leading role of information technology in the education system. Innovations are required where existing traditions no longer meet the needs of society. When it comes to the learning process, we are talking about shifting the focus from one knowledge-based personality to another.*

**KEYWORDS:** *Innovation, Teaching Technologies, Learning Process, Information And Communication Technologies, Improving The Learning Process, V.I. Andreev, I.P. Podlasy, Professor, Doctor Of Education K.K. Colin, Ph.D. Shapkin, V.D. Simonenko, V.A. Slastenin, Bologna, Carnegie Institution.*

### INTRODUCTION

Development is an integral part of any human activity. Man is constantly evolving through the accumulation of experience, ways of action, improvement of methods, expansion of mental abilities. The same process applies to any human activity, including pedagogical activity. At different stages of its development, society has always introduced new norms and labor requirements. This required the development of an education system. One of the tools of such development is innovative technologies, i.e. they are radically new methods of interaction

between teachers and students that ensure effective achievement of the results of pedagogical activity.

The problem of innovative technologies has been solved and is being solved by many talented scientists and teachers. Among them are V.I. Andreev, I.P. Podlasy, Professor, Doctor of Education K.K. Colin, Ph.D. Shapkin, V.D. Simonenko, V.A. Slastenin et al. All of them have made an invaluable contribution to the development of innovative processes in Russia.

Pedagogical innovations are carried out at the expense of the education system at its own expense (the path of rapid development), as well as by attracting additional opportunities (investments) - new tools, equipment, technology, capital investment, etc. can be increased. The combination of rapid and comprehensive development methods of pedagogical systems allows for the implementation of so-called "integrated innovations" practices built on a combination of different, multi-level pedagogical subsystems and their components. Integrated innovations, as a rule, do not take "external" measures, but are deliberately modified based on the deep needs and knowledge of the system. It is possible to increase the overall efficiency of the pedagogical system by strengthening the problems associated with the latest technologies.

The main directions and objects of innovative changes in pedagogy:

- Development of concepts and strategies for the development of education and educational institutions;
- Update the content of education, change and development of new technologies of teaching and learning;
- Improving the management system of educational institutions and the education system in general;
- Training and professional development of teachers;
- Development of new models of educational process;
- Ensuring the psychological and environmental safety of students, the development of health-saving educational technologies;
- Ensuring the success of teaching and learning, monitoring the learning process and student development;
- Creation of new generation textbooks and manuals, etc.

Innovation can be done at different levels. At the highest level are innovations that affect the entire pedagogical system. Advanced innovations occur on a scientific basis and help to move practice forward. A radically new and important direction in the field of pedagogy has emerged - the theory of innovations and innovation processes.

A distinctive feature of modern society is dynamism and modernization, so innovation is needed in all areas for sustainable development. This also applies to manufacturing, economics, and so on. Confucius proved the central role of education in the evolution of society. Innovations in education should be the basis for the modernization of Russian society. Current development trends and the Bologna process focus on the leading role of information technology in the education system. The predictions of the Carnegie Institution about a major technological

revolution in higher education in connection with the development of electronics and information and communication systems seem to be correct.

Understanding social processes allows us to conclude that the modernization of society contributes to innovations in culture, science and education. The rise of the human factor to the center of all scientific directions requires the modernization of the education system, the object of which is the individual. Innovations are required where existing traditions no longer meet the needs of society. When it comes to the learning process, we are talking about shifting the focus from one knowledge-based personality to another. At the present stage, due to the competitiveness of knowledge, the competence in acquiring new knowledge is becoming a strategic learning goal. Its formation is possible with the modernization of educational technologies.

The first concept of innovative technologies involves filling educational institutions with modern technical means and computer systems. Practice shows that the availability of information and communication technologies does not ensure the improvement and effective development of the learning process. Here the human factor predominates. We need people to run the systems. The human factor as a source of economic growth should be the basis of innovative technologies in education. In a multicultural society, the development of adaptive qualities of the individual becomes a strategic task of education. The economic instrument is no longer a decisive factor. A clearer factor is that man becomes a criterion for modernizing and modernizing society. The changing context of modern education is that it operates in a multicultural environment. Therefore, innovation trends are focused on the cultural content of modern education, so the socio-cultural direction of innovation is one of the important requirements of innovative development. Innovative technologies in education allow students to organize learning and direct it in the right direction.

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## HOW TO ASSESS IN TEACHING SPEAKING SKILL IN EFL CLASSES

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### ABSTRACT

*The article describes in detail importance of speaking skill among other skills as well as, key points of teaching speaking skill with the help of the method, Communicative Language Teaching. Therefore, the article contains examples of activities that can be successfully used in teaching communicative language. Also, based on the author's experience, some effective methods and recommendations for teaching a foreign language are given. All given methods and recommendations are covered step by step.*

**KEYWORDS:** *Communicative Language Teaching (CLT), Interviewing, Drawing-Based Discussion, Text-Based Discussion, Listening-Based Discussion, CEFR, Oral Assessment.*

### INTRODUCTION

Most English learners are primarily interested in the ability to speak. The only way to meet the requirement is to adopt a teaching method called Communicative Language Teaching (CLT), which allows students to learn the language and use it in everyday life for a variety of purposes. At present, experts generally agree that we do not learn a foreign language best with the help of grammatical translation (more on the website: <https://teachplanet.ru>). We learn by choosing language, communicating and focusing on form. That is why it is very important to learn the language in different situations. There are various ways to test students' speech ability, such as reading aloud, interviewing, drawing-based discussion, text-based discussion, discussion, listening-based discussion, or presenting controversial questions to students for discussion in pairs. Regardless of which type you use, there is one important thing to remember - the assessment must follow pre-agreed headings. The document will provide an overview of a number of possible ways to help students improve their speaking skills, and will discuss effective ways to use the rubric and how to make the oral assessment as objective as possible.

The second part of the XX century is marked as the development of the communicative paradigm in linguistics. The approach has influenced almost all humanities, including teaching and didactics. The purpose of the training has become communicative; There is ample evidence that a good command of English grammar, vocabulary and syntax does not necessarily mean a good command of the English language. In other words, the new approach - teaching the language of communication - focuses on language acquisition in real-life situations, rather than on knowledge of the language system. Consequently, the learning process becomes student-centered; student as a participant in the interactive process. Developing the concept of communicative language teaching proved to be a lengthy and difficult process as it highlighted issues in which traditional teaching had never shown interest.

### **MAIN FINDINGS AND RESULTS**

In 2001, the Council of Europe introduced a unified European system of reference to languages: learning, teaching, assessment (CEFR) in Georgia. Its main goal was to provide a teaching, teaching and assessment method that will enable students to effectively use the language both in public life and for professional purposes. In November 2001, a Council Resolution of the European Union recommended the use of CEFR to establish language proficiency testing systems. Georgia, as part of Europe, has adopted the rules. Thus, teaching began to be directed towards its use in everyday life, the approach and teaching methods also changed. One of the positive results of the new approach to teaching is a student who will be able to think independently in a foreign language, critically assess and discuss the issues under consideration. This will fill the society with people capable of contributing to the development of society.

Language competence goes beyond the ability to have even a deep knowledge of the language system. This means the ability to put your knowledge into practice and learn to read, write, listen and speak the language. The communication needs of a language learner are a familiar aspect of language learning. In recent years, an urgent problem in applied linguistics has been describing how language is used for communication and demonstrating how the curriculum and methods used in teaching reflect the communicative nature of language. Therefore, it is very important to develop a clear overall plan of action for teaching and assessing the speech abilities of your students. We must remember that testing evaluates the validity of the content, whether it is fit for purpose, and whether the methods are appropriate for conveying content and achieving goals. A communicative approach to language testing emphasizes the importance of the meaning of statements, rather than their form and structure. The success of a communication test is assessed in terms of the effectiveness of communication that takes place, rather than formal linguistic accuracy.

There are many different assessment methods used in higher education. When deciding which assessment method to use, both learning outcomes and learning activities need to be considered in order to use the appropriate assessment methods. The oral exam is a classic and rewarding type of examination that serves as a source of learning for many students, especially when constructively prepared and incorporated into teaching and learning objectives. The oral examination depends largely on the conscious efforts of the examiner, both in terms of learning objectives and the technique of the exam interview. This means that additional training is required for examiners to maintain the oral exam and increase its reliability. The oral exam is under pressure. Thus, there are many arguments in favor of giving oral examinations to students

as they are difficult to design and difficult to follow testing principles such as validity, reliability, simplicity, fairness, and objectivity. Oral assessment is very time consuming. The teacher should incorporate oral assessment into teaching practice during the lesson. In other words, the teacher must teach students to think aloud.

Teaching and testing English speaking skills is one of the most important aspects of teaching and testing a language. Long-term questions about which is more important - accuracy or fluency when teaching and testing speech skills remain largely unanswered. Very often people can reproduce almost all sounds correctly and make very few grammatical mistakes, but still cannot communicate. On the other hand, people can make many mistakes in both phonology and grammar and still succeed in expressing themselves quite clearly. As we can see, there are various factors to consider when testing oral products, but one important thing to remember first is that we need to teach them before testing.

Currently, a modern approach to teaching, in other words, teaching the communicative language (CLT), is the only way to meet the requirements and allows most students to practice speaking in the classroom and use it in everyday life for various purposes. The communicative approach is the result of dissatisfaction with the audio-linguistic and grammatical methods of translating foreign languages. It has become clearer that students can accurately formulate sentences in the lesson, but cannot use them outside the classroom. Currently, experts generally agree that we do not learn a foreign language best through grammatical translation. We learn by choosing language, communicating, communicating and focusing on form. This is why it is very important to learn the language in different situations. In the communication class, students are taught to use a new, untrained language both productively (orally or in writing) and receptively (listening and reading). The structure of a language reflects its functional and communicative use, and it is more than just sentences. In other words, it is very important to learn the language using communication functions. Function is the reason why we communicate. Every time we speak, we do it for the purpose of a function. Since the main goal of our students is to be able to speak, we must help them understand that the language changes depending on the situation. This is important to emphasize because in CLT lessons, students will have different roles to play and they should be aware that there are two things to consider when choosing the appropriate language for a function. That is - the context (situation, place) and the relationship between speaker and listener. While many features can be attributed to specific metrics (Why don't you ... - give advice; could you?- polite request, etc.), the context in which a particular metric is used can also be critical. For example, "Could you turn off the lights?" - it can be a polite request when used between colleagues, but an order if the boss is talking to a subordinate. Experts believe that teaching functions will help the student to master a language that is completely different from language learning. Traditional language teaching has never emphasized these things.

The relationship between language and language learner is a key issue not only in teaching methodology but also in applied linguistics. The task of these disciplines is to study and describe how a language is learned and how the language is used in real communication. Expert educators are also interested in ensuring that the language curriculum as well as teaching methods are designed to support the teaching / learning process and enable language learners to speak the language. Communication does not necessarily use correct grammar. For example, if a child says

no when he / she is invited to eat, the mother knows the child is not hungry. In other words, it is not always necessary to use a grammatically correct sentence to understand or be understood.

### CONCLUSION AND RECOMMENDATION

According to the above discussion, it can be said that language acquisition is a subconscious process that causes the practical use of language; language learning, on the other hand, is a conscious attempt to understand the grammatical and lexical forms of a language.

Communicative language teaching is the best way to help your students master the language and learn to speak. We can agree with Chomsky, who shares competence and productivity; he describes "competence" as an idealized ability, which is defined as a psychological or mental property or function, and "performance" as the creation of factual statements. In short, competence involves "knowing" a language, and performance is "doing" something with the language. The complexity of this design is that it is very difficult to assess competence without assessing performance. As we have learned, competence and performance are about "knowing" and "doing". In recent years, many language training programs have focused more on the "knowledge" (competence) part of language learning, where words and sentences are presented and applied in a way that best helps learners learn forms. When trained to learn a language through "knowledge," students have difficulty changing course of study and actually "do" something with the language. In short, it is difficult to assess whether poor student proficiency is due to limited competence or poor academic performance. For example, if a slender person says, "He goes to school every day," does that mean that he / she does not know how to pronounce the third person singular verb, or has little practice of writing his / her own sentences.

A more communicative approach to teaching should be used to focus students more on the "teaching" part of learning, which allows for more accurate measurement of language proficiency. This type of approach focuses on getting students to do something with the language. By encouraging students to gradually "learn in the language" rather than rigorously learn the language, we place more emphasis on both competence and academic performance. It is proven that very often a language learner can make grammatically correct sentences in the lesson, but it is very difficult for them to use the language outside the lesson if he / she does not practice speaking in the lesson.

Communication competence is the ability to adapt to the importance of having a message and interpreting the information received. Moreover, it is closely related to context and situations, because people can be competent in some situations and not in others.

The article contains examples of activities that can be successfully used in teaching communicative language. We fully agree with the idea that language is a system that is used to convey ideas. We must not forget that the main function of language is interaction and communication. The structure of the language is designed in such a way as to reveal its functional and communicative nature. A language can be taught in a lesson, but language acquisition can only occur in real or simulated "real" situations.

One of the problems that language teachers usually face is the issue of assessment. How can you rate oral production? The first step in developing a performance assessment is the selection of criteria. Students should know the assessment criteria in advance so that they understand what they are being asked about and why, and take care of achieving their goals.

Collaborative learning activities that enable students to use spoken language to interact with others (social or academic functions) are optimal for assessing spoken language. Teachers should remember that “Oral assessment is a direct means of assessing student learning outcomes through questioning. Unlike interviews, which usually have a structured list of questions, an oral assessment usually does not have a structured list of questions; Evaluators ask questions and ask for answers as appropriate. They measure the knowledge and skills acquired by the student during their studies. In other words, the oral assessment assesses students' academic performance as well as their language proficiency.

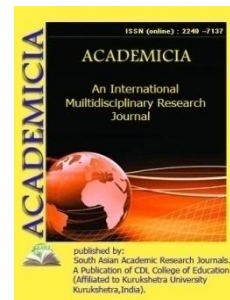
Assessment criteria vary depending on the specifics of the course. This can be a written assignment, test, experiment, etc. In our case, the main focus should be on the ability of students to develop their own language in different situations. What are the basic requirements for an oral assessment? These are credibility, reliability, fairness, evaluation and evaluation and, finally, preparation of students for oral evaluation.

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## **EFFECT OF ORGANOMINERAL SUPPLEMENTS ON SOIL SALINITY AND COTTON YIELD**

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### **ABSTRACT**

*At present research article, described data on the conducted experiments under the medium saline soil bold serozem like soils of Surkhandarya region, where it was observed that, the decreasing of toxic soils content for 10,3-11,1% in the soil tillage horizon but , increasing of cotton yield for 4.7 c / ha. This means that the dry residue and chlorine ion decreased by 10.3-11.1% compared to the almost close control of the saline-washed variant. According to the data obtained, the accumulation of salts in the driving layer of the soil was observed to increase in all variants from the beginning of the application period to the end of the season.*

**KEYWORDS:** *Agro Ore, Bentonite, Organ Mineral Compost, Volume Mass, Dry Residue, Chloride Ion, Macrostructure, Soil Reclamation, Ameliorants, Salinization, Organic Fertilizers, Fertility, Agrophysics, Cotton, Yield.*

## INTRODUCTION

In Surkhandarya region, the southernmost region of Uzbekistan, the reclamation of degraded saline soils, as well as the prevention of salinization, desalination, introduction of water and resource-saving agro-technologies, the development of new modern agro-technologies to ensure adequate yields of agricultural crops in saline soils. is one of the current issues.

The effects of application of organomineral composts based on non-traditional agro-ores and various local fertilizers as ameliorants in moderately saline loamy soils at different rates on soil salinity and cotton yield have not been studied much. Umid 1- tor k 2 uy 23 hon

Academician K. Mirzajonov noted that different levels of soil salinity sharply reduce the coefficient of seasonal use of mineral fertilizers by plants. [1] M.A. Belousov found that in saline soils, the absorption of nitrogen by plants is different, when the chloride ion in the soil is 0.04%, the resulting elements absorb nitrogen as the least chlorinated ammonium. [3] In order to reduce harmful salts in the soil, professors M.Khamidov, U.Juraev and K.Khamraev planted white corn (sorgo) phytomeliorant on saline soils in saline soils in the conditions of water shortage, the amount of water used for saline washing in autumn proved to have decreased by 2392 m<sup>3</sup> / ha

## METHODOLOGY

The experiment was conducted in 4 variants, under moderately saline loamy soils. Methodological manuals "Methods of conducting field experiments" UCSRI (2007), "Methods of agrophysical research" for agrophysical analysis were used.

In this research, the effect of the use of non-traditional agro-ores and composts based on them as ameliorants in the conditions of moderately saline loamy soils on soil salinity and cotton yield was studied.

When determining the effect of the use of compost ameliorants on the change in soil volume mass during the season, in the first variant, which was carried out by simple saline leaching, in the 0-30 and 30-50 cm layer of soil the volume mass was 1.35 and 1.38 g / cm<sup>3</sup>, as ameliorant 40 t /. In the second variant, where river mud was applied, this figure was 1.34-1.36 g / cm<sup>3</sup>.

In the experiment, it was found that in the fourth variant, where 21.0 t of compost was applied per hectare (15.0 t of semi-rotten cattle manure + 6.0 t based on bentonite), the soil volume mass was 0.02-0.03 g / cm<sup>3</sup> less than in the first and second variants.

Changes in the amount of macro aggregates in the soil under the influence of additional nutrients were detected by the method of N.I. Savinov before the application of composts and after reclamation measures in layers of 0-10, 10-20, 20-30, 30-40 and 40-50 cm.

Under the influence of compost applied in moderately saline loamy soil, the amount of macro aggregates in the driving layer changed, and the amount of agronomical useful macro aggregates from 0.25 mm to 10 mm in the 0-50 cm layer of soil was 60.03% in the case of 21.0 t of compost ( Table 1).

**TABLE 1 THE EFFECT OF SUPPLEMENTATION ON CHANGES IN THE AMOUNT OF AGRONOMICALLY USEFUL MACRO AGGREGATES, %**

Soil layer, cm	Variants			
	Control	Salted washed	10.0 t of bentonite mud	21.0 t compost based on cattle manure and bentonite
0-10	55.31	56.32	56.45	59.76
10-20	53.11	55.76	54.83	58.69
20-30	53.25	54.22	52.46	60.03
30-40	51.03	52.16	48.96	53.39
40-50	45.88	47.56	46.67	49.33

The aim of the study was to determine the effect of composts on the change of harmful salts in the conditions of moderately saline loamy soils. In particular, in Surkhandarya region, the average salinity of lands is 47.6 thousand / ha (17.0%). National Report on Land Resources, Kuziev [2]. In the initial period of the experiment, the dry residue in the 0-50 cm layer of soil was 0.541%, chlorine ion 0.045% and in the 50-100 cm layer, this figure was 0.547-0.048%, in the first case 4000-4500 m<sup>3</sup> of water was used and the dry residue was 0.473%. Chlorine ion was 0.034%. The most optimal effect of non-traditional organomineral compost ameliorants is when applied at 21.0 t / ha, 0-50; in the 50-100 cm soil layer, the dry residue and chlorine ion did not exceed 0.476-0.035 and 0.501-0.036%. This means that the dry residue and chlorine ion decreased by 10.3-11.1% compared to the almost close control of the saline-washed variant. According to the data obtained, the accumulation of salts in the driving layer of the soil was observed to increase in all variants from the beginning of the application period to the end of the season.

It was found that seasonal water during the growing season caused at least partial leaching of salts from the drive layer of the soil, but at the end of the application period, as a result of mineralization of groundwater and intensification of their capillary rise, slightly harmful salts accumulated in the drive and subsoil layers. In the experiment, it was observed that even in the variant where 21.0 t / ha compost was applied, the amount of accumulation of harmful salts in the soil layers at the end of the season was lower than in the control and other options. The applied compost ameliorants, along with the adsorption (absorption) of anions and cations of water-soluble salts, resulted in a decrease in the amount and effect of harmful salts in the soil layers due to coagulation of insoluble salts (Table 2).

**TABLE 2 THE AMOUNT OF SALTS IN THE SOIL LAYERS OF ORGANIC SUPPLEMENTS EFFECT ON CHANGE, %**

Variant	General salinity condition			
	0-50 cm		50-100 cm	
	Dry residue	Cl	Dry residue	Cl
The brine is not washed (control)	0,541	0,045	0,547	0,048
Salted washed	0,473	0,034	0,507	0,039
10.0 t of bentonite mud was used	0,501	0,037	0,512	0,039

21.0 t / ha compost	0,476	0,035	0,501	0,036
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In the research work, organomineral compost ameliorants used against the background of mineral fertilizers reduced by 15-20% during the season had a positive effect on the growth, development, harvest of cotton on soil fertility and reclamation status as both ameliorants and additional nutrients.

The maximum weight of cotton in terms of harvest was 21.0 t / ha in the variant used as compost ameliorant, 34.2 c / ha, and 3.8 c / ha in the normally saline version, 6.2 c / ha in the control was found to be superior (Table 3).

**TABLE 3 EFFECT OF ADDITIONAL NUTRIENTS ON COTTON YIELD, C / HA**

Variant	Picking			Productivity, s / ha
	1	2	3	
Unsalt washed (control)	24,2	3,3	0,5	28,0
Saline washed option	26,4	3,4	0,6	30,4
10.0t of bentonite mud was used	27,0	3,9	1,1	32,0
21.0 t / ha compost-ameliorant was used (6.0 t bentonite mud + 15.0 t based on cattle manure)	28,9	4,1	1,2	34,2

NSR<sub>05</sub> = 1.3 s / ha

NSR<sub>05</sub> = 2.8%

Based on the data obtained, it can be concluded that the use of local manure-based organomineral composts as ameliorants in moderately saline loamy soils has been shown to improve soil reclamation, increase cotton yields, and improve soil reclamation.

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## PHENOTYPICAL VARIABILITY OF COTTON BUSH DEPENDING ON THE LEVEL OF APPLIED AGROTECHNICS

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### ABSTRACT

*The article presents long-term studies carried out in the conditions of the Fergana region in typical serozem soils for cotton varieties Sultan, Namangan-77, Bukhara-6. Studies have shown that an increase in the level of agricultural technology led to a phenotypic change in the root and synthetic activity of all types of cotton roots. More powerful roots were formed in plants cut out at a high level of agricultural technology using the achievements of science and advanced experience.*

**KEYWORDS:** *Phenotypic Variability, Fruit Organs, Sap Extraction, Diversity Of Bushes, Biomorphological Differences.*

## INTRODUCTION

Cotton fiber ranks first among the fibers of other industrial crops. By its nature, it is very versatile and cannot be completely replaced by man-made fiber. Cotton fiber products are used in various industries: clothing and technical fabrics, knitwear, thread, cotton wool and other materials are produced from it. Cotton seeds, after removing the fiber, are used as sowing material, as well as processed to obtain edible oil.

The production of high yielding cotton varieties with high fiber quality that would meet the requirements of mechanized processing and harvesting of raw cotton is a complex process that uses a variety of methods, ultimately relying on mutation, crossbreeding and artificial selection.

After the stage of analytical selection of cotton, the era of synthetic selection began. It is based on selection in the presence of combinative variability, which arises as a result of crossing deliberately selected parental forms. This stage is associated with the development of methods for hybridization of distant ecological-geographic races, stepwise hybridization and distant hybridization. Breeding at this stage gave remarkable results - promising varieties of cotton have been created, which currently occupy the first place in terms of their specific weight in production crops.

### Main part

We studied the cotton varieties Sultan, Namangan -77, Bukhoro-6 in the Fergana region on typical sierozem soils. As a result of the studies, it was found that with better cultivation to the optimal regime, a proportional increase in the growth of roots, leaves and fruit organs of cotton occurs, regardless of the varietal characteristics of cotton.

As can be seen from the data, in the case of applying the achievements of science and advanced experience, the entire system — leaf — branches — developed maximally in comparison with conventional agricultural technology. Corresponding to the development of the organs of cotton, the discharge from each bush was reduced, which was accompanied by an increase in the total content of carbohydrates in the plants.

**TABLE 1. MORPHOLOGICAL STRUCTURE OF A COTTON BUSH IN THE RIPENING PHASE UNDER GROWING CONDITIONS**

№	Cotton variety	Number			Carbohydrate content, %		
		leaves	branches	Lateral roots of the first order	Soluble	Carpal	General
1	Sultan	50,0	12,3	25,4	2,002	8,010	10,012
	Namangan-77	53,8	13,6	27,8	2,080	8,125	10,205
	Bukhara-6	50,2	14,1	28,2	2,184	8,220	10,404
2	Sultan	54,4	13,6	31,4	2,130	9,008	11,138
	Namangan-77	59,2	14,7	31,3	2,125	9,105	11,240
	Bukhara-6	53,0	15,0	35,0	2,200	9,275	11,475
3	Sultan	55,3	15,9	35,0	2,389		
	Namangan-77	63,1	16,7	35,0		11,920	14,309
	Namangan-77	63,1	16,7	35,0			14,480



					2,475	12,005	
	Bukhara-6	57,2	17,5	37,2	2,488	12,100	14,588

For example, in the first variant of soluble sugars by grade ranged from 2.080 to 2.184%, while in the third variant, respectively, grades ranged from 2.475 to 2.488%.

It is known that on cotton fields there are different types of bushes, the yield of which is different. In most cases, an average of 30-35 g of cheese is collected from a bush, which is significantly less than in the experiments and practice of advanced farms.

### MATERIAL METHOD

Given the strong phenotypic variation in the structure of the cotton bush in crops, we conditionally divided them into five groups: 1-group - bushes with at least 15 bolls, 2- at least 10, 3- at least 5.4- at least 3 and 5 groups a - those bushes that did not have bolls, and the next year they tested for offspring, choosing from each group 100 plants.

Table 2.

№	Cotton variety	2017					2018			
		Groups of plants by type %					Productivity by types of plants, kg / ha			
			I	II	IV	V	I	II	III	the average
I	Sultan	23	0	24	26	7	31.0	30.0	25.9	28.9
	Namangan-77	23	0	25	27	5	32.4	31.5	27.4	30.5
	Bukhara-6	24	1	27	22	6	33.0	32.0	26.3	30.4
II	Sultan	24	3	27	22	6	32.3	31.2	27.0	30.2
	Namangan-77	25	3	23	25	4	34.5	33.1	28.4	32.0
	Bukhara-6	25	2	25	24	3	35.9	34.5	27.6	32.7
I	Sultan	26	8	25	19	3	42.3	40.2	27.1	36.5
	Namangan-77	27	9	25	19	-	45.4	45.0	28.4	39.6
	Bukhara-6	28	1	25	16	-	47.6	46.2	29.1	41.0

Given the strong phenotypic variation in the structure of the cotton bush in crops, we conditionally divided them into five groups: 1-group - bushes with at least 15 bolls, 2- at least 10, 3- at least 5.4- at least 3 and 5 groups a - those bushes that did not have bolls, and the next year they tested for offspring, choosing from each group 100 plants.

As can be seen from Table 2, in the variants of conventional agrotechnics, the percentage of plants of groups 1-2 was the smallest -43-45%, while in the variants of the complex of advanced agrotechnical plants of these groups were 54-55%. The number of plants belonging to group 3 was almost the same in all agricultural backgrounds. In the second year, plants from seeds; selected from 1-3 groups, sharply differed in yield. In the offspring, the highest yield was obtained in plants of group 1.

Studies have shown that plants of even one group, depending on the level of agricultural technology used, exhibit different productivity. The difference between the plants of the variants of conventional agricultural technology and the variants of complex advanced agricultural technology was respectively 10.3, 13.4 and 14.2 c / ha varieties. ( table 2)

Biomorphological different bushes and cotton productivity depending on bushes when grown in different agro-backgrounds. Consequently, by improving the quality of seeds, cotton productivity can be significantly increased, for which it is necessary to apply the achievements of science and best practices.

The development of the root system is largely determined by the agrotechnical conditions of its cultivation. The use of a complex of advanced agricultural practices with a plant placement scheme 90x13-I provides the best conditions for the development of the root system. When using a complex of advanced agricultural practices, the smallest depth of 4.8 cm was established for the lateral root of the first order, the greatest thickness of the main root was 13.9 mm at the root collar and the maximum number of lateral roots was 73.3 pcs.

**TABLE 3 COTTONROOT SYSTEM HEALTH**

№	Cotton variety	Allocated, ml	Root volume, cm <sup>3</sup>	Content in sap, mg per 100 ml		
				Nitrogen	Phosphorus	Potassium
I	Sultan	6.8	21.6	18.4	20.6	17.4
	Namangan-77	7.2	22.3	19.1	21.4	18.3
	Bukhara-6	7.0	21.9	20.2	24.0	18.4
II	Sultan	7.2	23.4	20.1	22.4	19.2
	Namangan-77	7.6	24.4	22.1	24.4	20.0
	Bukhara-6	7.4	24.6	23.1	26.4	20.0
III	Sultan	7.9	27.1	23.6	25.6	21.1
	Namangan-77	8.2	27.9	24.1	28.6	22.1
	Bukhara-6	8.5	28.0	25.0	27.0	21.9

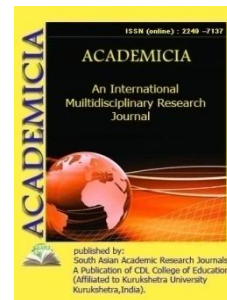
## CONCLUSION

Studies have shown that an increase in the level of agricultural technology led to a phenotypic change in the root and synthetic activity of all types of cotton roots. More powerful roots were formed in plants that were cut out at a high level of agricultural technology using the achievements of science and advanced experience: in this variant, the volume of roots of one plant was 27.1, 28 cm<sup>3</sup>, while on the control 21.6-22 cm<sup>3</sup> the release of sap in 4 hours was 7.9-8.5 and 6.8-7.2 ml. The larger the volume of the roots, the larger the volume of the roots, the

more sap is released, which significantly increases the absorption of nutrients from the soil, improves the growth, development of plants and increases the yield of cotton.

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## **STREET CHILDREN: AN EXPLORATION FROM THE STREETS OF GHAZIABAD**

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### **ABSTRACT**

*Rapid urbanization has resulted in the phenomenon of 'street children' which is one of the several categories of 'urban deprived children'. They are socially excluded and most marginal categories of children across the world, every year thousands of children are pushed to the streets due to several factors but this phenomenon is prevalent more in developing economies. This study investigates the socio-economic life and health issues of children working on the streets of Ghaziabad city, Uttar Pradesh. The Primary data has been used which was collected through a field survey of 50 children found working on the streets. Key findings were- majority of street children were Hindus, a large proportion started working at a very small age, half of them were engaged in street- vending, majority had family ties and were living in slums, and they were facing several health issues.*

**KEYWORDS:** Children, Ghaziabad, India, Street, Urban.

### **INTRODUCTION**

In the absence of any consensus on the meaning and definition of the term 'street children', different terms are used synonymously for it such as- 'abandoned children', 'homeless children', 'children in difficult circumstances', 'vulnerable children' along with few others also. The most cited definition of 'street child' has been framed by UNICEF. It divides street children among two categories, first is the 'children of the street' who have no or severed family ties and they survive on the streets completely on their own and second is the 'children on the street' who work on the streets but return to their families at night. 'Street children' is used for all those children for whom the street is a reference point and plays a central role in their lives (Rana,

2019). They are pushed to the streets due to poor conditions of their families and abusive family members. They supplement their family incomes with their trivial earnings which they earn by defying all the odds of the street life. On the streets they are engaged in pick-pocketing, begging, working on fruit stalls, cleaning cars, shoe shining and selling rubbish (Flintoff 2011).

The sight depicted above is very common in cities of any developing economies including India. Street children phenomenon is the outcome of today's complex urban lives and it needs immediate attention of policy makers. In the mid 1990s, WHO and UNICEF estimated the number of street children to be 100 million across the globe (Defence for Children International, 2005). Another estimate by a Geneva based NGO puts the figure at 120 million globally out of which 30 million in Africa, 30 million in Asia, and 60 million in South America. In India there number is estimated at over 2 million (Kanti, 2018). However, figures provided by different agencies create discrepancies in the gross estimates of children on the streets globally and in the developing nations (Ennew, 1986). 90% of street children in India have regular ties with their families and they come to street for work, remaining 10% have severed ties and they are abandoned or neglected (Nigam, 1994).

This study has been conducted to investigate the socio-economic profile of children on the streets of Ghaziabad city, their work profile and the health hazards they face.

### **Research objectives and Research hypothesis**

This study was conducted with the objectives to-

- 1- Know the socio-economic profile of a child in street situation.
- 2- Study the issues related with health and maltreatment encountered by street children.

Following hypothesis were framed for the study-

Research hypothesis 1: There is significant association between "age of child" and "ill-treatment" with the children.

Research hypothesis 2: There is significant association between "gender" of the child and the "ill-treatment" he/she suffers.

### **RESEARCH METHODOLOGY**

Following research methodology was used for conducting the research-

**Research method-** It was a cross sectional study. Field investigation was conducted by the researcher from 12<sup>th</sup> November 2019 to 12<sup>th</sup> January 2020.

**Respondent Characteristics and inclusion criteria-** This study employs UNICEF definition of 'street children'. Children within age group of 5-18 years, found roaming/working at religious places, surroundings of railways, bus stops and market places constituted the respondents of this study. Those children who were found intoxicated were excluded from the study.

**Sampling method and sample size-** Sampling frames of street children are not available, so researchers relied on snowball and convenience sampling for selecting child for investigation. At the time of taking the interview all the subjects were found on the streets. Few of them were either roaming on the streets, while majority of them were engaged in economic activities. Study was conducted on 50 street children.

**Sampling region-** Field investigation was conducted in Ghaziabad city, Uttar Pradesh. Ghaziabad city comes under Ghaziabad Metropolitan Region. Areas from where the street children were selected for interview were- Pacific mall, Ghaziabad-Delhi border, Ghaziabad railway station, Old bus stand and Hapur chung. According to Census 2011, population of Ghaziabad city was around 16.48 lakhs with literacy rate of 84.78% and sex ratio of 885. Hinduism is the religion of majority in Ghaziabad, followed by Islam. 20.26% of the total Ghaziabad population resides in slums.

**Data collection tool-** A schedule was used for collecting the data and questions were explained to the children by the field investigators.

**Data entry and analysis tool-** SPSS-16.0 software was used for organizing, entering and analyzing data.

### Findings

Following sections summarize the findings of the study.

#### Demographic Profile of the street children

Pie chart below depicts the age-wise distribution of the street children. Majority of the children belonged to the age group of 9-12(42%) followed by 5-8(28%). Mean age of the street children was 10.44 years with the range of 5 and 17 years and a standard deviation of 3.2 years. Study also revealed that majority (88%) of the children was males, 70 % were Hindus, and 30 % belonged to the Muslim community. All the children were found to have regular family ties and they were working on the streets to supplement their families' income.

#### Family situation of the street children

Out of the total sample, Fathers of 12% were not alive, mothers of 4% were not alive, giving a total of 16% with single parent. 2% revealed that he had no parents. Out of the total sample, 84% reported to be living in a family headed by father and 16% belonged to mother headed families.

#### Engagement in economic activities

All the street children were found to be engaged in some work. The mean age at which they started working was found to be 8 years. According to the Child Labour (Prohibition and Regulation) Act, 1986, amended in 2016, children between the age of 14 and 18 are adolescents and only the adolescents are allowed in the employment that too not in the listed hazardous occupations and processes. It is alarming to note that in spite of existence of such stringent laws which forbid the employment of children, children are pushed to work. Sample of this research study reveal that children had to start work at very tender ages. The following 'less than cumulative frequency curve' shows the distribution of ages at which a specific population of the street children had started working.

**TABLE- 01 LESS THAN CUMULATIVE PERCENTAGE FOR THE AGE AT WHICH CHILDREN STARTED TO WORK**

Age of child when he/she started work	Cumulative %
5	12
6	18
7	30



8	40
9	60
10	90
11	100

Source: field data

54% of children did the work on daily basis while 34% and 12% do it on seasonal and occasional basis.

### **Type of economic activities**

Majority of children (50%) were involved in street vending; they sold petty items mostly- small toys, ballons and key chains. 24% were engaged in begging, 10% were found to be working in dhabas(road side eatries), 6% were rag pickers, 4% were occasional shoe-shiners, 6% along with some family member were dealing in door to door purchase of household junks

### **Reasons for working**

Supplementing the household income (60%), extreme poverty (18%) and abuse in family were (22%) the commonly cited reasons by them that pushed them to come and work on the streets.

### **Nature of street children earnings for doing work**

It was found that 66% children were receiving their earnings in cash directly paid to them, 10% which included majority of the children working in dhaba (road side eatery) were getting earnings in cash and food, in case of 24% earnings of children were received by parents . It was also found that their average monthly earnings were Rs. 1922 with a range of 1184 to 2664.

### **Expenditure of earnings by street children**

Multiple responses were reported for the expenditure items. Among those children who themselves were receiving earnings 64% responded 'yes' to the question "do you spend money on purchasing some food item"? 66% responded 'yes' to the question "did you give away your money to others"? 12% responded 'yes' to the question "did you spend money on community services"?

### **Condition of housing and access to basic utilities**

Out of total sample 24% were staying in a family owned or rented house, 76% were slum dwellers or living in clusters under flyovers. Only 4% respondents were found to be living in habitations where all the basic utilities water, toilet and electricity were available. 18% were living in the conditions lacking all the basic amenities. Remaining respondents were either deficient of one or two of the utilities. Detailed bifurcation is presented in the following table.

**TABLE-02 AVAILABILITY UTILITIES AT PLACES OF HABITATION**

Utilities	Percent
Toilet, water and electricity	4.0
Toilet and water	8.0
Electricity only	2.0

Water only	40.0
water and electricity	28.0
None	18.0
Total	100.0

Source: field data

### Health issues of street children

Due to their living and working conditions street children are exposed to several health problems. Figures revealed that during the last six months (from the date of interview), 20% children suffered injuries and 56% suffered from sickness. Detailed picture is shown below.

**TABLE-03 CROSS TABULATION OF INJURY AND SICKNESS ENCOUNTERED BY STREET CHILDREN**

		Any sickness in the last six months?		Total
		Yes	No	
Any injury in the last six months?	Yes	6%	14%	20%
	No	48%	32%	80%
	Total	56%	44%	100%

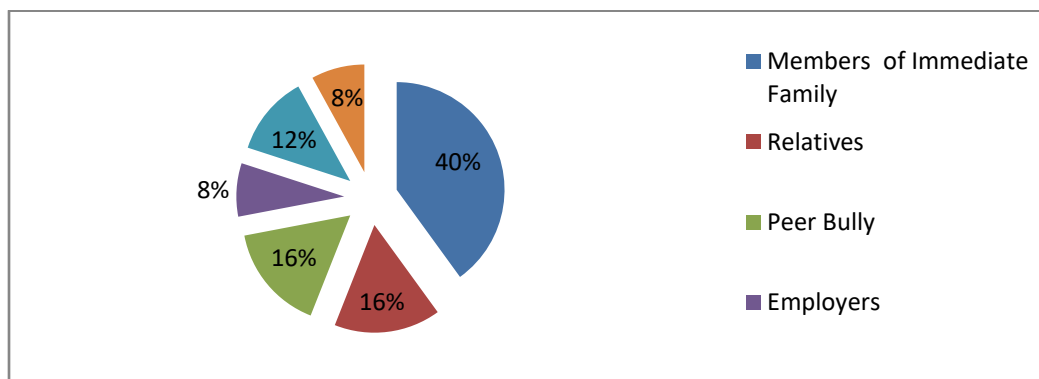
Source: field data

Symptoms of malnourishment, under-weight, stunting and skin infections were visible in children. Unhygienic living and working environment, malnutrition, no or limited access to medical care are the factors which are associated with malnourishment and health problems found in street children.

### Maltreatment

On the streets, street children are unsupervised by any responsible adult, which expose them to several ill-treatments. Following pie-chart shows that they are mostly ill treated by their immediate family members.

**Figure-01 Persons ill-treating street children**



Source: Field data

Following hypothesis was framed and Chi-square test was applied to determine any association between “age of the child” and “ill-treatment” child suffers.

Research hypothesis: There is significant association between “age of the child ” and “ill-treatment” with the children.

Findings: Since  $p \text{ value} = 0.526 > \alpha = 0.05$  so null hypothesis cannot be rejected and there is a failure to find any significant association between “age” and “ill-treatment” with the child so it may be concluded that children of all the age groups were equally exposed to ill-treatment.

#### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.960 <sup>a</sup>	18	.526
Likelihood Ratio	18.657	18	.413
Linear-by-Linear Association	1.806	1	.179
N of Valid Cases	50		

a. 28 cells (100.0%) have expected count less than 5. The minimum expected count is .42.

Any significant association between the “gender” of the child and the “ill-treatment” was also determined by framing the following research hypothesis and applying chi-square test to test it.

Research hypothesis: There is significant association between “gender” of the child and the “ill-treatment” child suffers.

Findings: Since  $p \text{ value} = 0.378 > \alpha = 0.05$  so null hypothesis could not be rejected and it may be concluded that street children of both the genders were equally exposed to ill-treatment.

#### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.417 <sup>a</sup>	6	.378
Likelihood Ratio	7.756	6	.257
Linear-by-Linear Association	.418	1	.518
N of Valid Cases	50		

a. 9 cells (64.3%) have expected count less than 5. The minimum expected count is .36.

## CONCLUSION

This study presented the socio-economic and demographic profile of Ghaziabad street children, work they are engaged in and their health problems. Phenomenon of street children in cities of India is an alarming and escalating phenomenon and in coming times may become a serious challenge due to increasing population and rapid urbanization. Immediate attention of policy makers is required to bring these children back into the regular system and to prevent street children phenomenon to become a huge concern of child protection and child rights. Street children phenomenon can be addressed with the joint efforts of policy-makers, judiciary, urban planners, NGOs and civil society.

## Limitations of the study

- 1- Since it was a study relied on field data collected from the respondents by selecting them through convenience and snow-ball sampling techniques. Both these sampling techniques are non-probability samplings so the present study suffers from all drawbacks and limitations of sampling in general and non-probability sampling in particular. Non representativeness of the entire population by the small sample size is one such serious limitation.
- 2- Study was not a funded study and there were time and funds constraints so the size of the sample was kept small. Due to small sample, caution is required in making the generalizations from the findings of this study.
- 3- More rigorous funded research studies are required to fully understand the socio-economic profiles and various plights of street children.

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## MUSICAL PEDAGOGICAL FUNDAMENTALS OF DOSTON ART

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### ABSTRACT

*The article deals with the history, types, form and content of folk epics, ancient and modern schools of epics, their repertoire, traditions and methods of performance, famous composers and performers, the harmony of poetry, melody and instrumentalism in epics, their promotion in the republic and internationally, selections). It is also based on the fact that the art of epics has a high pedagogical. During the years of independence, our people have clearly understood its secrets, its magic has been demonstrated, its identity has been restored, it has been proved that it is closely connected with the social life of the Turkic peoples.*

**KEYWORDS:** *Dostonsanti, Baxshi, Shoirbaxshi, Khalfalarsanti, Jirov, Dostonnoma (Songs), Drums, Dutar, Kobiz, Tar And Other Percussion Instruments, Open Epic Singing (Khorezm Traditions), Closed (Throat) Singing (Kashkadarya) And Surkhodarya (Traditions), Epic Festival, Epic Schools, Pedagogy Of Epic Art, Traditions Of Teacher-Student Education In Epic Poetry, Promotion Of Epic Art.*

### INTRODUCTION

Created, spoken, sung and listened to for many centuries, embodying the national identity, ancient history and language of our people, its way of life, traditions and customs, recognized as an integral part of universal culture, epic art is the selfless work and creative thinking of our famous poets. are works of literary and musical art that have been passed down from generation to generation and meet the spiritual needs of our ancestors.

That is why the art of epic poetry, which is extremely rich and always young, is an incomparable spiritual treasure, and inculcating their brightest examples in the minds of young readers plays an important role in educating them in the spirit of boundless respect for their people, homeland and national musical traditions.

Bakhshi and doston words are essentially related words, and they complement each other in content as well. Bakhshi, bakhshi is a Turkish word meaning giver, devotee, poet, teacher, educator. It is also observed that among the people the word baxshi is called by such terms as poet, sozchi, khalfa, jirov.

The epics, as indicated in the sources, are the history of the people, the description of the nation's past, the past of dreams and aspirations, in a word, the song of the people's history, the melody of their destiny, the sad music of their destiny. The Bakhshis are the singers of the history of this nation, the unparalleled memorizers, or rather, the golden chain between ancestors and generations, the masterful creators and performers who translate history into history, seal history, leave history in history.

In the distant past, when there were no mass media and technical means, cinema and theater performances, epics, which had a great emotional impact on the psyche of our ancestors and were one of the leading tools in their artistic education, still retain their significance and artistic influence. Currently, in Samarkand, Kashkadarya, Surkhandarya, Khorezm, Namangan regions of the Republic and in the Autonomous Republic of Karakalpakstan there are a number of well-known bakhshis, jiravs and khalfas who perform folk epics with great skill.

On the activities of famous teachers of the past and present, on the experience of teacher-student education of modern youth epic schools, on the use of epic samples in music practice in secondary schools and additional education circles, to generalize and popularize the experience of acquaintance and study of epics in general secondary and special music education the creation of educational films, the high performance of epics, the preparation of audio and video recordings, their promotion through the media, is one of the current problems of modern music education and upbringing.

The most famous of the heroic epics of our people, created during the centuries-old history of the art of epic poetry, is the epic "Alpomish". During the years of independence, our people have clearly understood its secrets, its magic has been demonstrated, its identity has been restored, it has been proved that it is closely connected with the social life of the Turkic peoples.

For this reason, on November 6, 1999 in the ancient city of Termez were held ceremonies dedicated to the 1000th anniversary of the epic "Alpomish", scientific and theoretical conferences were held, lectures were read, films were made, a new literary edition and a musical version of the epic were published. Speaking at the event, the First President IA Karimov:

"The epic" Alpomish "teaches us human qualities, to be just and truthful, to protect our country, the fortress of our family, to protect our friends, our honor, the sacred tombs of our ancestors from any aggression."

Thanks to independence, some epic examples have been included in the standard curriculum of general education music culture lessons. Although the program does not specify which samples to choose from which epics, it is recommended to choose letters from epics such as "Alpomish", "Gorogly", "OshiqGharibva Shohsanam" and listen to them with students and sing some parts.

Epics can also be read from a book. But hearing them with the tones of the noma in the bakhshi performance has a completely different effect. As the famous French writer Victor Hugo once said, "Where the word ends, the music begins." That is, music can vividly express deep feelings and emotions that are difficult to explain with some words in the human heart.



There are examples of Uzbek folk music, which is a creative product of many generations of musicians and singers, with a wide range, extremely rich and high artistic value. There are some positive efforts and experiences in the country to collect, preserve, classify, master the notes, study the path of development and theoretical foundations, to involve them in the process of continuous music education.

A relatively more complex layer of our national traditional musical heritage is the genre of professional (master) music in the oral tradition. Professional music genres differ from other folk melodies and songs (folklore) in performance ornaments, structure, prestige, volume development, high peaks and other peculiarities.

Excellent mastery and professional experience are also required to sing to the standard of performance of musical ornaments, such as moans and chants typical of traditional professional musical heritage, singing in a closed voice in the performance of the epic.

Local musical styles can be compared to the notions of local Sheva in linguistics. The similar qualities of all existing "musical styles" in turn give rise to a collective concept, such as "general musical style." National local musical styles are divided into four main local musical styles on the basis of their unique features, which are studied in more detail in the science of Uzbek musicology. They are called by local names, ie Tashkent-Fergana, Bukhara-Samarkand, Surkhandarya-Kashkadarya and Khorezm local styles.

In all local styles, many melodies and songs, samples of musical folklore are similar to each other. They also have their own unique musical genres. For example, large songs and wild maqoms typical of the Tashkent-Fergana style are not found in other regions. Bukhara-Samarkand local musical style, "Bukhara" (performed by female musicians) and Mavrigi (male performers), In Khorezm, a small orchestra consisting of a narrow or dutar, a bolomon or a neighbor, a gijjak and a doira will perform a dastan. The art of performing epics with artificial closed (throat) sound is a genre formed within a certain local style.

Considering the performance traditions of all local musical styles, the selection of musical material (repertoire) for all stages of continuing music education, from pre-school and school music practice, should focus on patterns specific to the local music style of the region as well as educational goals and objectives.

One of the reforms of the education system after the independence of the Republic was the development and implementation of state educational standards. The requirements of the STS state that samples of national music in harmony with the art of universal music should be a means of shaping the musical and aesthetic education of students. On this basis, the formation of a musical culture in students, which is an integral part of human spiritual culture, has been identified as one of the main tasks of general music education and upbringing. To achieve this goal, a music teacher has the following tasks:

- Development of musical abilities and interests of each student through the use of traditional professional musical heritage, taking into account the specific (individual) characteristics of each student;
- Expanding the range of knowledge, skills and abilities of students about this masterpiece through the study of traditional musical heritage in the classroom and in extracurricular activities;

- In the process of various musical activities to feel the features of our traditional musical heritage (moans, sighs, etc.) and to form a desire to follow them in performance;
- Identification of factors of musical development and moral and aesthetic education of students through the artistic and ideological content of various national folk songs and classical professional music;
- To arouse students' interest in the profession of labor, profession, especially music teaching and art in the classroom.

The teacher works on bright examples of traditional national musical heritage, works of Uzbek composers and composers, works of folk art and composers of foreign countries, singing, playing one or more instruments, conducting, music teaching methods, musicology, journalism and other activities. and at least have to have satisfactory musical pedagogical knowledge, skills, and competencies. That is why a talented music teacher is a master of his profession and a sincere, kind to children, a highly cultured researcher and creator, is required to be a person loyal to the ideology of national independence. He should be aware of pedagogy, psychology, child physiology, philosophy-based logic, ethics, aesthetics, sharia, literature and other sciences.

A music teacher's responsibilities include active participation in the implementation of popular forms of music education, such as extracurricular music clubs, lectures or conversation concerts, creative meetings with well-known artists, selection of talented students to participate in various in-school and out-of-school activities and festivals.

In order to carry out such multifaceted work, the school has a special music room equipped to meet modern requirements, the necessary equipment for the use of educational and information technologies, audio and video recording library, usable musical instruments, visual and distribution teaching aids, a sufficient number of textbooks. also necessary. Unfortunately, the number of schools with such facilities is very small.

In order to get acquainted with the layer of musical folklore (simple folk melodies and songs) of our traditional musical heritage, to study and master them, a number of musical materials are provided in the curriculum and textbooks of music culture classes 1-4 of secondary school. Given the fact that some information and excerpts from musical samples are given for 6.7th grade lessons on the genres of maqoms, classical melodies and songs, we focused on the study of "Methodological features of the effective use of epic art in school music education" and the development of methodological recommendations.

As the President of the Republic of Uzbekistan ShavkatMirziyoyev said in his speech at the opening ceremony of the International Festival of Bakhshi Art in Termez on April 6-10, 2019, "If we do not work together today to preserve this unique art, tomorrow, unfortunately, will be too late for future generations. , history does not forgive us. (3)

So far, the issues of involving examples of epic art in the educational process on a scientific basis in general secondary music education have not been adequately addressed. We are trying to select and test several epic samples as a result of our experimental work to identify the art of the epic, its pedagogical capabilities, existing experience and problems in this area. Continuing this work, we plan to test the selected teaching materials in other district, city and regional schools. These are:

1. "Galmadi - galmadi" (words and music of Ojizakhalfa).
2. "Release" (from the epic Gharib and Shohsanam, musical version).
3. "Yoringuligaldi" (Musical version from the epic Garib and Shohsanam).
4. "Sayodkhon is in the garden" (from the epic SayodkhonHamro).
5. "I fell in love" (from the epic OshiqGharib and Shohsanam).
6. "Bobojon" (from the epic Alpomish).
7. "Advanced" ("Where are you going, uncle", from the epic Garib and Shohsanam).
8. "Your voice is like a child, (from the epic Gharib and Shohsanam).
9. "Qadrinnabilsin" (From the epic of Gorogly).
10. "Naylayin" (from the epic OshiqGharib and Shohsanam).

**M e t o d i k t a v s i y a l a r.** To listen to each epos or sing some passages, the teacher arranges to listen to the art of the epos, in his own performance, or from a recording, giving brief information about the content of the epos and the epos to be listened to. In this, the performance of the teacher plays an important role. However, given that not all teachers are able to perform satisfactorily, we think it is necessary to recommend the widespread use of the record of the performance of skilled bakhshis through technical means.

During the experimental tests, students in grades 5-7 learned the basics of the art of baxshi, the concept of the epic, various schools of performance, their famous teachers, methods of performance, the instruments they use, the repertoire of epics and compositions, epic art in the years of independence. the establishment of the honorary title of "People's Bakhshi of the Republic of Uzbekistan" by our state, the establishment of epic poetry classes based on the traditions of teacher-student education on the basis of music and art schools in the regions where epic traditions exist, and the establishment of a special epic school in Termez on April 6-10, 2019 in the ancient city of Termez. have an understanding and an understanding of the art of epos based on listening to suggested sample epics and singing partial excerpts.

In our country, there is a tradition of singing epics in Bulungur, Narpay, Nurata, Kurgan, Shakhrisabz, Qamay, Sherabad, Uzbek-Laqaay epic schools in southern Tajikistan, playing the drums alone and with a muffled voice. The most talented of them are ErgashJumanbulbuloglu, Polkan poet, FozilYuldashoglu, ShernaBeknazaroglu, MardonaqulAvliyokuloglu, who are "Alpomish", "Yakka Ahmad", "Yunuspari", "Avazkhan", "Oysuluv", "Kuntugmish". who narrated epics such as.

In Khorezm, well-known poets such as Bola Bakhshi - KurbannazarAbdullaev, RuzimbekMurodov, OtakhonMatyokubov, Qalandar, sang more romantic lyrical epics, such as "OshiqGaribva Shohsanam", "Oshiq Mahmud", "Khirmondali", "Gorogli", "Bozirgon".

Classical bakhshis of the Fergana Valley and Karakalpakstan, such as JienJirovTogayogli, BerdakKargabayogli, OteshAlshinbayogli, modern bakhshis such as KurbanboyTadjibayev, GayratdinOtemuratov, GulnaraAllamberganova, ZiyadaSheripova, sang in the open voice ", "Posgan el ", "Aydosbiy ", "Amangeldi ", "Ernazarbiy " and other epics.

Honored Worker of Culture of Uzbekistan EshqobilShukur in his article "Language of people and history" We need to teach young people to listen to epics. The person who has tasted it then knows what his secret is. Anyone who feels the pleasure of it will follow him ... "Recently, young people have gone so far as to say that the art of baxshi is the art of baxshi. We must look for ways to enrich their hearts with such national arts so that our young people do not get distracted by other trivial things. "(5)

In Kashkadarya, Surkhandarya, Khorezm and other regions, where there are traditions of the art of epic poetry, there are opportunities to acquaint students with the art of epic poetry and ensure that they enjoy the artistic aesthetics of its bright examples. We believe that in order to do this, it is necessary to make effective use of local dialect-based epics and select teaching materials. In some areas, such as Bukhara, Samarkand, and other areas where there are no traditions of epic art, it will be more difficult for students to use the script of master bakhshis performed in a certain dialect. Because students do not understand the poetic text of the letter well.

To partially overcome this problem, we translated the text of the letters into literary language during our experimental work and recommended that students read the text before listening to the letter in the dialect. Also, as part of our opportunity, we selected excerpts from epic poems such as "John Bobojon" ("Alpomish"), "Qadrinnabilsin" ("Gorogly") and "My child sounds like you" ("OshiqGharibva Shohsanam") and followed the traditions of Khorezm epic performance. we suggested singing in an open voice with instrumental accompaniment and then listening to the bakhshi performance on the record.

So, all our pedagogical work in the field is aimed at bringing the younger generation to the classical professional musical heritage of the oral tradition, in particular, to instill in their hearts and minds the unique melodies of epic art and regularly understand the essence of our classical musical heritage. is important in that it serves the upbringing of a harmoniously developed person who feels the need to enjoy artistic and aesthetic, striving to acquire beautiful human qualities through art.

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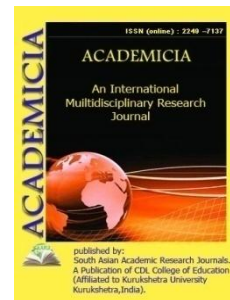
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## INFLUENCE OF PRODUCTION WASTE AS A MICROFILLER ON THE PROCESSES OF HYDRATION, CRYSTALLIZATION AND FORMATION OF STRUCTURES IN THE DISPERSIONS OF GYPSUM BINDERS IN THE REPUBLIC OF KARAKALPAKSTAN

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### ABSTRACT

*The article studies the effect of soda production waste as a microfiller on the properties of gypsum minerals in the Republic of Karakalpakstan. The results of laboratory studies confirm the existence of an energy effect in the form of improvements in plastic strength and concentrated reagents, compared to the separate chemical reagents present in the composition of soda production waste. The results of the chemical composition of SPW, which predetermine the possibility of its use as microfillers of gypsum binders, etc. to. in its composition contains mainly lime and calcium carbonate. In this regard, the effect of various amounts of waste additives on the properties of suspensions of gypsum binders was studied.*

**KEYWORDS:** *Natural Mineral, Filler, SPW, Gypsum, Binders.*

### INTRODUCTION

Dispersion systems find various and widespread use in many industries, including the building materials industry. The importance of dispersed systems is determined by the fact that many of them serve as the basis for obtaining most dispersed materials. These include abrasive and composite materials, sorbents, catalysts and fillers, cement and asphalt concretes, binders and products based on them.



The physicochemical properties of mineral binders significantly affect the formation of hydration hardening structures in their dispersed systems and, thereby, the quality of the resulting material [1-2]. Gypsum, as a monomineral binder, is a classic object of research, and a comparative analysis of its modification makes it possible to establish the relationship between the properties of the initial products and hardening structures. Unlimited reserves of natural raw materials, as well as natural and by-product gypsum-containing materials and the ever-increasing value of gypsum as a building material and, at the same time, the lack of reliable, scientifically grounded ways to improve its properties (in particular, strength and water resistance), lead to long-term time abroad and in the CIS countries of a large number of studies of the process of hydration structure formation in the  $\text{CaSO}_4\text{-H}_2\text{O}$  system [3-4, 8].

Currently, the development of new approaches and innovative technologies for the production of modern composite gypsum binders, aimed at reducing the costs of finished products through the use of local raw materials, as well as industrial waste, is especially relevant.

### Objects and research methods

The object of research in this work was gypsum minerals from various deposits of Karakalpakstan and mineral fillers that have no analogues in Uzbekistan. In composition, it is close to high-grade, so it can be used to obtain binding materials with high physical and mechanical properties. Using the example of semi-aqueous calcium sulfate, the effect of the type and concentration of finely dispersed fillers of different nature - silica, carbonate, clay and soda production wastes - on the properties of coagulation and hydration structures in their aqueous suspensions at different water-solid ratios was studied.

### RESULTS AND THEIR DISCUSSION

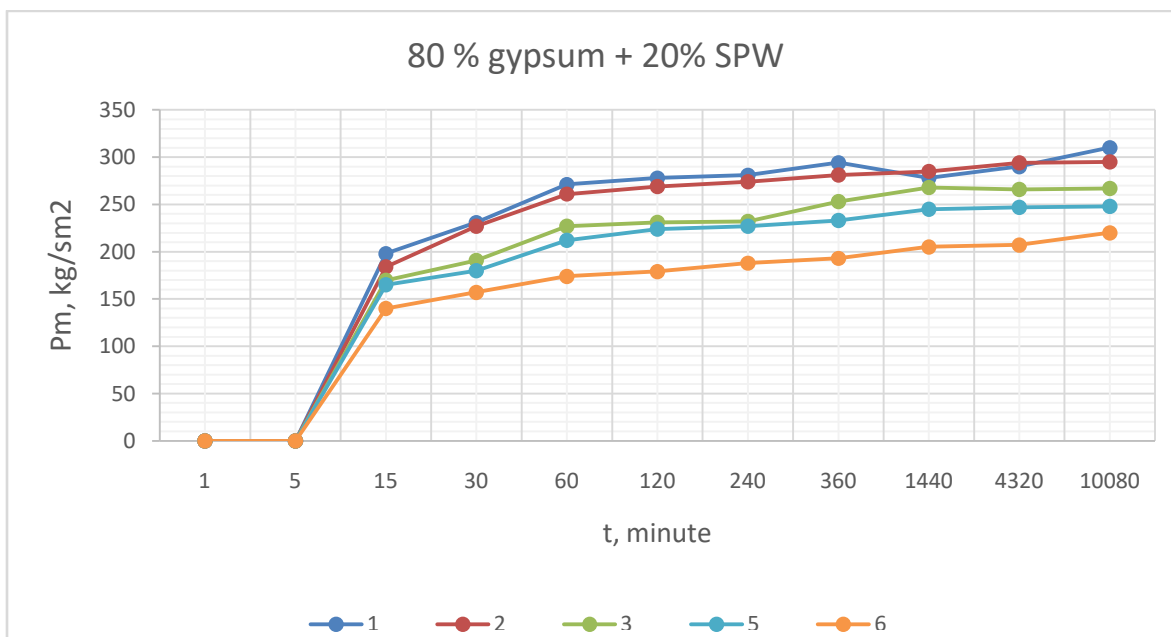
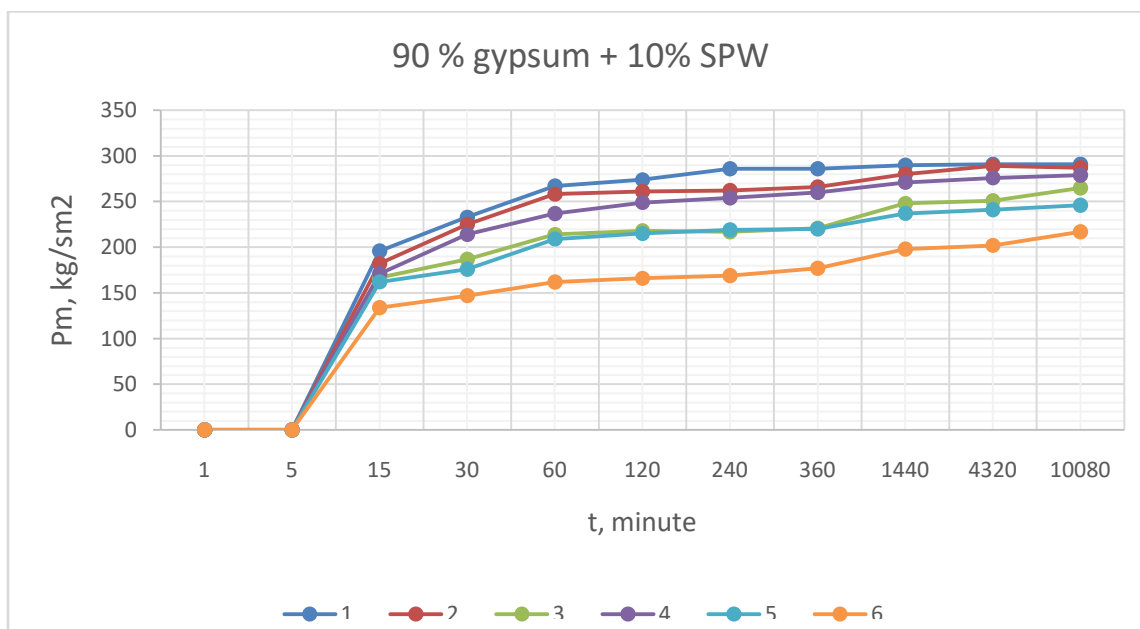
The results of the chemical composition of the waste of soda production predetermines the possibility of its use as microfillers of gypsum binders, since it contains mainly lime and calcium carbonate (Table 1). In this regard, the effect of various amounts of waste additives on the properties of suspensions of gypsum binders was studied [5, 6, 7].

**TABLE 1 CHEMICAL COMPOSITION OF SODA PRODUCTION WASTE**

Oxides		Filler
		SPW
Mass content in% for air dry matter	$\text{SiO}_2$	0,33
	$\text{TiO}_2$	<0,01
	$\text{Al}_2\text{O}_3$	0,60
	$\text{Fe}_2\text{O}_3$	<0,01
	$\text{MgO}$	2,82
	$\text{MnO}$	0,01
	$\text{CaO}$	66,17
	$\text{Na}_2\text{O}$	1,21
	$\text{K}_2\text{O}$	0,06
	$\text{P}_2\text{O}_5$	<0,01
	$\text{SO}_3, \text{total}$	<0,10
	$\text{SO}_3, \text{sulfate}$	<0,10
	L.O.P.	28,12

	H <sub>2</sub> O, 320°C	1,54
	CO <sub>2</sub>	6,32

The introduction of up to 50% SPW has a positive effect on strength at relatively low values of  $W/T \leq 0.35$ . Further increasing this index results in greatly reducing the strength of coagulation structures, especially at the initial moment of hardening process.



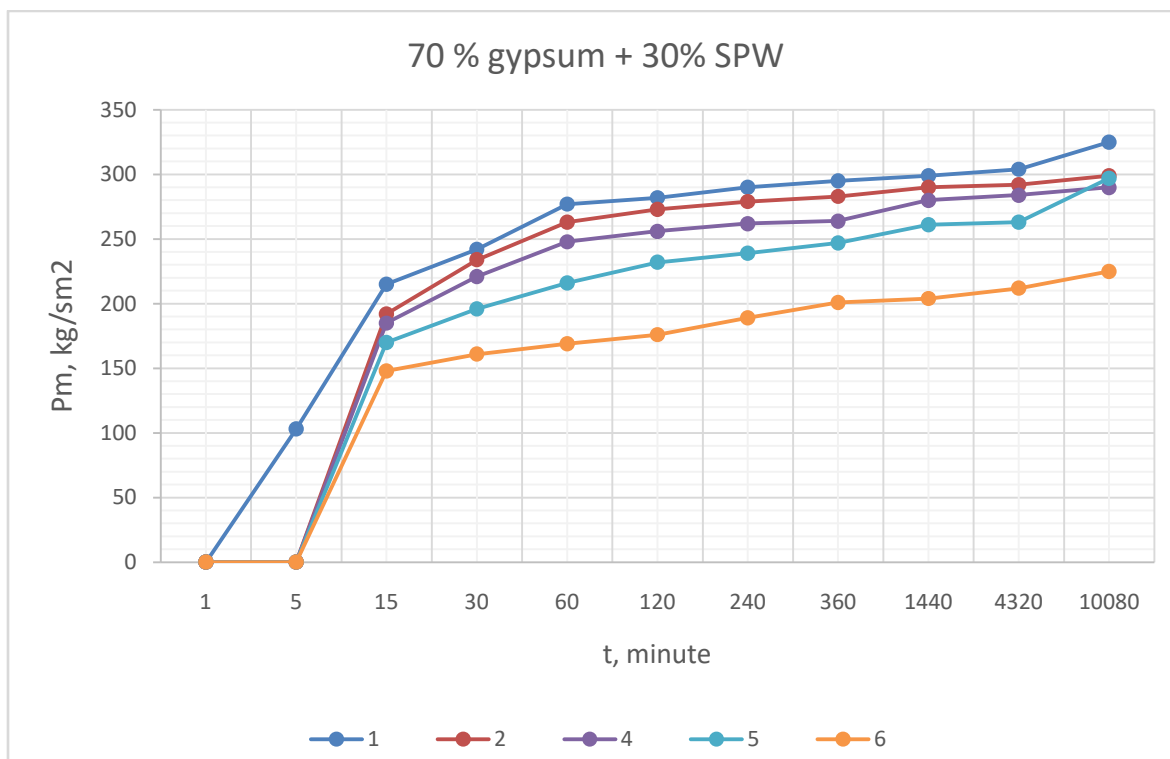


Fig.1. Kinetics of structure formation in GB suspensions obtained in the temperature range 160-180°C with SPW as a microfiller (W/T = 0.50).

For suspensions of semi-aqueous gypsum, the introduction of various amounts of SPW did not affect the course of the curves of dependences of plastic strength on W/T, however, it contributes to a change in their absolute values. Figure 1 shows the results of measuring the plastic strength in pastes of gypsum fired products at a temperature of 180°C. As can be seen from these figures, in the first moments (up to 15-30 minutes), the introduction of SPW accelerates the release of hydrates, and, accordingly, the strength of the system. An increase in the concentration of the introduced micro-filler does not cause negative changes in strength characteristics, as in the case of using natural fillers. The greatest increase in strength is noted in pastes containing up to 40-50% SPW with W/T = 0.4 [9, 10].

**TABLE 2 KINETICS OF STRUCTURE FORMATION IN GB SUSPENSIONS OBTAINED IN THE TEMPERATURE RANGE 300-320°C WITH SPW AS A MICROFILLER (W/T=0.50).**

Sample	P <sub>m</sub> , kg/sm <sup>2</sup>										
	1 min	5 min	15 min	30 min	1 hour	2 hour	4 hour	6 hour	1 day	3 day	7 day
90% gypsum + 10% SPW											
№ 1	79,1	132	258	272	280	287	285	287	287	291	295
№ 2	81,4	128	250	269	274	278	280	283	280	282	288
№ 3	68,2	110	223	232	238	241	242	242	244	250	259
№ 4	79,5	123	247	256	265	269	272	273	275	277	281
№ 5	65,6	108	195	208	221	224	227	231	229	227	230

№ 6	53,3	97,6	147	160	169	173	177	180	189	198	208
80 % gypsum + 20% SPW											
№ 1	27,6	103	214	251	268	271	276	284	277	271	280
№ 2	20,1	91,6	189	236	252	259	264	271	269	264	269
№ 3	17,5	84,4	171	210	227	232	235	247	241	237	231
№ 4	18,7	89,2	183	227	241	248	253	262	255	251	247
№ 5	15,0	72,2	160	194	206	211	216	229	214	210	214
№ 6	14,6	55,7	132	163	174	179	184	195	186	181	192
70 % gypsum + 30% SPW											
№ 1	19,6	78,6	156	194	237	242	249	255	264	276	282
№ 2	14,7	64,1	145	187	226	231	238	249	257	269	276
№ 3	11,3	51,3	131	162	194	210	221	237	245	250	254
№ 4	13,2	59,9	141	177	208	222	232	244	251	258	265
№ 5	10,1	42,2	126	154	171	197	204	219	223	228	236
№ 6	8,9	31,0	104	122	140	162	175	188	196	199	204

In concentrated pastes, especially with lower water-gypsum ratios, the strength in the first 3-5 minutes is 15-40 times higher than the strength of the binder system without filler, where such values of plastic strength are noted after a few hours.

The solubility of the products of firing natural gypsum minerals at temperatures of about 300°C is much lower than that of the products of firing these minerals at a temperature of 160°C. As noted earlier, they have higher hydration rates. The rate of hydration increases in the presence of SPW and with an increase in its concentration (Fig. 2).

Hardening of pastes based on gypsum fired products with SPW additives occurs as a result of denser and stronger contacts between new formations and the substrate made of this mineral. The high structure-forming property of SPW is associated with the presence of lime with high activity in the binding of water and calcite. Although calcite does not chemically interact with  $\text{Ca}^{+2}$  ions, however, due to the presence of the cation of the same name, its surface has an affinity for neoplasms in the system and, as a result, acts as a ready crystallization center and, as a result, accelerates the release of a larger number of nuclei, thereby improving crystallization and the growth of hydrate crystals.

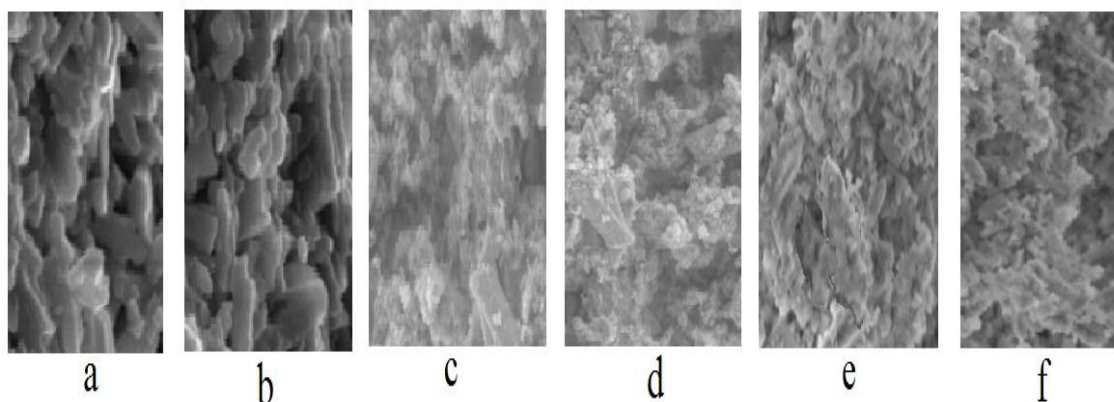


Fig. 2. The microstructure of the hardened samples obtained at a temperature of 160°C in the presence of SPW: a) №. 1; b) №. 2; c) №. 3; d) №. 4; e) №. 5; f) №. 6;

The treatment of SPW causes synergy - the combined effect of two or more reagents, which is stronger than the sum of the actions of these reagents when used separately. The results of laboratory studies, confirm the existence of a synergistic effect in the form of improvements in the plastic strength and setting time of gypsum binders at the lowest possible concentration of reagents, compared to the separate chemical reagents present in the SPW.

Comparative analysis of Pm of fired products of natural gypsum materials, regardless of origin at a temperature of 700°C, treated with SPW in various concentrations and determination of the degree of hydration in kinetics show that an increase in the concentration of additives in the system strongly affects these characteristics of the binder. So, if the degree of hydration of the fired sample №. 1, containing mainly insoluble anhydrite, at the initial moments of structure formation is about 3-4%, and in the presence of SPW in an amount of 10% it slightly increases to 6%. However, a further increase in the concentration of microfiller has a positive effect on the degree of hydration and after a daily period reaches 35-40%. After 3 days, a strong increase in strength is noted.

## CONCLUSION

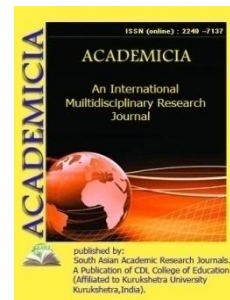
The analysis of the results obtained gives grounds to conclude that the waste of soda production in the amount of 20% of the binder mass can be recommended as an activator for setting and hydration hardening of fired products of all studied samples, regardless of origin.

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## SOCIO-HISTORICAL ROOTS OF APPLIED PHILOLOPHY

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### ABSTRACT

*This article provides a philosophical basis for the genetics of applied philosophy, its stages of development, its conceptual ideas, and its historical and philosophical roots, trends, views of philosophers in this field, and the importance of applied philosophy today.*

**KEYWORDS:** *Identification, Conceptualization, Differentiation, Integration, Experimental Philosophy, Modality, Configuration Of Sciences, Technical Perception, Amateurs, Bioetics, Biocenology, Axiology.*

### INTRODUCTION

The list of the works on applied philosophy includes ideas about life, about man, about the world, about all people, and has practical meaning, that is, it encourages action or prevents action works are included. These works, in turn, do not have a description of the research, but consist of comments, individual opinions and recommendations.

The spirit of applied philosophy was created by Confucius, many ancient philosophers, including M. Monten, F. Bacon, A. Schopenhauer and others. Works on applied philosophy include works by the famous American writer Dale Carnegie and Russian Vladimir Levi.

The concept of practical philosophy is always used in conjunction with the concepts of practical intellect and is also noted in the context of ethics. However, Kant's ideas themselves describe two types of practical modality of perception: moral-practical and technical-practical perception.

In the application of Kant's ideas in philosophy, in the pre-1960s (e.g., Alvin Diner) the concept of applied philosophy was appropriately studied, in contrast to the theoretical analysis of the relation of perception studied in theoretical philosophy to existing real situations, the general sum of the branches of science, which reveals the essence of the related orientation. Applied philosophy covers such areas as ethics, technical philosophy, labor philosophy, and philosophical poetry (philosophy of creation).

Since the 1980s, the configuration of the sciences that make up the structure of applied philosophy has undergone a fundamental change, focusing, on the main interdisciplinary direction of applied philosophy and combining values of social action, resulting in social institutions and moral, attention is paid to the connections between the practical unity of legal, ecological, religious, political, economic, linguistic relations.

Although ethics has remained a priority in modern applied philosophy, its descriptions and directions have changed, including the direction of social ethics, the philosophy of language for the purposes of private justification, the philosophy of social and similar directions are used.

Today, applied philosophy includes such fields as political and social philosophy, legal philosophy, met ecology, "ethical economics" (philosophy of economics), philosophy of language, and philosophy of technology. The complex of disciplines that make up applied philosophy is not a closed and incomplete description, but an open description of the social and philosophical content of the basics of human activity on the basis of new materials in specific disciplines, including the humanities.

Applied philosophy is the branch of philosophy that deals with human activities. Applied philosophy includes thinking about social relations (sociology), thinking about class relations (political and economic reflection), Marxism, and other areas. It also includes moral and spiritual philosophy, which is one of the components of practical philosophy, and this direction deals with the issues of clarifying relationship between man and the universe, according to the terms given by Kant. "What should I do?" can be expressed in the form of answering the question. The line is "What can I know?" the answer to the question is placed opposite the direction of theoretical philosophy, and also, "If I live in a state of moral obedience, then what can I hope for?" differs from the religious philosophy that answers the question. The purpose of applied philosophy is to show people the conditions (social, economic, political, and spiritual) that allow them to be happy.

What is the essence of applied philosophy? How is it different from philosophy, which has a scientific, dogmatic character? First and foremost, practical philosophy is about understanding. Understanding is the process of understanding oneself, one's thoughts, words, and actions. It means knowing how to think, reason, and analyze. At the same time, philosophy is based on the concept of "WHAT?", while practical philosophy is based on the concept of "HOW?", that is, applied philosophy, along with how a person thinks,

what he thinks about. Here the form is more important than the content, and the structure of thinking is important in terms of what its content is filled with.

In this way, weapons based on this thinking that can be used by human beings are given. Identification (searching for and clarifying the problem), posing topical issues (studying the weaknesses of the idea, critical analysis), conceptualization (including key terms that express the main idea) as tools in this form and evidence will be provided.

Each new idea goes through different stages of critical thinking, during which its form changes and it becomes clear what is more important. When working with thinking, it is important to understand the limits of the idea and the relevance of the problem, to be able to see the descriptions of its completion, and to understand its causes. Self-awareness is achieved through self-awareness. At this point, the famous phrase "Understand yourself" quoted by Socrates is well known. It is a practical philosophy that works in these concepts, in part because the process is so complex that in some cases we have to admit what we don't want to admit it. In this sense, philosophers, when commenting on people, point out that in some cases a person tends to go where others do not want to go. Practical philosophy is not just about teaching, it is about teaching thinking, about being.

"...Is it possible to confuse philosophy with everyday life? This can be done with other activities, such as physical activity. If you do gymnastics, then your body will be more flexible and in good shape. This principle requires you to work on your own thinking. We will talk to the interviewee at this point and provide no evidence in this case. This is because in some cases we don't have time, and in other cases we don't know something or we are not sure what we know. That fact must be taken into account. "We don't stop and ask ourselves", "Why am I doing this?" Stop rushing. Stop in sit down. Sit down and just think stupid things, think about your existence. For example, according to the idea put forward by SerenKyerkegor, try to find an answer to the question "Why do people care more about their homes but less about opzi?..." ring.

**The philosophical technique of "Socrates dialogue".** The modern way of life leads to a mirage of thinking about oneself and making decisions. But it all comes down to something different. Thus, we are constantly affected by different forces and different external forces, under the influence of which people act in a state of non-independence, but "situations arise randomly". Anxiety, on the one hand, leads to increased attention and demotivation, and on the other hand, a symptom of the fact that the person does not take action, but the situation with it.

The history of philosophy needs to be studied because it is as interesting as the history of art. We love Homer, Shakespeare, Rembrandt, Beethoven, even though they lived a long time ago. Creativity related to philosophical ideas is considered to have the same great intellectual value as works of art. For many of them, the passage of time does not affect them, that is, they do not lose their dignity.

The following situation is also important here. That is, the history of philosophy is not just a collection of old ideas. The history of philosophy is not a treasure trove of valuable ideas. Heinrich Heine states: "Each epoch is marked by the discovery of new ideas, as

well as a new outlook, through which many discoveries are made about the antiquity created by the human psyche”<sup>1</sup>.

In short, by studying the history of philosophy, we are studying philosophy.

Applied philosophy is a reflection of the fact that the philosophy of Kant's ideas is in the form of “practical perception” and “technical perception” rather than in a more semantic (where it represents ancient traditions) but in terms of terminology makes. The preservation of the superiority of practical cognition over theoretical cognition, as well as the predominance of spiritual-moral behavioral descriptions over scientific knowledge, is a state of affairs in applied philosophy, ethics, philosophy of state and law, and even anthropology.

It has been observed that the issues presented in the modern world have become extremely urgent under the influence of the continuous progress of scientific and technological progress, especially under its negative consequences, and have become the object of philosophers attention. There is a tendency to shift from emphasis on traditional issues of theoretical understanding to practical philosophical research.

A striking example of the transition from the the position of theoretical cognition to the position of practical cognition is Hans Jonas, a student of E.Husserl and M.Heidegger. His personal experiences on “personal thinking experiences” are no longer a joy to know, but a fear of the neare future or a panic for humanity to become the main motive for thinking, which in turn is the latest case a sense of responsibility and accountability.

It is this sense of dread in the face of future events and the growing sense of responsibility and accountability that has led to the acceleration of the “rehabilitation of practical cognition” in the process of philosophical development around the world. One of the main directions of this type of rehabilitation is, of course, bioecology.

The term “bioethics” (“biological ethics”) id coined by V.R.Potter's book, “Bioethics as a Bridge to the Future”, became popular after its publication. The emergence of this scientific field is a unique reponse to technological and socio-political “challenges” in medicine and biology.

Nowadays, with the increasing discovery and implementation of new medical and biological technologies, the level of potential for impact on the human body is facing an unprecedented complex moral contradiction in the face of human society views and perspectives, in turn, the search for ways out of this dramatic situation that arises under the influence of the practical work of transplantologists, resuscitators, phsychologists, biotechnologists and many other specialists, i.e. decisions and solutions there is a need to clarify the measures of responsibility and accountability in adoption. From a general ethical point of view, bioethics V. R. Potter. It is noted that after the announcement by Potter, it was decided as one of the practical aspects, which has a clear specialization.

By the middle of the XX century, the integration of biological and medical ethics was becoming increasingly international. First of all, this is reflected in the prohibition of experiments that are considered crimes against people (Nuremburg Code, 1947), as well as the elimination of cases of boils in the work of doctors (Sydney Declaration, 1969).

In addition, the Geneva Declaration (1948), the International Code of Medical Ethics (London, 1949), and the Gelsingsk-Tokyo Declaration (1964 and 1977) can be found. It has been noted that biological ethics is now one of the top priorities, as evidenced by the many documents and events that have been adopted by international organizations in recent years:

1993: The International Committee on Bioethics convenes an international symposium on "Ethics and Human Genetics" in Strasbourg, prepares relevant recommendations and submits them to the European Parliament;

1995: An official document is prepared and distributed by the World Health Organization entitled "Brief History of the Ethics of Medical Genetics";

1996: The Convention for the Protection of Human Dignity and Rights in the Field of Biomedicine is ratified by the Parliamentary Assembly of the Council of Europe;

1998: The Fourth World Congress on Bioethics is held in Tokyo.

The Council of Europe's Specialized Group is working to improve the Biomedical Convention on Human Rights and the World Health Organization's Human Genetics Regulations, including the implementation of genetic research and the development of ethical solutions and decisions on medical and genetic care for the population.

The philosophers discussed the "parts" of philosophy, analyzing its existing structural structure, how the collection of philosophical ideas was originally formed, and how the work of the first philosopher-systematists came into being. The following are excerpts from ancient authors:

**Seneca (1<sup>st</sup> century BC):** "Most of those who have written about it, including the greatest representatives, confirm that philosophy is divided into three parts: the moral, the natural, and the parts devoted to human perception. The first part deals with spiritual order. The second part describes the nature of things. The third part explores the properties of things, their placement, as well as the types of proofs so that the original types of truth do not remain hidden under lies"<sup>2</sup>.

**Sextus Empiricus (late 2<sup>nd</sup>–early 3<sup>rd</sup> century AD):** "Philosophy, in its essence, is a kind of mixed existence, in order to carry out subordinate and methodological research, each point of philosophy must be at least relative to philosophy. If one goes directly to work, one may assume that philosophy consists of one part, one may divide it into three parts. It is also noted that those who divide philosophy into two parts, divide it into physical and logical parts, and someone else divides it into physical and ethical parts, while the third person can divide it into additional parts, and the third person can divide it into logical parts. Philosophers divide philosophy into parts of logic and ethics formed. Those who divide philosophy into three parts divide it into physical, logical, and ethical parts"<sup>3</sup>.

The guarantor of this principle is Platon. The disciple of Xenocrates, peripatetics, and the proponents of Stoicism supported a clear statement of the fragmentation of philosophy in this opinion. Proponents of peripateticism are considered direct followers of Aristotle. Proponents of Stoicism are representatives of the Greek school of philosophers founded by Zeno and Cyrenus (34-265 AD).



In this case, the division of philosophy into parts is unlikely to be compared to a fruitful orchard, where the physical part is equated with the growth of plants, the ethical part with the ripening of the fruit, and the logical part with the strength of the garden walls. Other philosophers liken the division of philosophy to the egg, that is, the ethical part is compared to the yolk part of the egg, the comparative, logical part is that it is directly emphasized that the egg forms the outer shell. Posidoni describes the division of philosophy into living beings, describing that “the physical part of philosophy is blood and flesh, the logical part is bones and muscles, and the ethical part is similar to spirit and soul”.

Excerpts from the ideas of the ancient world mentioned above show that they had similar view on the concept of the division of philosophy into parts. Indeed, philosophy can be broadly divided into three parts, respectively, into three “subjects”: that is, the object of activity, the subject of activity, and the activity itself, that is, the means and means.

Thus, the components of philosophy in general express the general idea of the universe, its structural structure in terms of categories, ideas about man and the society in which he lives, ideas about the methods of activity or human perception of the universe.

Correspondingly, the “three” parts of this subject can be distinguished as the three “parts” of philosophy.

1. The part of the worldview that forms the doctrine of the universe and its categorical structure.
2. The teachings of man and society, anthropology and social philosophy.
3. Methodical part, consisting of teachings on forms and methods of activity.

**Philosophy of Worldviews** Philosophy expresses a relatively general ideas of the universe as a whole, as well as its categorical structure. The subject of this part of philosophy is the objective real being, the universe, which is considered to exist independently of man and humanity. The philosophical aspect of the worldview come to the fore on the basis of its objective descriptions, its descriptions of objectivity. In this section, philosophy seeks to make the ideal of “scientific” philosophy.

The place of philosophy as a doctrine of the forms and methods of activity is determined by the general methods of knowledge and practice. In general, less knowledge of the universe leads to less knowledge of what a person wants, as well as the development of successful activities to master (know and change) the world. The subject of the methodological part of philosophy consists of the manifestation of human activity and its various forms, in other words, the interaction of the subject (man and society) with the object (objective world). At the heart of the philosophical methodology is the question of the ratio of ideal and real existence, is a question of the interrelationship of subjective and objective states as a whole. The philosophical methodology includes the following:

- 1) The doctrine of thinking (where the issue of ideas is central);
- 2) The doctrine of knowledge (the central issue here is the question of the original truth, the essence);



- 3) The doctrine of practice (its central issue is well-being, consisting of values);
- 4) The doctrine of art (the central issue is the issue of elegance and beauty);
- 5) The doctrine of creation. Each “part” of this philosophical methodology has its own category – a system of concepts.

Philosophy, like any other field of human activity, develops, becomes more complex, and in turn differentiates according to its internal conditions. Differentiation (Latin – differentia – means differentiation) – means the division of a whole into different forms and levels. The process of philosophical differentiation and specialization of its individual parts continues. On the other hand, the emergence of “working” philosophical systems in the direction of the integration of philosophical ideas over time is noted. In philosophy, differentiation and integration are two aspects of a whole single process consisting of its determination and development. Integration (Latin – integration – means unification) – is a process of development, which results in the establishment of unity within the system on the basis of the interaction of separate, specialized elements.

In the work of philosophers, specific divorces are predetermined. They are divided into expert philosophers (specialists in a particular field of philosophy) and systematic philosophers who seek to embrace all available rich philosophical ideas from a single point of view. Other philosophers are also required for modern society.

Diderot has some interesting ideas about the systematic philosophers who collect and organize facts. As he points out, “Gathering on the one hand, and linking the facts to each other on the other, are two very difficult exercises, and the philosophers have divided these exercises among themselves. Some of them are only engaged in the collection of materials throughout their lives, they are made up of useful and industrious workers, while others, as proud builders, hasten to use these materials. However, all rational philosophical constructions built in the period up to now have been overthrown. The laborers who are doomed to work within the zone will sooner or later come out of the ground, they will move underground, in the darkness, in the fragments that are considered disastrous for this architecture discovered as a product of the brain, this structure will be destroyed and only fragments this situation will continue until another wise man discovers new combinations. We make a distinction between experimental philosophy and rational philosophy. Even if someone is blindfolded, he always moves forward, stumbles on the road, and finally gets stuck in something valuable. Someone else grabs this valuable material and tries to light a torch from it, but so far that abstract torch has served him less than when his opponent was looking for something on the basis of palpation. Experience infinitely increases the level of its research, it is constantly influencing, it is constantly searching for events, and at the same time it is noted that it follows the path of anthology as perception. Experimental philosophy does not know in advance what it will face and what it will not achieve during the work, but it will continue to work tirelessly. On the contrary, rational philosophy exaggerates its possibilities, makes its own judgments, and in the end remains silent”<sup>4</sup>.

If we look at the development of philosophy over a long period of time, we can see that over time, a system of philosophy that encompasses all situations will emerge. In ancient Greece, the philosophy that encompassed all aspects of this form was Aristotle's

philosophy. In the new era, every great philosopher will strive to create a system of philosophical knowledge. In particular, the teachings of the system were inherited by philosophers such as Descartes, Spinoza, Hobbes, Locke, and Kant. Hegel emerged as the real Aristotle of the new era.

Applied philosophy – is a branch of philosophical science about human activity. In some cases, the whole practical philosophy is represented as axiology.

Practical philosophers can work individually and also unite with others, setting up centers of applied philosophy for this purpose.

The working conditions of a practical philosopher can be different: from office reception to communication in informal situations (travel, museum visits, exhibitions, theaters, concerts), at home, during travel, during meals can be increased.

In the future, it will be necessary to establish an association of practical philosophers and develop rules for admission to the association. In the sense, an association can function as a community of lawyers. This is primarily aimed at creating a barrier to the entry of fraudsters and amateurs into the field of applied philosophy. Unsurprisingly, only philosophers with a diploma (with a university degree in philosophy or with a PhD) are allowed to work in the work of applied philosophers. Ideally, a practical philosopher will need special training, that is, in addition to general philosophical knowledge, they will need to acquire the specific knowledge required in the field of applied philosophy.

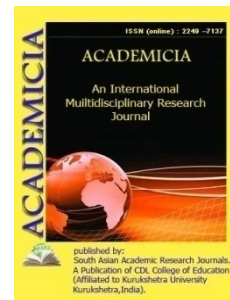
The Centers for Applied Philosophy aims to provide philosophical dialogue and counseling services to the population on practical philosophical issues (life and death, career choice, creativity, love, marriage and family, parent-child interaction, philosophical treatment (use of philosophy for healing, comfort), drug and suicide prevention, prevention of crime, misconduct, and the like) to show.

Areas of work of the centers:

- 1) Service to the population (philosophical advice, is in the form of questions and answers, conversation [exchange of ideas, dialogue], analysis of specific situations, apology [open conversation], commentary – assessment [to examine someone, in situations described in the visit]);
- 2) Individual teaching of philosophy (including practical wisdom) in a special program;
- 3) Carrying out research work in the field of applied philosophy.

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## THE ROLE AND PRACTICAL IMPORTANCE OF GEOMETRIC LIVING ELEMENTS IN THE CREATION OF GIRIX PATTERN COMPOSITIONS

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### ABSTRACT

*This Article The Role And Practical Importance Of Elements Of Geometric Life In The Creation Of Girix Pattern Compositions described. One of the most important areas of human life is the field, which can not be imagined without drawings. Geometric patterns in drawing are also widely used by Uzbek folk craftsmen. They create pattern compositions using geometric shapes. In this way, the artist first performs geometric constructions on paper in the process of realizing the information about the object and its details in his mind. Geometric constructions are the basis of the science of drawing.*

**KEYWORDS:** *Pattern, Composition, Introduction, Architecture, Picture, Drawing, Shapes.*

### INTRODUCTION

It is known that before creating any objects and structures, their drawings are drawn. In the VII-XV centuries in Central Asia (now the territory of Uzbekistan) great scientific discoveries and great monuments were built. Such large and luxurious monuments and scientific discoveries cannot be created without drawings. In those days, drawing developed as a science as well as architecture as an integral part of it. Drawing was seen as a tool and was not given importance as a science.

It can be an image of what man did with his first weapon after creation. They made pictures of different animals by drawing on rocks, caves, and so on. The images done here are done by drawing. This means that any image, that is, the first appearance of something, is made by drawing.

A drawing is an image that is executed for a specific purpose using drawing tools, using a certain scale of geometric constructions in accordance with all the rules of the existing state standard.

An image is a drawing, painting, photograph, etc., which is made by cutting an object on an object with a pencil, nail, ink, or paint.

**Main part.** Drawings, in turn, look different. For example, before you start drawing any drawing, the drawer takes a drawing tool, such as a pencil, ruler, compass. He also begins to draw parallel, perpendicular, circular, and various shapes on the paper. In this way, the artist first performs geometric constructions on paper in the process of realizing the information about the object and its details in his mind. Geometric constructions are the basis of the science of drawing. The person who draws any drawing is highly skilled and is accustomed to automatically perform various geometric constructions.

One of the most important areas of human life is the field, which can not be imagined without drawings. Geometric patterns in drawing are also widely used by Uzbek folk craftsmen. They create pattern compositions using geometric shapes. Geometric shapes form the basis of pattern compositions. As a result of skill, ingenuity and ingenuity of our masters, wonderful pattern compositions are created. One such type of pattern is the "girix" pattern.

A gyrus is a geometric pattern that, unlike plant motifs, takes the overall shape of leaves, flowers, and other objects in nature into geometric shapes. The word "Girix" is originally a Persian-Tajik word meaning "fleeing", "scattered", and in Arabic "knot". Geometric patterns are made up of elements. Its elements consist of 4 parts: triangles, rectangles, polygons and curves (Figures 1 and 2). Thousands of patterns can be created using these input elements.

Girix, like other patterns, consists of a very simple element called a distribution. From the repetition of these distributions, a complete pattern composition is formed. There are many different secrets to creating geometric patterns, and here are some ways to create a pattern:

1. Creating a pattern composition based on a combination of input elements:
  - a) based on a combination of rectangles (Figures 1,3 and 4).
  - b) based on a combination of triangles (Figures 2 and 5).
2. By continuing some aspects of the input elements (Figure 5).
3. By adding some elements to the composition.
4. By modifying some aspects of the pattern elements in the composition.
5. By attaching two different input elements (Figures 3 and 4).
6. As a result of the removal of some fragments from some of the compositions.
7. Divide the Girix composition into several independent compositions.
8. Create different compositions using different grid lines, etc. (Figures 3, 4 and 5).

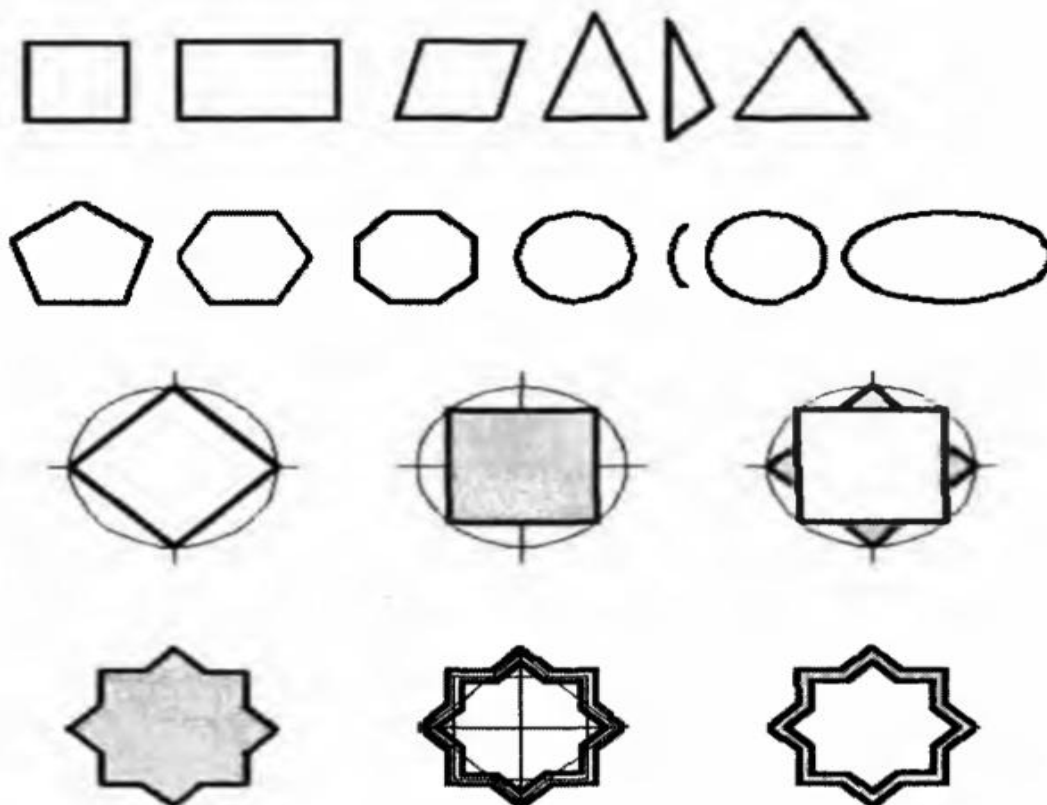


Fig.1

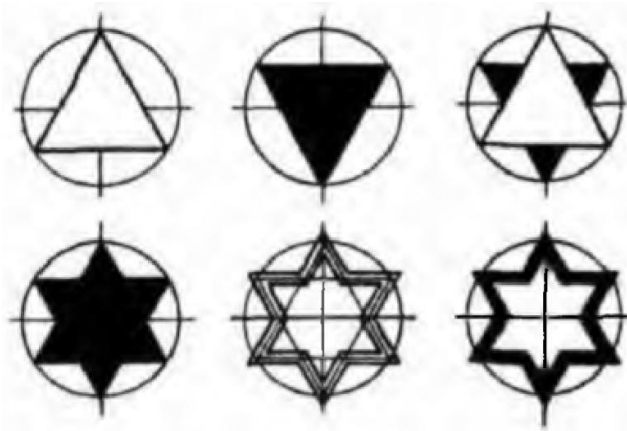


Fig.2

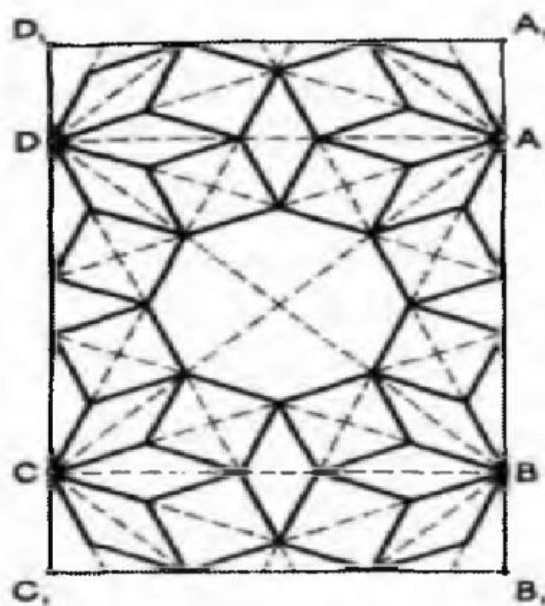
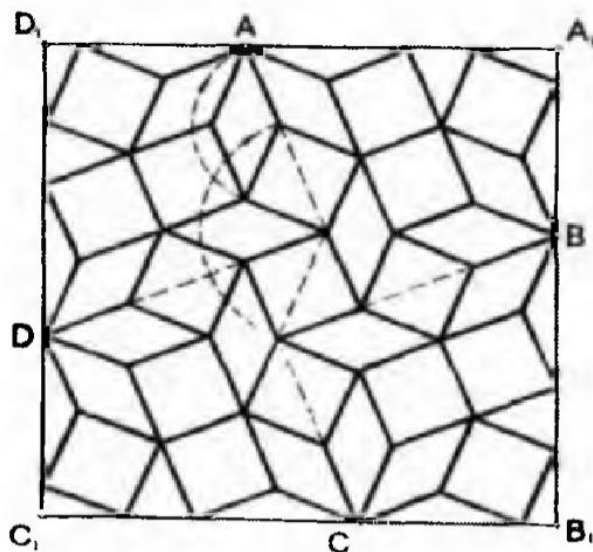
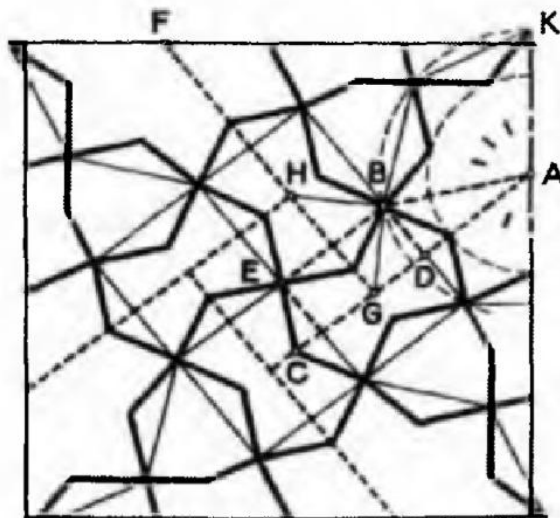


Fig.3 Pattern made of four light beams.



**Fig.4**

*Making patterns from squares and rhombuses*

**Fig.5**

*A pattern called "Nog'oralar" and "taullar".  
a combination of seven-pointed stars*

The entry will have a specific content and character. Just as every plant in nature has a name, so do giraffes. If the entrance consists of a five-pointed star, it is called a "five-pointed entrance". Similarly, the edges of the same shape are named according to the number. When a gyrus consists of five- and six-sided star-shaped elements, it is called a "five- or six-pointed gyrus." If it consists of six- and ten-sided star-shaped elements, it is called a "six-ten-pointed star." If it consists of five, eight, and twelve-pointed star-shaped elements, it is called a "five, eight, twelve-pointed star," and so on. The geometric pattern consists of continuous reports, each of which has its own structure. This is called arabesque in Europe. Any pattern, whether simple or complex, is created by placing, comparing, and combining simple elements in a specific order.

The constellations are lattice-like and star-shaped, with three to sixteen star edges. Girikh differs from other types of patterns in that it produces different polygons based on a regular polygon placed at a specific location on the surface. Creates the above pattern of repetition at the link level. There are two types of entries.

- 1) entrances for a rectangular level;
- 2) Entries for equilateral triangles and polygons.

It's almost like a rectangular coordinate system and a polar coordinate system. In the first type of entry, the size of the shapes does not change during their repetition. In the second round, the shapes become smaller as they repeat from the base of the equilateral triangle as they get closer to its end. The pattern is drawn on paper or cloth to engrave on stone, ganja, copper, or wood, and then processed. Of course, a student who learns how to draw beautiful patterns before working on them will be able to teach this art to his students in the future. Girikh has his own rules. That's why we need to study the rules of geometric construction when making an entrance. Geometric shapes with axes of symmetry, equilateral triangles, squares, rectangles, rhombuses,



and regular polygons are used to create entries. In some cases, you may need to divide the circles into equal parts, use joints, curves, and so on.

When creating an entry, a single element is selected, and that element acts as a key. To identify this key, the short side of the input panel is taken as one side of the square, and the long side is placed to form the main square. This square is divided into four parts, one part of which is further divided into four parts to form a half-square. Inside this half-square ABCD lies the key (Figure 6, a, b, d).

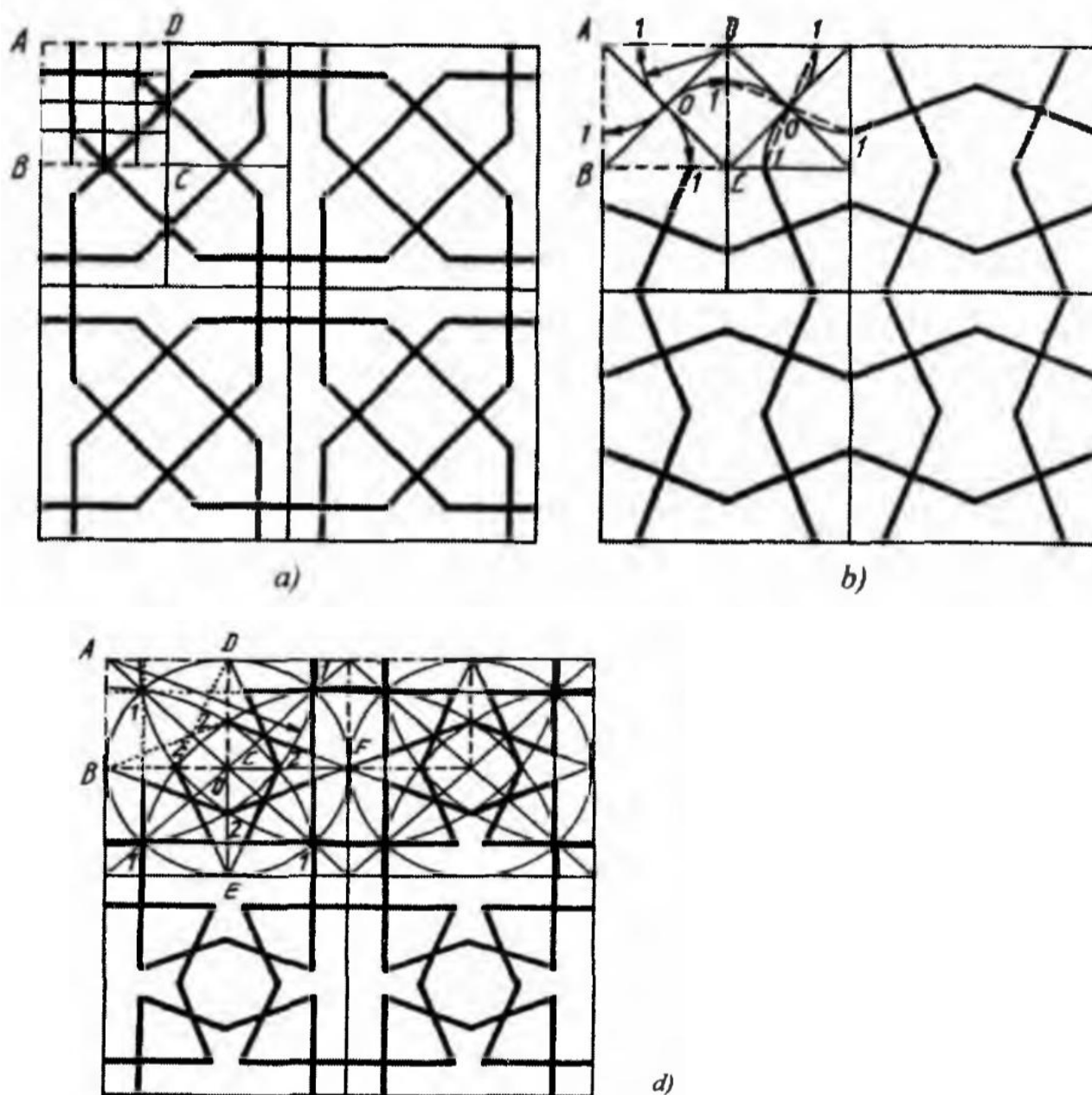


Fig.6

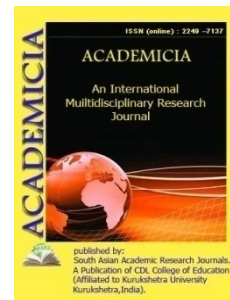
## CONCLUSION

The key element is determined using grids (Figure 6, a) or by drawing square diagonals, drawing arcs equal to half of the diagonal, and defining points 1. Points 1 are connected by a dashed line passing through point O (Figure 6, b). If the input is more complex, a quarter of the base square is used to find its key (Figure 6, d). The diagonals of this square are drawn, the point O is determined, and a circle is drawn through it that strikes the sides of the square. Arcs passing through points 1 where the diagonals of a circle and a square intersect are drawn from the corners of the square, and they intersect to form points 2. Points 2 are connected by points B, D, E, F. Then the input element is defined. By drawing horizontal and vertical lines from point 1, the input key is identified within the square ABCD (Figure 6, d).

In conclusion, drawing plays a very important role in the development of human consciousness, in the imagination of the world around us, and in the development of the great blessing of thinking through the transmission of one's understanding to others. In fact, even now, every piece, whether large or small, is first drawn before it is created. After each item is purchased, a drawing is made before using it. It is assembled, repaired, and adjusted using a drawing. So, it is well known that the development of humanity and society is closely linked with the drawings. But through the process of studying the environment, that is, being, people engage in science and make new discoveries for their own benefit, for the benefit of the country in which they live, for the benefit of the world. In order to convey all this to the whole world, first of all, the drawings are addressed.

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## DEVELOPMENT OF FINE ARTS IN UZBEKISTAN AND THE CONCEPT OF COMPOSITION IN FINE ARTS

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### ABSTRACT

*This article provides information about the development of fine arts in Uzbekistan and composition in the fine arts. Before we can study the fine arts, we must first look at the history of its development. The main factors in the development of the fine arts, as well as the difficulties in the development of the content of primitive art and the stages of development to the present day are given.*

**KEYWORDS:** *Fine Arts, Primitive Art, Creativity, Nationality, Composition, Artist, Type And Genre Perfection.*

### INTRODUCTION

President of the Republic of Uzbekistan Sh.M.Mirziyoev: "We consider it our priority to improve the activities of all levels of the education system in accordance with modern requirements"

We know that during these years, which are very short in history but centuries in content, our people have consistently and resolutely followed the path of national development, overcame all trials and tribulations, and achieved great successes and achievements.

We have come a long way since independence. After gaining independence, our country has undergone great changes, radical reforms have been carried out in all areas. The emphasis on art, sports and education is growing. From this attention, we can see how happy people are from the conditions through their expressions of gratitude.

Man, by imagining the wonders of nature and its mysteries, imitated living beings, creating their images. By drawing pictures, man makes an imaginary attempt to exert his influence on things and events in nature, or to subdue the harsh conditions in them. The role of art, especially fine arts, is of great importance in the further development of education in our country. The visual arts play an important role in enriching people's imaginations and shaping their aesthetic tastes.

**Main part.** Before we can study the fine arts, we must first look at the history of its development. And then, of course, we have to study the types and genres of fine arts diligently. The development of the history of fine arts dates back to prehistoric times. The murals in the caves, the stone and bone figurines, and the embossed aesthetic ornaments on the stone slabs and fragments of deer antlers still exist long before the conscious imagining of human art.

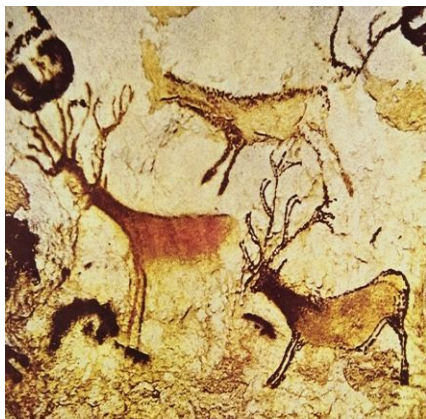


Among the types and genres of fine arts, especially the manjara genre is distinguished by its uniqueness and unique attractive colors. An artist who works in the genre of landscape must first be able to make the right choice when creating a composition. Composition is very important in the visual arts.

As the President said, "The development of our national spirituality today is inconceivable without examples of fine arts. The fact that in recent years Uzbek artists have been creating and achieving new successes, and many young talents are entering this field, testifies to its development and prospects. Similar positive changes can be observed in

the field of monumental art. As you know, when we talk about monumental art, we mean, first of all, the complex of majestic statues and monuments that have a great impact. "

We deeply feel that art must meet aesthetic needs and serve the public aesthetically. It helps to understand that a person is not only an artist when he creates, directly when he creates works of art, but also when he perceives works of art. That is why today it is necessary to teach us to understand and analyze our material and spiritual wealth, works of art.



One of the important features of art, including composition in the visual arts, is that it participates in all types and genres of fine arts. It serves to develop a person's spiritual thinking.

That is why today we have everything from education to the press, television, the Internet and other media, theater, cinema, literature, music, painting and sculpture, in short, to the human heart and mind. We must further strengthen our activities in all spheres of direct influence on the basis of the spiritual needs of the people, the requirements of the times, and raise them to a new level.

Speaking about this, it should be noted that the representatives of this industry, ie teachers and coaches, writers and journalists, film and theater people, musicians and artists, in general, our intellectuals are moving to a market economy,



which is a new reality for our people. who has a deep sense of his spiritual duty to society in the age of teeth, is working diligently without sacrificing his talent and mastery. 1



In the fine arts, the concept of composition is one of the most ancient trends. Composition as a subject appeared after pencil and painting, and now the composition course is included in the curriculum of higher education professions.

In the visual arts, composition is created by means of images such as pencil, shadow, light, color, air, and line perspective.

The composition course is of great importance for students to think figuratively in their independent creative and pedagogical activities. Composition consists of conversations, lectures and practical exercises. The basic laws, rules, methods and tools of composition are thoroughly studied by students in the course of practical training and conversations.

Composition is an integral part of the study of special subjects such as sculpture, architecture, graphics, pencil, painting, art history.



Therefore, the rules of composition should be thoroughly mastered by future professionals in order to impart perfect knowledge to the next generation.

The laws and rules of composition in the fine arts have been formed since the earliest stages of human development. While primitive people observed life with the mind, the sense of composition is very poorly developed. We can see this in the chaotic, separate images of humans and animals. In education, educational technology in the discipline of "Painting composition" is developed based on the

rules of application of new technologies in higher education. In fine arts, pencil, painting, composition are taught.

"Composition" is present in all genres of fine and applied arts and is the main basis of the work. The word composition comes from the Latin "Kompositio" - to compare pieces of objects and put them together in a certain order, to describe the creation according to the idea, to compose.

Composition emerged as a subject after pencil and painting, and now the composition course is included in the curricula of higher education professions. In the visual arts, composition is created by means of images such as pencil, shadow, light, color, air, and line perspective.

The composition course is of great importance for students to think figuratively in their independent creative and pedagogical activities. Composition consists of conversations, lectures and practical exercises. The basic laws, rules, methods and tools of composition are thoroughly studied by students in the course of practical training and conversations. Composition is an integral part of the study of special subjects such as sculpture, architecture, graphics, pencil, painting, art history. In pencil and painting, the artist directly addresses the basics of composition, without knowing its rules, he does not understand the essence of composition, pencil, painting.

The composition of ancient oriental art is very different from that of primitive times. In the ancient East, the theme of composition was depicted in a strictly defined order on the plains, subject to the ritual laws of slavery.

The first new methods of composition began to appear in ancient Egyptian art. This is the result of the conscious development of social life in society. In the image, the relationship of line, size, color and hue has reached a high level.

## CONCLUSION

Artists of the ancient world began to understand the concepts of symmetry and rhythm in the structure of plants, leaves and flowers created by nature, the sequence of the seasons, and began to apply them in their creative work, composition. Therefore, the ancient Greeks made effective use of rhythm and symmetry in relief, frontal compositions. Until the Renaissance, no theoretical textbook on composition was created. Thus, during the years of independence, Uzbekistan has shown a special creative research in all areas of fine arts, the expansion of the range of historical, cultural and moral values, the principles of renewal - the effective work of artists on new artistic interpretations. Today, all the conditions are created for young people to study and show their talents and abilities. In the work of young artists, the conditions are given to them in such a way that art schools and universities meet modern requirements. It is the duty of every child of this country to make a worthy contribution to the development of our country, using the opportunities effectively and meaningfully, thankfully for the conditions created for us.

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## SOME BIOLOGICAL FEATURES OF ANIMALS OF DIFFERENT GENOTYPES

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### ABSTRACT

*The article gives a brief information of its ecological state, climatic conditions, and other biological indicators that directly affect cattle meat productivity in Djizzak region. The clinical and hematological parameters of bulls in the experimental groups were mainly at the level of physiological norm. However, the performance of both characters was higher in the summer than in the winter.*

**KEYWORDS:** *Body Temperature, Climate, Clinical Parameters, Morphological Parameters Of The Blood, Breed, Pedigree.*

### INTRODUCTION

Jizzakh region is characterized by extreme climate change. In summer the climate is very hot and the sun's radiation is strong, and in winter the days are very cold and humid. This can have a negative impact on the body of Simmental cattle bred in temperate climates, and most importantly, it can improve their process of adaptation to new environmental conditions and reduce their productivity.

### MATERIALS AND METHODS

The experimental part of the study was conducted in 2016-2018 in the conditions of the farm "Sangzor" Arnasay district of Jizzakh region. For the experiment, on the basis of genetic similarity, 40 newly bred calves of black and Simmental breeds of similar sex, age and sex were distinguished. 10 male calves were included in the III group, 10 female calves of the Simmental

breed were included in the III group, and 10 male calves of the same breed were included in the IV group.

The conditions for feeding and caring for the animals in the experimental groups were the same.

One of the indicators that is directly related to the productivity of animals belonging to different genotypes is their individual

### Biological Characteristics

Research results. Clinical indicators are of great importance in the study and evaluation of the biological condition of animals and their degree of adaptation to certain environmental conditions.

This is because the clinical performance of animals is closely linked to their health and productivity. In our study, the clinical indicators of the animals in the experimental groups are given in Table 1.

**TABLE 1 CLINICAL INDICATORS OF ANIMALS IN THE EXPERIMENTAL GROUP, CHANGES IN THE SEASONS. ( $\bar{X} \pm \bar{Sx}$ )**

Indexing	Groups (n=5)			
	I	II	III	IV
Bahorda (March)				
Body temperature 0C	38,1±0,25	38,0±0,41	38,2±0,32	38,1±0,05
Heart attack (1 minute)	64,9±0,32	65,3±0,25	65,2±0,31	65,4±0,21
Breathing (1 minute)	26,2±0,25	26,3±0,28	26,0±0,21	26,2±0,25
Summer (iyul)				
Body temperature 0C	38,4±0,07	38,3±0,28	38,4±0,26	38,2±0,28
Heart attack (1 minute)	66,2±0,20	67,2±0,15	66,3±0,3	66,9±0,15
Breathing (1 minute)	27,4±0,19	27,6±0,18	27,7±0,15	27,6±0,18
Autumn (October)				
Body temperature 0C	38,2±0,15	38,1±0,07	38,3±0,13	38,2±0,15
Heart attack (1 minute)	64,0±0,16	64,4±0,25	65,1±0,22	65,2±0,22
Breathing (1 minute)	26,3±0,20	26,4±0,15	26,6±0,20	26,4±0,15
Winter (January)				
Body temperature 0C	38,1±0,09	38,0±0,07	38,1±0,07	38,0±0,07
Heart attack (1 minute)	62,9±0,19	63,8±0,33	63,9±0,31	64,0±0,16
Breathing (1 minute)	24,9±0,12	25,1±0,19	25,6±0,14	25,7±0,14

The analysis of the data in Table 1 showed that regardless of the seasons and the genetic origin of the animals, their clinical performance was mainly at the level of physiological norms.

In the spring, at 12 months of age, the heart rate was 65.4 beats per minute in Simmental bulls, compared with 65.9 and 65.9 in Simmental bulls and Simmental bulls, respectively. , 2 March.

In the summer, in 15-month-old Simmental bulls, the figure was 66.9 times per minute. This is 0.7, 0.3 and 0.6 times lower than their counterparts, black-and-white females and male calves, as well as female calves of the Simmental breed, respectively. This difference was in the autumn

and winter months, ie in 18- and 21-month-old bulls, respectively: 1.2, 0.8, 0.1 and 1.1, 0.2, 0.1 times.

The bulls in the experimental group had slightly higher heart rate and respiration in summer than in autumn and winter. This indicates that under the influence of hot summer temperatures in the body of experimental animals, the cardiovascular system is active and accelerates the metabolic process.

The fact that the metabolic process in animals is physiologically normal depends in many ways on the blood. This is because blood is the main factor that triggers the process of metabolism (metabolism, which includes all enzymatic reactions). Therefore, in our study, we determined the degree of saturation of the blood with the necessary and essential elements, and presented the data in Table 2 below.

**TABLE 2 CHANGES IN THE MORPHOLOGICAL PARAMETERS OF THE BLOOD OF ANIMALS IN THE EXPERIMENTAL GROUP OVER THE SEASONS, (X ± SX) S**

Groups, (n=5)	Erythrocytes, млн/м <sup>3</sup>		Leukocytes, минг м <sup>3</sup>		Gemoglobin, г/%	
	(X±Sx)	Cv,%	(X±Sx)	Cv,%	(X±Sx)	Cv,%
Spring (March)						
I	6.84±0,02	0,58	7,85±0,02	0,42	11,04±0,013	0,22
II	6,93±0,002	0,07	8,04±0,012	0,29	11,26±0,018	0,31
III	7,03±0,012	0,35	8,11±0,022	0,54	11,33±0,014	0,24
IV	7,07±0,013	0,35	8,22±0,021	0,50	11,41±0,008	0,14
Summer (July)						
I	7,18±0,002	0,07	8,24±0,008	0,19	11,51±0,011	0,19
II	7,21±0,014	0,40	8,35±0,015	0,35	11,66±0,008	0,14
III	7,24±0,018	0,48	8,40±0,012	0,30	11,72±0,011	0,19
IV	7,22±0,002	0,07	8,48±0,015	0,34	11,83±0,014	0,24
Spring (October)						
I	7,03±0,012	0,34	7,90±0,012	0,29	11,07±0,020	0,35
II	7,10±0,013	0,35	8,14±0,013	0,31	11,19±0,008	0,14
III	7,13±0,014	0,39	8,25±0,008	0,19	11,31±0,014	0,25
IV	7,11±0,013	0,35	8,30±0,018	0,42	11,46±0,013	0,22
Winter (january)						
I	6,66±0,018	0,54	7,98±0,017	0,41	11,14±0,014	0,25
II	6,75±0,018	0,52	8,20±0,01	0,24	11,42±0,013	0,22
III	6,82±0,012	0,33	8,37±0,02	0,42	11,49±0,017	0,29
IV	6,91±0,011	0,32	8,35±0,013	0,30	11,57±0,013	0,22

The analysis of Table 2 showed that in the experimental group IV animals, the amount of erythrocytes in the blood was higher in summer than in winter, ie 7.22 million / m<sup>3</sup> in summer, and in the remaining animals in groups I, II and III, respectively: 7, 22, 7.21 and 7.18 million / m<sup>3</sup>, respectively. In all seasons of the year, our experiments showed that the blood of animals of groups III-IV is more saturated with the necessary elements than their counterparts in groups I

and II. In terms of leukocytes and hemoglobin levels, animals of groups III-IV were superior to their peers.

### CONCLUSION

The clinical and hematological parameters of bulls in the experimental groups were mainly at the level of physiological norm. However, the performance of both characters was higher in the summer than in the winter. In this case, the animals of groups III and IV were superior to their peers, the animals of groups I and II.

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## MACRO AND MICRO STRUCTURE OF THE ENCYCLOPEDIA OF PRESCHOOL CHILDREN

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### ABSTRACT

*There are different types of speech aids in the world educational lexicography, and the analysis showed that most of the dictionaries created for preschool children are of encyclopedic nature, i.e. encyclopedic for teaching. This is due to the fact that children's encyclopedias are more cognitive, educational, pictorial, colorful and, most importantly, they contain general information about things, events, persons, geographical names, which are the basis for concepts specific to a particular national culture.*

**KEYWORDS:** *Encyclopedia, Astronomy, Geography, Mega-Structure, Macrostructure, Mega-Construction, Marsupials, Annotated Dictionary, Preschool Education, Textbooks, Dictionary Corpus, Lexicography, Speech Aids, Encyclopedia of Preschool Children.*

### INTRODUCTION

Every dictionary has its own composition - interior construction. As in all forms of the dictionary, the **mega-structure** of a preschool children's dictionary usually consists of an introduction, teaching aids (user manual), a dictionary body, and applications. There are two cases in the mega-construction of educational dictionaries for young users:

1) Thematic dictionaries, the body of which consists of specific cells. For example, one of the main objects of our research is N.N.Malofeeva's "Encyclopedia of Preschool Children", "Astronomy", which covers the concepts of the universe, "Geography", which contains concepts related to the earth's surface, and "Plants", which describes the concepts of inanimate nature. (1) The dictionary "My first encyclopedia", authored by V.V.Aristonova and others, consists of such sections as "All about man", "Technology around us", "The world of art" (2).

2) Multiple dictionaries, each topic covered in a separate book. An important feature of children's dictionary mega-structure is that they have the appearance of a series, that is, they consist of books that cover specific topics related to the understanding of the world around us. In recent years, the first versions of such dictionaries have been created in the Uzbek language, as well as in the world educational dictionary. For example, a series of dictionaries, such as "My First Dictionary", "My First Encyclopedia", for example, "My First Dictionary" children's encyclopedia consists of 50 books, 10 of which have been published. Each encyclopedia contains information on the field in which it specializes in a concise and concise form, taking into account age indicators. The texts are enriched with direct illustrations. These small encyclopedias are aimed at helping preschool children to acquire basic encyclopedic information about the creation, structure, composition, history of events, great discoveries and various areas of human society: 1) "Journey to the world of technology" - provides information about the history, types, structure of cars, as well as creates incentives for new inventions in children; 2) "It's very interesting" - a wonderful little encyclopedia that helps to get an idea of man, in which the guest - the host of the alien planet - interacts with Man. In the book, the Alien visitor acquires information about man and his structure while answering various questions he asks; 3) The "World of Butterflies" contains information about the types of butterflies on Earth, their peculiarities and structure; 4) The small encyclopedia "Journey to the Universe" provides scientifically based answers to questions about the creation of the universe, the origin of the universe, the Earth, the Sun, the planets, in general, what is the history of natural phenomena; 5) "Travel around the world" aims to get acquainted with the most beautiful places on the globe, countries, cities, their location, area, population, state language, different nationalities and peoples living in them, their culture, customs, attractions. The book depicts the image of each state, its historical and world-famous places with colorful illustrations; 6) The encyclopedia "Journey to the world of fish" consists of several sections, which describe a particular family or group of fish and their main species. At the beginning of each section, the specific characteristics of a particular category of fish, interesting information on their habitat are highlighted; 7) In the encyclopedia "Journey to the animal world" special attention is paid to the world of fauna. The fauna is studied in a systematic way, divided into sections and on the basis of categories. Categories such as about mammals, egg-laying and marsupials, bats (insects), insects and sloths, primates, predators, seals, whales and dolphins, ungulates, rodents and amphibians, and birds are included in the book; 8) The encyclopedia "Journey to the plant world" is dedicated to the study of the plant world. This book, which collects interesting information from each other about herbivores, carnivorous plants, and the like, arouses more interest in nature than in readers; 9) The encyclopedia "Journey to history" allows the child to travel to the past. The book is a brief account of the history of important events, ancient settlements, great historical figures, various geographical expeditions, cosmic inventions, miraculous structures from the earliest times of human history to the second half of the twentieth century; 10) In the encyclopedia "Young Scholar" such as air and atmosphere, inventions and discoveries, machines and mechanisms, numbers and figures, physics, mathematics, seasons, horoscopes, television, sound recording, medicine, nuclear energy, computers, color, X-rays information on different topics of the type is given along with pictures on the topic (3).



## THE MAIN FINDINGS AND RESULTS

The macro and microstructure of the dictionary is important in dictionary analysis. The children's dictionary **macrostructure** consists of a dictionary body or dictionary, which determines the order in which dictionary articles are placed. All materials in the dictionary - dictionary (spelling, correct pronunciation, morpheme, translation dictionaries), a set of dictionary articles (encyclopedic, annotated dictionaries) form the vocabulary corpus. The development of the children's encyclopedia macrostructure takes into account the choice of vocabulary, placement of dictionary articles, assignment of figurative words, interpretation of portable meanings in polysemous words, inclusion of reference materials in the dictionary, etc. The body of the preschool children's dictionary has a unique structure that is not found in any other dictionary, and the material is presented in the form of an article within the article. For example, let's look at the structure of the "My First Encyclopedia" dictionary, "All About the Man":

<i>The main theme</i>	
<b>ALL ABOUT THE MAN</b>	
<i>Level 2 topic</i>	<i>Level 3 topic</i>
<b>OUR EARS</b>	ear, external ear canal, middle ear, shell, eardrum, inner ear, evstaxiev canal
<b>BLOOD</b>	blood composition, nourishes and protects, pulse, movement of blood,
<b>WORKING HARD</b>	heart, arteries, veins, heart and arteries
<b>CHILDREN</b>	Boys: restless and quarrelsome, male strong and protective, teenagers,
	Girls: girls, woman - housewife
<b>OUR BODY</b>	Stand up straight, keep your stature upright, how do we sit
<b>SECRETS OF LONG LIFE</b>	Nature's gift, action is life
<b>POSSIBILITIES OF THE BODY</b>	In the jungles, in the city, it's like a fairy tale

Girls: As can be seen from the table, the vocabulary corpus consists of a single general dictionary article (ALL ABOUT THE MAN), articles within an article (our ears, blood ...), and articles related to small articles: clicks, girls, housewives.

### ALL ABOUT THE MAN

#### Secrets of longevity

People say that they did not spend a lot of energy and time to prepare a long-lasting magic substance - an elixir. To do this, the ancient magicians mixed various herbs, grinded the mouse's tail and cat's teeth, and invented prayers that were difficult to say. They did not know that the secret of man's longevity was hidden in him, in himself.

#### Nature's gift

Scientists have proven that our bodies can live for 150 years without a break. That is how nature created the human race. Unfortunately, mankind makes little use of this gift of nature. Our bad habits make us age prematurely.

Action is life

To live long, you need to refresh, eat right, and most importantly, walk more in the fresh air. People today don't move much, either at work or at home. As a result, our body's ability to function is reduced, making it especially difficult for the heart.

Sometimes, in addition to dictionary articles, the corpus contains a link to the topic - "footnotes". The glossary also includes additional links: "People who have lived a long life in the mountains with clear air can often be found". Or, "Compare the lungs of smokers with the lungs of a healthy person. Bad habits are detrimental to our health"(4).

In the placement of dictionary articles in children's dictionaries, usually thematic, sometimes thematic-alphabetical order is followed. The thematic order is based on the semantic-semantic feature of the dictionary article, mainly its location. Typically, in ideographic dictionaries, thesaurus, associative dictionaries, the vocabulary is sorted in terms of subject integrity. Although thematic arrangements are followed in the placement of vocabulary in children's encyclopedias, it is not like ideographic dictionaries or associative dictionaries. For example, the first 3-volume children's encyclopedia "Miracle Book", published in 1998, consists of three parts, the first part consists of the surrounding universe, the universe, seas and oceans, natural phenomena (What is matter ?, What is the universe ?, The universe is infinite. ? ...), Part 2 flora (What is botany? Where did plants come from? What is yeast? which family does it belong to? how do insects breathe? ...). The dictionary is a purely thematic dictionary and does not follow the alphabetical order.

Vocabulary microstructure, i.e., analysis of the internal structure of a dictionary article, plays an important role in characterizing children's encyclopedias. A dictionary article is the basic building block of any dictionary, consisting mainly of a keyword and its commentary, and usually consists of two parts - the headline (left part) and the commentary (right part). Typically, a dictionary article consists of information about the phonetic characteristics of the word, grammatical commentary, and etymology of the keyword, commentary, definition, synonyms, conjunctions, construction information, and illustrations as evidence, lexicographic pometas, additional references and notes.

In children's encyclopedias, the headline, which is an important part of the structural structure of the dictionary article, is important. A keyword is a list of different level units in a dictionary microstructure that contains information related to spelling, pronunciation, and stress. Unlike other dictionaries, a children's dictionary does not follow a strict criterion when choosing a keyword form, they can be units belonging to different levels.

Modern educational dictionaries also adapt to the educational process. Vocabulary is formed on the basis of state educational standards, curriculum, textbook content. Grammar tasks, tests, questions, exercises are added to it. For example, in the color-decorative educational dictionary "Colorful world" created by Yu.Tursunova for preschool children, along with the explanation of the red lexeme, the poems and assignments involving this lexeme are attached:

**RED** - Blood, strawberry, tomato color. Red represents the strongest excitement in human life. It is also a sign of red disorder, revolution, disobedience to existing procedures, rejection of them. This color is also a symbol of love.

**Carrots**

We are in red and yellow  
 We are invincible in battle.  
 Our ranks as soldiers,  
 As Dries many souls.

A **RAINBOW** is a miracle of nature with a combination of colors. We see 7 different colors in it: red, orange, yellow, green, blue, blue and black. But it has millions of colors that the human eye cannot see.

**Rainbow**

The colors are amazing, colorful,  
 See what catches the eye.  
 It shines after the rain,  
 Seven different amazing colors.

**Practical task:** Try to make a rainbow at home. To do this, you take a glass filled with water, put a glass inside. In this case, choose a room with dark and white walls. Light with a flashlight until a rainbow appears (5).

**CONCLUSION**

Any dictionary serves as a source of information. The dictionary provides the reader with information in a variety of areas. Explain the meaning of a lexical unit, provide information about scientific concepts, and so on.

Typically, any dictionary is developed based on the applicable norms of literary language. The dictionary of the textbook is graded based on the age of the user, which link of continuing education he is learning. For example, dictionaries created for primary grades cover language units specific to children's speech and form competencies to follow ortho-epic, orthographic, lexical, morphological, syntactic norms in the speech process. According to the age of the user in the World Curriculum, for preschool children "Learn to pronounce correctly", "Speak correctly", for primary school "Write correctly", "Learn to pronounce correctly", for senior classes "Spelling textbook", "Pronunciation reading" dictionaries.

Our observations show that dictionaries created for relatively older users, high school students, academic lyceum, vocational college, university, institute students, are mainly terminological, encyclopedic; dictionaries for schoolchildren in the form of a dictionary of lexical units, normative dictionaries and terminological dictionaries; most of the dictionaries created for preschool children consist of color-illustrated encyclopedias, i.e., color-decorative educational annotated dictionaries.

The fact that dictionaries for children belong to this category was due, **firstly**, to the fact that the dictionary is intended for a wide range of users of a certain age, and **secondly**, to the need to explain things, concepts, events in general, to convey the interpretation through pictures.

Educational lexicographic edition for young users - the following important criteria lead in the creation of children's encyclopedias:

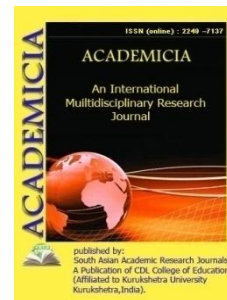
- 1) Lexicography - the formation of the dictionary, its presentation, interpretation (lexicographic semantization), etc.;
- 2) pedagogical-psychological - stage of education (preschool age, preschool age, senior preschool age, school readiness age), age, speaking ability, level of mastery, etc.;
- 3) Aesthetic - visualization, illustrations, ornaments, font size, shape, cover decorations, paper quality, colors. Mental problem, information description and technical definition, complexities related to vocabulary symbolism.

## CONCLUSION

As can be seen, the first textbooks created for preschool children appeared mainly in the form of a pictorial dictionary - encyclopedia, and this genre of lexicography is still developing as the oldest and youngest genre.

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## THE ROLE OF SYNONYMS IN THE EXPRESSION OF THE LINGUISTIC FEATURE IN PUBLICISTIC TEXTS

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UZBEKISTAN

### ABSTRACT

*In this article, the scope of the use of synonyms in the language of newspaper and Mass Media and their artistic aesthetic impact is covered by the example of newspaper texts. Also, the semantic groups of synonyms, the synonymous words used in the language of the newspaper, are expressed by examples.*

**KEYWORDS:** *Synonym, Synonym Couple, Linguistic Culture, Spiritual Closeness, Newspaper Language, Newspaper Style, Expressiveness, Nominative Meaning.*

### INTRODUCTION

Another characteristic feature of the publicistic style is that in many respects there is a desire to form a fund of lexical means, which is inherent only in this style. It is possible to distinguish several layers of the newspaper lexicon. The core of the conceptual (ideological) lexicon consists primarily of a layer of socio-political lexicon.

The productive use of socio-political lexicon and the harmonious use of language with emotional expressiveness are becoming one of the main features of the present newspaper language. In the process of applying social lexicon, attention to neologisms, the process of metaphorization in the semantics of lexical units takes precedence. This is due to the complex effect of several trends in the field of selective use of language tools in ensuring the harmony of style and expressiveness in the language of the newspaper.

The causal function is considered to be the most important function of the newspaper language. The peculiarity of modern newspaper language is also reflected in the attempt to expressively enrich every aspect of standardization. Socio-economic life, political, spiritual-educational processes, the present peaceful, peaceful life presuppose the creation of an impressive text in the

newspaper language, enriching and harmonizing the neural lexicon with emotional-expressive lexicon.

A number of achievements have been achieved in Uzbek linguistics in the field of studying various features of synonyms. The publicistic style, in particular, the thorough study of synonyms in the newspaper language, is also one of the criteria for assessing the skills of a journalist. Significant scientific work has been created in the field of studying synonyms in Uzbek linguistics (1). Among them are the works of A. Doniyorov, A. Hodjiev, R. Kungurov (2).

Among the lexical means, synonyms occupy the most important place with the fact that they can represent the social and artistic-aesthetic polish of our language. A synonym can be called a specific field, capable of generating unlimited possibilities of speech creativity. That is why scholars such as A. M. Peshkovskiy and A. I. Efimov considered the study of synonymy of speech to be one of the central problems of stylistics.

Due to the fact that the choice of a suitable, necessary unit from a synonym row is the most correct way to expressiveness, a subjective assessment, it is considered a necessary linguistic tool in artistic literature and publicistic text. "The existence of synonyms and variability in general create conditions for the choice of language tools in which circulation corresponds to this or that situation, hence the concept of choice is among the stylistic categories" (3).

Synonyms are used as stylistic figures for the following purposes:

1. In order to summarize, summarize synonyms are used in pairs of words: *happiness, dignity, respect*.
2. Two or more synonyms for expressing the similar or close details of the thought in speech in different ways products used. At this time, synonyms come in many forms, for example, in the form of core synonyms (big, great, huge, large, massive), in the form of compound, artificial words (brave, fearless) synonyms, compound synonyms (to distinguish, to differentiate) and finally, in the form of synonyms (heavy leg, double, pregnant, loaded) represented by euphemistic words or conjunctions.

Synonyms are of great importance in the effective expression of speech, as well as in ensuring that the style is colorful, in the Prevention of refunds (4). The study of the use and methodological features of synonyms in the language of the newspaper can be based on the researches of Sh. Rahmatullaev, A. Hodjiev, A. Shomaksudov, M. Mirtodjiev. Professor Sh. Rakhmatullaev divides synonyms into lexical and grammatical groups (5). Indeed, lexical and grammatical synonyms fully express their methodological potential in the text. According to the classification of Professor A. Shomaksudov, synonyms are divided into ideographic, stylistic and stylistic synonyms in terms of meaning and scope (6). Professor A. Hodjiev's book "Explanatory dictionary of synonyms of the Uzbek language" is one of the main sources in determining the meaning and scope of synonyms (7). In the chapter "Paradigmatic relations in lexical meanings" of M. Mirtodjiev's monograph "Semasiology of the Uzbek language" the paradigmatic relations in lexical meanings are analyzed in two ways: 1) on a certain theme semantically. 2) the essence of the phenomenon of synonymy is explained in detail (8).

According to Mirtodjiev, in the linguistic literature, in order to distinguish semantic synonyms from absolute synonyms, they are called "words with close meanings" and not "words with the same meaning". Because in semantic synonyms, words are not exactly the same as some lexical



meanings. These lexical meanings undoubtedly differ from each other in their emotional-expressive, stylistic semantics, and in what style they belong. As A. Hadjiev rightly pointed out, intimacy brings together, but does not unite. To do this, he analyzed the words to laugh, to smile, to grin, to smirk, roar with laughter, to whisper, loud laughter, to shout. He points out that the lexical meanings of these words are very similar. They form a semantic sequence. But there can be no synonymous series. These include the lexical meanings of the verbs smile, loud laughter, to whisper, laugh, "create a sign of joy in the muscles of the lips and eyes"; The verbs to laugh, to laugh, to laugh, to laugh have the same synonymous line with the lexical meaning of "to vote for joy" That is, not mutual lexical meaning affinity, uniformity is the basis for the synonym of words (8).

There is a definition is synonyms, these are words that come equally in the nominative meaning. For this, it is worth paying attention to the following example. The words beautiful, handsome, attractive are a mutual semantic synonym for the nominative meaning. In this respect, they have equal semantics. But they are not absolute synonyms. The word of beautiful differs from the rest in its originality to poetic speech, word of attractive colloquial speech. Also the nominative meaning of words will be the case of emotional, expressiveness, stylistic expression makers.

The sources of semantic synonyms in the Uzbek language are several. As an example, the existing love and liking in Arabic language, again the semantic synonyms of happiness and enjoyment assimilated directly into the Uzbek language.

Synonyms also play the role of an important stylistic tool in the newspaper language. They played an important role in ensuring expressiveness, responsiveness, achieving color saturation, preventing repetitions and repetitions. Each of the synonyms has its own semantic-stylistic meaning; the subtle differences in their meaning will be clear in the text. It is very important to pay attention to whether synonyms are suitable or not in the text, semantic-stylistic meaning. Applying them depending on the subtleties of meaning in its place will help to express speech fluently, brightly, clearly, meaningfully. The fact that the synonym does not use the word in its place, does not take into account the features of meaning causes a certain stylistic defect, nervousness, sometimes awkwardness, in general, a violation of the stylistic norm.

The application of synonyms in the language of newspaper is very colorful. In the language of newspaper, stylistic, ideographic, fertile were also used synonyms specific to a certain style. While some of them served to express the expressiveness, others were used only to avoid repetition. In their application, the dexterity, resourcefulness of journalists is felt. Below we will try to consider the application of synonyms in the newspaper language on the example of some synonym series

The application of synonyms in functional styles of words also has its own characteristics. It is also characteristic that synonyms such as big, beautiful, face, heart and other are used in the newspaper language.

From the words of the main synonym of the heart, the series was also used fertile in the language of the newspaper. The synonymous line includes heart, tongue, soul, breast, chest (A. Hodjiev's dictionary, p. 235), and the language of the newspaper is characterized by heart, soul, tongue, mind. The words heart, soul, and tongue are especially active in the language of essays and short stories, and sometimes in articles. Among them, the word heart is most actively used in such standard combinations as heart reserve, heart command, heart temperature, heart call. Take, for

example, A gentle melody spreads over the vast area. This delicate melody, full of longing for spring, love for nature, love and devotion to the motherland, confidence in the bright future, reaches the depths of every soul listening to it. (Z.,19.03.2019). These historical words, these moments, dreamed of by our people, will be remembered with pride for centuries, will never fade from the hearts of present and future generations (Z., 04.09.2019).

Among the synonyms of the word beautiful are beautiful, graceful, loveliness, fairness, adornment, seemliness, embellishment, for the language of the newspaper beautiful, graceful and etc. It means characteristic. The language of the newspaper often uses the word beautiful, which is methodologically neutral. It applies to humans and other inanimate objects. Expressiveness and effectiveness are ensured by the appropriate use of the word "beautiful" in the newspaper. The word "beautiful" is found mainly in articles about morality, rural and urban life. For example: Our ancient and eternally young cities, beautiful nature, rich and colorful culture have fascinated the people of the world for centuries (Z., 14.11.2019). Naturally, this will keep your home clean and beautiful, and you will be able to breathe fresh air and be in a good mood (Z., 12.11.2019). At the conference, President Shavkat Mirziyoev noted that tourism, like all other spheres, is developing in the country. Uzbekistan, located in the center of the Great Silk Road, attracts more and more tourists with its unique historical monuments, unique culture and traditions and beautiful nature. Emphasized (Z., 19.11.2019).

In the synonym series of the celestial soul, the sky, blue, in the articles of the newspaper sheet, essays, criticism, sometimes in the articles of the main, in some cases the sky, was used. For the newspaper language, the use of the words mainly sky, sometimes blue, is characteristic. For example: *...As thousands of stars in the sky of Samarkand fall to the Earth* (Z., 26.11.2019).

It has been actively used in country and motherland newspaper materials among countries, place, lands, plant, provinces, etc. They are sometimes used to prevent recurrence. For example, .....Representatives of the public of the region expressed confidence that they will increase the prestige of our country as a citizen of a free and prosperous country, fully complying with the procedures for the full performance of the prayers of future pilgrims (Z. , 22.10.2019). In the first half of this year, the growth of tourism services in the country amounted to 27%, and the volume of tourist services - 6.6% (Z., 3.11.2011). Every day of this visit, I intend to pray for the prosperity of the country, peace, well-being of my people, the well-being of our President, the well-being of our children (Z., 29.10.2019).

Each word has its own meaning in the synonymous phrase man, people, person. For example, the word man is used in general philosophical contexts. For instance: *As a result of illness , about 5 million people die each year* (Z., 07.01.2020). Where do such evils, which distract the human being from human qualities, contradict our spirituality, take us out of the circle of decency and morality, and lead us to the streets, in particular, come from? Who is paving the way for them to multiply and multiply? (Z., 16.01.2020).

In the following example, it becomes known that it is also necessary to replace the word man with the word person, since there is an opinion about specific people, that is, the word man was used as a noun. For example: *Of course, it was not even easy to determine the winners of the competition. The name of the winners was determined on the basis of the conclusion of the jury consisting of highly qualified specialists in each direction, the honor of the people who participated in the Events* (Z.,19.12.2019).

In the texts of the newspaper, especially in the reports written in connection with problematic articles and festive events, the words man, nation, people were actively used. For example, *A man is a soup of tones. Both the listener and the admirer of the magical varieties he created, he himself. The importance of music can not be overemphasized in inspiring a person towards noble goals, beginning with bright dreams, calling for kindness.* (Z., 20.08.2019). *The witness of history is that during the period of the Turkish, this kingdom, which occupied almost half of the world, spread to such a place as Turkey. Even now, according to the internet, 300-400 million inhabitants of the world's population speak in Turkish language. But there are also peoples in the world who do not have their own language. Alternatively, every nation, for the prestige of its native language, burns the soul and loves it as much.* (People's questions, 15.10.2020)

There are a lot of cases when synonyms such as courage, bravery and boldness are used appropriately in order to avoid repetition in the text. For example, *In one of such struggles, on the 19th of November, the brave soldiers of the border troops showed their true steadfastness* (Z., 29.08.2019.). *And bravery is never forgotten. Such boldness can not be unitized if times change.* (Z., 18.07.2019.).

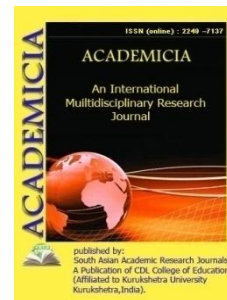
The use of emotional-expressiveness meanings of synonyms in words in the text serves to impressiveness and brightness. For example.: *The most glorious, most cherished day gives endless pride to our hearts and gives joy to our hearts. It should be noted that this Memorial date, which has a special place in the history of our country, is widely celebrated in all the cities and villages of our region* (Z., 05.09.2019). *In fact, independence, freedom is the greatest, the most cherished blessing. It is a great happiness to live to realize such higher concepts by feeling them from the heart. It gives a person special pleasure, motivates goodness, encourages creativity* (Z., 5.09.2019).

Many synonyms in our language are used in the texts of the newspaper as a scan, in these words the national, the cultural scheme is strong, the appropriate application of them in the text will provide influence and serve as an important factor in the formation of a sense of national pride. In general, the linguistic research of the publicistic text, in particular the texts of the gazeta, helps to draw sufficient conclusions from the results of the analysis of such areas as Stylistics, Text Linguistics, sociolinguistics in Uzbek linguistics. Especially stylistic analysis of texts serves as a relative basis for a comprehensive solution to the problem.

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## **ANALYSIS OF SYMBOLIC MEANINGS USED IN NATIONAL CLOTHES OF BUKHARA, SAMARKAND AND NURATA**

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### **ABSTRACT**

*The article describes the history of Uzbek national clothes from ancient times, the elements of artistic decorations in it, the symbolism of the patterns and their analysis. Each region had its own costumes from ancient times. The appearance, color, and style of clothing have changed over the centuries. This can be seen in the multilayered costumes, the weaving of fabrics, the make-up of clothes, and the ornamental ornaments. In particular, this article explores men's and women's clothing in Bukhara, Samarkand and Nurata. The semantics of the patterns used in them are detailed. Each period's costume, style, and ornaments have presented their own aesthetic design. Based on these aspects, the social origin of the person is identified. At the same time, each dress had its own symbolic meanings. Samples of decorative arts also have symbolic meanings, while not only keeping people safe from various calamities, but also symbolizing peace, purity, family, love, happiness and children. Information on the gold embroidery techniques are also given in the article. The research was made on the basis of historical sources, museum funds and written information.*

**KEYWORDS:** *Art, Applied Art, Region, Pattern, Color, Dress, Symbol, Semantics, Embroidery, Golden Embroidery, Composition, Style, Stylize, Ornament.*

## INTRODUCTION

Over the centuries, in the territory of Uzbekistan has established peculiar and major centers of folk arts and crafts. Each region differentiated from others by ornamental art. Especially, skullcaps and knives of Chust, Richten are famous for their lacquered ceramics, Margilan's rainbow lustered satin and adras, Bukhara golden embroidery, Shahrikhon knives, colorful embroidery of Surkhandarya, Khorezm jewelry and unique Karakalpak patterns are known.

Uzbek national costumes in Samarkand, Bukhara, Tashkent-Ferghana and Khorezm, atlas, adras, embroidered robes, various waistcoats, Khorezm women robes, Bukhara gold embroidery, silk scarves, Kashkadarya and Surkhandarya men and women have their robes in bright colors, vests, and children's clothing are varies with artistic decorations.

The first original ornament had a geometric shape, consisting almost exclusively of rigid forms - circle, semi-circle, oval, spiral, square, rhomb, triangular and other combinations. The decoration was mainly used with zigzag, barcodes, stripes, "arch" ornaments and rope patterns.

The symbolic meanings of forms began to appear, as the ancient people began to have a certain theological understanding of the organizational structure of the universe. For example, circle - sun, square - earth, triangle - mountains, swastika - sun movement, spiral - development, active movement and so on. [1]. However, they probably did not serve as decoration at the time because they were placed in areas such as the bottom of the containers, the jewelry and the amulets where people could not see. Gradually, these symbols became of aesthetic value and began to acquire ornamental pattern. There were revealed the task of decorating the ornament.

**Research part (material of the research method).** As it is known that each color in the fabrics has a symbolic meaning, for example, red means a strong influence on human psychology, this color means feelings, love, desire, and on the other hand, aggression. The red color represents life movement and the ability to act.

Yellow color is the brightest color; it symbolizes lightness, sensitivity, bright feelings and joy, as well as the perception of a happy life.

Green color means firmness, eternity. This color reveals a human's firmness in character. The blue color is the color of the sky, the peace, the quiet, the harmony, the satisfaction, the eternity and the interconnection to the environment. The black color shows characters of mystery, secret, problem, seriousness and simultaneously denying all of them. Black is mainly meant of mourning in Uzbekistan. The white color is a symbol of purity and integrity. This color can be seen mainly in bridal dresses. The composition of the fabrics consisted of three or four colors. The costume is bright and colorful in color spectrum, with the main colors were reddish-purple, blue, gold, black and white. In the Bolalik-tepa illustrations clearly visible that the servants uniform was used only in grey and green [2].

According to the original archaeological illustration samples which found in Dalvarzin-tepa and Bolalik-tepa fortresses, the colors of the shoulders and waist were the same. The combination of black and red, yellow and red is used in a wide variety of colors. Red and yellow are also common, as they are also common in nature. Color played an important role in the Uzbek



national fabrics. All regions of Uzbekistan are represented by traditional color and color combinations. According to Margilan weaver M.Mirzakirov, red in Khujand fabrics, red in Fergana is rare, saffron-yellow, blue –are dominated in Kokand. Depending on the density and color of the fabric, one could know where it was made. In addition, each color is designed for a particular age.

The tradition of paying special attention of the people to the red color is still saved, and during the war of kungirats, mountain-clogs, girls sew their scarves on red cloth and when sending sheep to marriage portion, tied red scarf to the sheep. Generally, our people considered red as a symbol of joy in our nation. The traditional clothes reflect to the outlook of our people, the traditions of the economy and the way of life.

As each color has its own peculiarity, the designer should be able to use it properly, namely, create models of dress according to age, gender, color, tone, lifestyle, function and human psychology. The pattern, that is, ornament, in its turn, was considered as one of the features that demonstrate symbolic elements in the dress.

*Ornament*, -according to many experts 'opinion, not an independent direction, but rather a particular kind of artistic design used to decorate a particular thing, but also "it is enough complex visual structure and various expressive means is applied for its organization." They include the mathematical foundations of color, texture and ornamental composition - rhythm, symmetry; graphical expression of ornamental lines, their orientation, elasticity, angle; the relief includes the plasticity of the ornaments and finally the expressive qualities of the motives and its beauty. The word ornament is associated with the word "decoration or pattern", which has never been independent, and is made up of usefulness and beauty; its basis is connected with functionality" [3]. He should emphasize using the shape of the decoration. The ornament consists of subjective or non-subject motives that can be used in stylized and geometric patterns of naturalistic elements.

The pattern plays a major role in national applied crafts. There are 4 main functions of the pattern: firstly, constructive - it helps to keep the tectonics of the body and supports its spatial perception; secondly, operational or working - facilitates use of the product; thirdly, the representational - the value of the item; fourthly, psychologically - it affects the psychological spirit of the person, excites or rather calms it. Within the long history of ornamental art, many types of patterns have appeared: geometric, plant, complex, etc., which can be seen from simple subdivisions to complex joints.

One important aspect of studying geometric patterns is not only the determination of the structure of compositional properties, but also the description of the structure of the pattern. Some experts say that the geometric pattern was formed during the primitive period and represented an abstract idea. Ancient people depicted the world around them with signs using cave walls and household appliances. In primitive ornamental compositions, geometric symbolic forms are common and have specific symbolic meanings, for example, circular-sun, square-earth, triangular-mountain, spiral-continuous motion.

Geometric pattern forms striped, spatial composition systems. Exactly the geometric pattern that enables us to understand the mathematical, rational concept of the universe. Typically, the artist relies on mathematical calculations for the initial structures of geometric ornaments when creating various compositions of circular, square, and triangular segments. On the basis of a

corner is a number representing repetitive or proportional portions of the components in the ornamental composition.

The circle is a universal symbol that has no beginning and the end, infinite and unlimited. In many traditions (customs), a circle was a symbol of space.

Also, the circle- is the sum of perfection, unity, immortality, finality and completeness that is the most universal form of geometric patterns, reflecting harmony. The main function of the circle is the symbolic representation of celestial bodies, and even in Islam, the circular shape is said to be the glance of Allah.

Square - is the basis of ornamental decoration in all cultural directions. According to the ancient world outlook, the square is the basis of the universe, the four sides of the world. All sides of the square also have a territorial meaning. The square is sometimes used as a symbol of rhombus or rectangular land that has been plowed as the main symbol. The square's symbolism was perfection, permanence, stability, honesty and purity.

Triangle- is the basis of humanity, the fundamental form of geometric ornament. The triangle is the combination of the spirit, soul and body of humanity. Oval - is the protection of the human soul, a sign of the mysteries of humanity's origin and of the creation of the universe. Spiral (curve)- is a symbol of life-force from the earliest times and represents the endlessness of life, the contradictions of life.

The rhombus - is a symbol of female, beloved, and childlike nature, and these patterns are formed by combinations of siddhis and sijiis. The figure was used for the women clothes, covers and hats. In ornamental decorative patterns, realistic shapes are represented by geometric shapes using conventional symbols, that is, the artist geometrically shapes the living image. Such styling often transforms their appearance by making them look totally unrecognizable, becoming just plain geometric patterns [4].

The art of gold embroidery has a long history, and almost all Eastern countries are home to it. In the 15th century, gold embroidery, one of the most subtle types of artisanship in Uzbekistan, flourished in Bukhara. Gold embroidery is one of the key parts of Uzbek applied art. From ancient times gold embroidery has been widely used not only as a decoration but also as a symbol. Only the king khan's family or high-ranking officials could wear clothes with elements of gold. In addition, each ornament of the composition has its own meanings and the appearance of the composition varies greatly with the future owner of the dress.

In fact, the art of gold embroidery was founded in the Timurid period and flourished in the early 19th and 20th centuries. In the past, men were engaged in this type of art. All of the best craftsmen worked in Bukhara [5]. According to the scientist PA Goncharova, the theme of the Bukhara tin was mainly used by herbs, such as leaves, palm trees, bush, trees, branches, canvas, almonds, pomegranates. If a single-leaf flower pattern is embedded in the other, it is known as the "choraldürünbaberun" [6].

The word "madokhil" is an arabic word which means - "to enter." These flowers are often embellished with small-shaped patterns, with two leaves at the top of the dress facing each other [7].

Geometric patterns are rarely used. Each pattern had its own symbolic meaning. The symbolic forms used in gold embroidery are also closely related to human life. There are stylized forms of almond, grape, grapevine, cotton, shrubs, trees, flowers of different shapes, pots and bushes, turquoise, sunflower, willow tree, bush and leaf forms.

Bukhara's clothes differ from those of other regions with its elegant, luxurious and gold embroidery. Three colors are predominant in Bukhara fabrics: brown, yellow and pink. In the Bukhara oasis, the edges of the collar are embroidered with gold and simple embroidery. National costumes reflect the rich cultural traditions, customs, lifestyle and rich historical roots of the Uzbek people [8].

Men's robes, turbans, skulls, trousers, footwear, women's clothing: dresses, gowns, aprons, scarves, boots, and gold embroidery are adorned with flowers and various patterns.

Almonds are the richest copy of the original. All the almond flowers mean happiness. (Almonds are one of the most commonly used patterns in the Samarkand-Bukhara embroidery). Almonds are used in women, children's clothing and hats. This symbol in leaf-shaped ornaments is an important element of gold embroidery. They can create independent compositions for smaller pieces. The leaf is a symbol of spring awakening and spring freshness. It is used in women's shirts and suzannas.

The "davkur" is the purple and part of the kids' robe. "Turunji" consists of a "moh" half-pointed and a "shash" six-angular star. Plant-shaped lines are there too. The basis is filled with ornaments. The sheep's horn is a symbol of courage, gravity, and purity. Used mainly in men's robes - chapan.



Fig.1.-Davkur-almond.

The symbol of almonds is one of the richest patterns of gold embroidery. All the almond flowers mean happiness, peaceful, comfortable life. The ornamental composition includes the almond ornaments - the "Toji Flower" (Picture 1). [9].

The content and composition of the embroidery pattern are adjusted for the purpose of using a particular piece.

In the late 19<sup>th</sup> century, in Nurata appeared a unique style of embroidery, with flowers embroidered on a white background to reflect the character of Nurata's spear. Such colorful embroidery is a leading figure in the artistic embroidery of Uzbekistan. Often, floral patterns accompany the bird's color image, as well as stylized images of animals and humans. The most common picture is the middle octagonal star and four large branches in the corner.



Photo.2.- Wild Almond.

Suzane (palak). Almonds - wild almonds represent the intention of destroying the evil spirit and removing evil from the eyes. (Pic.2).



Picture.3. - Pepper.

Suzane(palak).Pepper is a very similar matrix in pepper and almond semantics. Pepper has become a popular symbol for stigma, like scare away evil spirits. (Pic.3).



Figure.4. - Pomegranate.

Suzane(palak). Pomegranate is a symbol of widespread folk art. Pomegranate is usually described in the section of the profile, fecundity (children) in the expression. The picture of the pomegranate surfaces that have been studied are also very popular. It may also represent the cell membranes in the fruit (Pic. 4).





Figure.5.-Full Moon.

Suzane (palak). Full moon is a powerful energy and emotion. In the most perilous period for new married people, it is meant to save them from the catastrophe (Pic. 5).



Fig.6.-Motley worm (Suzane for girls).

Suzane (palak). Motley worm (Suzane for girls) is depicted in lighter contrast colors. Leather is made of “aladja” wool. It means protecting the babies from the scorpion attack (Figure 6).



Figure.7.-Күйгү Emotions.

Suzane (palak). The portrait represents a symbol of wealth and patronage (Pic.7).



Figure.8.-Herat.

Suzane (palak). The great cultural center of Herat is the capital city of the Herat-Timurid empire. It is a reflection of the great culture of the great ornaments and miniatures by A. Navoi, K. Bekhzod and Sultan Hussain. (Fig. 8).

**CONCLUSION.** As a result of the research, it should be noted that each region has its own unique pattern elements, color concept, ornaments. One of the important things is to say that colors used in the patterns have a positive and a negative effect on the psychology of a person and his mood. Each region also has its own rules for using patterns. Generally, patterns are described depending on what they are used for.

For example, the types of ornaments used in suzane and palaks (decorative coversheet) are fundamentally different from the patterns used in clothes, in appearance, color and symbolic meaning. Designers need to pay close attention to the symbolic meanings of the designs when

designing new clothing designs. Patterns used in headdresses should not be used in shoes, and vice versa.

The research shows that each region has its own unique patterns, including Bukhara, Samarkand and Nurata, but it is important to remember that the patterns used in palaks (decorated coversheet), suzane, and clothes differ in color and philosophical meaning. In general, this theme is widespread and also their usage is actual for today, and has a wide range of patterns throughout Uzbekistan, including Tashkent-Ferghana, Samarkand-Bukhara, Surkhandarya-Kashkadarya, Khorezm and Karakalpakstan.

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## TRAJECTORY TOWARDS PEACE THROUGH THE LENS OF SPORTS AND SUSTAINABLE DEVELOPMENT GOALS

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### ABSTRACT

*There are different angles from where an individual understands and measures the depth of development. A policy maker has different prospective, an educationist has different one, the health professional has different and a socialist has different too. The sports considered an entertainment asset in society but it has various important factors which plays vital role in bringing development, peace and of course in achieving various sustainable development goals. The study focuses upon the association 'sports' as a method which has direct or indirect impact on achieving sustainable development goals. The contribution of sports is not just limited to the entertainment and physical activity but it has own importance in making of peaceful and healthy society.*

**KEYWORDS:** *Development, Peace, SDGs, Society and Sports.*

## INTRODUCTION

Sports as social phenomenon play a vital role in developed and developing countries. On the basis of its driving roots from 'disport', sports involve the diversion of people from the pressure of daily life through the participation in any form of physical activity<sup>1-3</sup>. The European Association for Sociology of Sport (2018) has defined sports as all types of human movements, aiming to maintain or improve physical fitness and mental well being as well as socio-cultural relationships. These human movements also involve competition at different levels and its associated results<sup>4-5</sup>. In every human society from past to present time, people have been practicing physical leisure activities that can be recognized as sports<sup>5</sup>. Sport is characterized with physical exertion, formally structured; formally organize association, goal of achievement, explicit rules of behavior and proceeding. It generates opportunities among people who participate in any sports as a player, athlete, coach, etc. Different extrinsic rewards like trophies, monetary rewards, cheering, etc. and intrinsic rewards like the feeling of satisfaction in achieving the goal are offered which act as a motivational factor for the participation in the sports<sup>1-2</sup>. Same sport has different meanings to different people, involving in that sport. For example, cricket can be a job to a professional player while it can be a competition for a club player; sports in an aerobics class can be a source of recreation, socialization staying healthy and stress reduction<sup>6</sup>.

While considering social facet of sports, it is also observed that there is an interconnection between sport and other social institutions, such as family, education, economic, politics, health, media and religion in the society<sup>7-8</sup>. The family as a primary institution of socialization provides support and encouragement to children in the participation of sports. The family also influences the level of seriousness and attitude towards sports among children. Sports also act as a 'unifying agent' in the participation of athlete with the support of their parents and siblings. Many daily activities of the family are often influenced by the involvement of children in any sport. The amount of money and media coverage involving in any sport depends upon the value and marketability of that particular sport in the society. Companies provide sponsorship to individual athlete, team or sporting event for participation and organization of the sports, such as in the South Africa, 'Castle Lager' company sponsored 'Proteas' team. In return companies use the name of individual, team or event for their own promotion and campaign. Media covers mega-sporting events like the 'Olympic Game', the 'FIFA World Cup', the 'Tour de France' and so on globally. More than 3.2 billion people around the world viewed the 2010 'FIFA World Cup' South Africa on television<sup>8</sup>.

Numerous endeavors have been initiated at national and international levels to promote peace and development by the means of sports in the world. In 1999, the International Olympic Committee (IOC) had adopted IOC Agenda 21 2030 Agenda which advocated to improve socioeconomic condition, to conserve and maintain resources and strengthen the role of young people and women in developing sustainable societies<sup>9</sup>. The Sustainable Development Goals (SDGs) also recognizes the significance of sports in bringing peace and development due to its cost effective and flexible nature. The Principality of Monaco organized SDGs Youth World Cup 2018 as a pilot project in New York from 22<sup>nd</sup> to 24<sup>th</sup> June 2018. On its basis, The United Nations envisage the toolkit of action through which sports can bring sustainable development in the world<sup>10</sup>. The well being of entire world, including both developed and developing countries along with surrounding environment remains a focal point of the SDGs<sup>11-12</sup>.

The 4<sup>th</sup> International Day of Sport for Development and Peace has recently been celebrated on 6<sup>th</sup> April 2020 to encourage people for participating in sports and remain physically active at the time of uncertainty and social distancing due to the spread of epidemic COVID-19<sup>13</sup>. World Health Organization, 2020 (WHO) also recommends some measures to remain physically active, in other words, accomplish the task '*150 minutes of moderate*' or '*75 minutes of rigorous*' physical activity or 'a mixture of both' per week, without any equipment and limited space during self-quarantine in COVID-19<sup>13-14</sup>. Measures, such as take short session time of physical activity, use internet for online exercise classes, walk in limited space, reduce the time of seating ideal, do meditation and home based exercise are suggested<sup>14</sup>.

Sport as a social institution is the sociological importance in the socialization of youth, integration of different groups, mental and physical well being, historical continuity through the recording of past and enriching in community pride. The idea of winning, teamwork, fair policy, and hard work, conformity to rules, loyalty, and commitment to sport symbolizes the norm and value of society related to success, social control, honesty, cooperation and justice<sup>1, 3, 7, 15</sup>. Although some form of aggression is expected among sport people with their participation in sports, yet sports related rule and regulations control their violent behavior<sup>1</sup>. Sports enable human value, equality, health education, public private partnership, job opportunity, social inclusion and empowerment. It ultimately promotes socially desirable traits among people involve in the sport that requires for peace and development in the world<sup>16</sup>.

The aim of this paper is a break up of four parts that underpin the attribute of sports and SDGs in bringing peace and development as well as giving significance to well being and physical fitness on the basis of secondary analysis of previous related studies and literature. The first section analyses the contribution of sports in the achievement of SDGs in bringing sustainable development in the world. The second encapsulates the significance of sports in creating peace and violence free situation for sustainable growth in developed as well as developing countries. The third section contours the role of sports in improving health, academic improvement and opportunities for development in the society. The last part outlines the desirable quality of peace and development through the achievement of SDGs.

### **Sustainable Development Goals through sports**

In the 'United Nation Conference on Sustainable Development' of Rio de Janeiro, the discussion on developing SDGs on the basis of the success of the Millennium Development Goals (MDGs) had initiated in 2012<sup>11, 17 & 18</sup>. The MDGs appreciated the significance of sports in the achievement of goals with the multidimensional aspects of sports. Sports improve health and well being through physical activities and education; create opportunities in employment; cultivate non-violence, fair competition and teamwork; and ultimately bridge the cultural and ethnic barrier through cultural exchange and communication<sup>19</sup>. After 2015, the MDGs have been incorporated in the SDGs that decided to be achieved by the year of 2030<sup>11, 17 & 18</sup>. The SDGs encompass 17 goals which reflect the different dimensions of the society, such as social, economic, health, education, environment and political facets<sup>20-21</sup>. These goals support the principle of equity, human right and non-discrimination<sup>22</sup>.

Goal-3 Good health and well being, goal-4 Quality education, goal-5 Gender equality, goal-8 Decent work and economic growth, goal 11- Sustainable cities and communities, goal-16 Peace and justice and strong institutions and goal-17 partnership for the goals for sustainable

development can be achievable through the attributes of sports such as physical activities, physical education, holistic education, non-discrimination, employment prospect and team work<sup>23</sup>. The Taekwondo Humanitarian Foundation is working in the area of SDGs, particularly in the area of health and harmony. Youth Leadership programme (YLP) camp in Germany is functioning in the locale of empowering the young leaders. The Diyar Consortium project of Palestine works in the context of gender equality. NepAll project is striving for the inclusion of disabled people in sports. YLP in Gwangju, Republic of Korea is working for bringing harmony and peace in Korea. The United Nations is making efforts in the achievement of SDGs with the partnership of IOC. These are some of the example of the sport's contribution in SDGs<sup>24</sup>.

The SDGs acknowledge the ability of sports in addressing the multiple SDGs at a time. International agencies, for example United Nations Development of Economic and Social Affairs (DESA), WHO, United Nations Educational, Scientific and Cultural Organization (UNESCO), etc. are working in collaboration with other United Nations (UN) organs, agencies, private organizations and civil society in order to achieve SDGs through Sports. The principality of Monaco initiated the project 'SDGs Youth World Cup' to spread the value of sports and its contribution to the achievement of SDGs. There were 80 school children from New York participated in a soccer tournament that organized under this project. After participating in the tournament, school children understood the importance of SDGs and the contribution of sport in SDGs as well as they realized the importance of hard work and consistency in achieving success in both sports and studies. They were also willing to spread the awareness about SDGs, gender equality and healthy lifestyle among family members and friends<sup>25</sup>.

Despite acknowledging the contribution of sports in SDGs at global level, policy makers of some countries have an indifferent attitude towards sport for achieving SDGs at national level. Nepal, for example, has no independent policy in Sports that has potential to achieve SDGs. There is only one policy on the encouragement of 'sport tourism' and infrastructural development of 'sport adventure' that facilitates the creation of job opportunities and economic growth in SDG 8<sup>18</sup>. There are many sports in which women are denied to take part, for example, Nigerian women are restricted to participate in American football, rugby, cricket, etc. due to stereotyped female orientation. This attitude acts as a barrier to the achievement of SDGs, especially goal 5. Interaction, socialization and education can bring a change in the attitude, behavior and skill of women as well as in family, society and ultimately in the world that encourages women to participate in sports.

Collaboration among government, NGOs and international agencies, Provision of Social support, creating conducive environment, sensitization of traditional leaders or rulers and sponsoring research on finding barriers and ways will enhance the participation of women in sports and in the society that further strengthen women's position in society and bring gender equality<sup>25</sup>. A comprehensive and integrated approach is required at each level for the achievement of SDGs through sports in developed as well as developing countries, including Nepal<sup>20, 26</sup>. Moreover, accountability should also be improved from international to national level<sup>22</sup>. There is a requirement of more funds for the inclusion of sports in development programmes<sup>22, 27</sup>.

### **Sports and peace**

Sports endeavor to bridge the gap between groups, to generate unity and tolerance and to facilitate social relations with the creation of civil society, sport clubs, teas and league system

based on democratic process and rule and regulation. Kvalsund (2007) states that sports can distract people from conflict and violence to rule governed and socially accepted pattern of behavior, for example, in case of former child soldiers in West Africa<sup>28</sup>. The United Nations Educational, Scientific and Cultural Organization (UNESCO) consider sports as a catalyst for upholding the ideal of social integration, non-violence, tolerance, justice and peace (UNESCO, 2017). Many initiatives, for example 'DIAMBARS' in Senegal, 'Sport for Peace in Central American countries' (El Salvador), 'Sport for Peace in ECOWAS countries' (West Africa region), 'YSPE Programme' in Mozambique etc. commenced to promote intercultural exchange, physical education and prevent violence, delinquency and drug consumption. These initiations have been further endorsed cohesion, cooperation, peace, social development as well as improve lifestyle and reduce the risk of lifestyle related diseases<sup>29</sup>.

'Diversionary' and 'integrated' sports programmes, such as 'Summer Splash Scheme' 'Night Hoops Programme', 'Youth Works', 'From Gladiator to Weightlifter' etc. were launched whereby young people could be engaged in the activities related to sports and arts<sup>30</sup>. In 2002, there was a around 5.2% decline in youth based crimes, such as motor crime, domestic burglary, robbery, criminal damage and drug offense with the success of 'Splash Extra Scheme' in UK<sup>9</sup>. There are many NGOs that are functioning in different countries like UK, Scotland, Rwanda, Africa, South America, etc. 'Ball to All', 'Peace Players International', 'Right to Play' and 'United Through Sport' are exemplary non-profitable organizations that work in the area of peace, development and health through sports. These organizations are using sports like football for peace and development through childhood development<sup>31</sup>.

'Ball to all', for example, provides soccer balls to children of the underprivileged section with a belief that by participating in sports, children are less likely to influence with anti-social elements<sup>27, 31</sup>. In Jerusalem, 'Peace Players International' uses sport to uphold unity and peace between Arab and Jewish youth in the situation of violence and political instability<sup>31</sup>. The 'Olympic Game' represents an epitome of sport event in which the 'Olympic Torch Relay' is starting to spread the message of humanity and oneness in the world before commencing the 'Olympic Games'<sup>27</sup>.

In Colombia (Sri Lanka), former child soldiers of a different armed group like the Liberation Tigers of Tamil Eelam (LITTE) rehabilitated and reintegrated into Sri Lankan society through 'Cricket Peer Leader' training, an innovative sport for development in which educational, vocational, recreational and psycho-social activities were carried out under the partnership of United Nations International Children's Emergency Fund (UNICEF), the International Cricket Council (ICC), government, Sri Lankan Cricket, and the non-government organizations (NGOs), such as 'Cricket for Change UK'<sup>32</sup>. Football is also considered as a means to unite people and promote peace due to its popularity and contribution in social transformation. The government of Colombia has also used the football as a 'methodology of peace' with the 'program Golombiao, El Juego da la Paz- the Peace Game'. Apart from cricket and football, sports like badminton, chess, table tennis, baseball, gymnastics and ju-jitsu are also used to endorse peace in collaboration with the Monaco based organization Peace and Sport and local NGOs<sup>33</sup>.

Sports consider not only as physical activities, but also as a medium of social interaction and intensive interpersonal relationship that go beyond any type of division, such as class. However, in South Africa, socioeconomic variables, like class, race, gender, etc. influence the participation



in the sports. Keim (2006) outlines the need of joint programmes for mass based sport irrespective of class, gender, age, race and so on in South Africa. Sports can be a means of social transformation in bringing peace and community development in South Africa<sup>19</sup>. Cha (2016) discusses the role of sport in constructing the national identity and nation building that further creates national unity among citizens of any country. North and South Korea, for example, utilized the sport to create a sense of unity that was shown through the participation of their teams together at Asian Winter Games 2003 in Aomori, Japan<sup>34</sup>.

All problems cannot resolve through the use of sport, yet sports' contribution cannot ignore in bringing national unity and peace. Sports are creating a positive transformation in the society<sup>31</sup>. While developing interventions for development and peace via sports, concentration should be given to the social-cultural situation and the most suitable sport of the country where programs carry out. In India and Pakistan, for example focus should be given to sensitization on gender related issues and cricket is more popular sport than football. Cardenas (2013) identifies the need of academic research in the area of development and peace through sports, especially analytical work, in-depth evaluation<sup>33</sup>.

### **Development through the agency of sports**

Hartmann & Kwauk (2011) consider sports as a source of risk reduction, crime prevention and social intervention that contribute to the development of skill, social knowledge and leadership quality. Sport based interventions have not provided only a 'right to play', but also an environment through which individuals can raise themselves and their community from marginalized circumstances<sup>35</sup>. The study of Harrison and Narayan (2003) mentioned that participation in sports had assisted in the child growth and development as well as it reduced psychological disorder as compared with non-involvement in sports. Children's involvement in sports and extracurricular activities was statistically associated with regular exercise, consumption of nutritious foods, healthy self image and lower chance of emotional stress, suicidal behavior, and substance abuse, physical and sexual abuse. Sports also created a positive attitude towards school, teacher and peer group which further benefited their education<sup>36</sup>.

Sports are observed as a possibility of generating sustainable income and employment with the commercialization and global reached of sports<sup>37</sup>. Sources of income are sport related sales and services, boosting of international trade, and supporting business growth as well as rise sport related jobs and entrepreneurship<sup>38</sup>. The sport management programme has created innumerable key jobs in sport organization. These jobs are trainers, coaches, coordinators, physician, massage therapists, nurses, physical therapists, finance and administration managers and so on<sup>39</sup>. Sports events, such as the Olympic Games, football and rugby championship create the opportunities to grow tourism that further creates employments, promote local products and culture as well as enhancing economy and social reputation<sup>3, 40</sup>.

The hosting of mega-event of sports like 'FIFA World Cup', 'Olympic Games' etc. is considered a source of international prestige and wealth to a hosting country, for example, Brazil hosted the World Cup in 2014. These events provide numerous political and economic opportunities, such as improvement in the international reputation of the hosting country, increase participation in sports, improvement of sport facilities and infrastructure, enhance international trade etc<sup>37</sup>. Apart from income generation, sports enhance country reputation, improve health and social well being, and encourage human values, such as discipline, teamwork and competitive spirit, fair



play and mutual respect<sup>38</sup>. On account of sports, individual development, health promotion, equality, social integration, peace building and post trauma are made possible that is required for the development of any country<sup>41</sup>.

The United Nations understands the growing value of sports towards the realization of development with the empowerment of individual and community, including women and young people as well as the fulfillment of objectives related with health, education and social inclusion<sup>10, 37</sup>. While celebrating the 4<sup>th</sup> International Day of Sport for Development and Peace, the UN General Assembly divided the program into two phases. In the first phase (23<sup>rd</sup> to 31<sup>st</sup> March 2020), messages about the benefit of sports on health were disseminated through the platform of social media. In the second phase (1<sup>st</sup> to 6<sup>th</sup> April 2020), online activities related to sports or physical activities were posted on social media to bring people together for the course. Young athlete participated in the launch event of the day on 6<sup>th</sup> April 2020 at the visitors' lobby, United Nations headquarters<sup>13</sup>.

Along with international agencies, local authorities also recognize the importance of sports as a holistic approach for the development of personality and communication skill, health education and awareness on social and economic issues like pollution, micro finance etc. GOAL project in India (Delhi), for example, started among young girls of two impoverished communities- Aali Gaon and Deepalaya in 2008 to bring educational, personal and social development with the use of netball. The project showed that a sense of self- esteem and confidence could be generated among girls through playing netball<sup>42</sup>.

WHO (2003) recognizes the benefit of regular physical activities and sports on the reduction of risk of cardiovascular diseases, some cancers, type 2 diabetes, body fat and promotion of psychological well being as well as lessening the risk of unhealthy lifestyle. Apart from this, there is a reduction in the healthcare cost, increase productivity and develop a healthier, physical and social environment<sup>43</sup>. Sedentary or sitting nature of jobs increases the risk of obesity and overweight irrespective of age and gender, which further increases the risk of getting life style diseases. Gonzalez-Gross & Melendez (2013) recommend using any sports or physical activity for physical fitness and healthy lifestyle<sup>44</sup>. Sports in development projects, such as Mathare Youth Sport Association in Africa, Go Sisters- Zambian programme, Youth Education through Sport (YES) of Zimbabwean project and Magic bus in Mumbai are working for numerous social issues like inequality, physical fitness, pollution, drug abuse, HIV/AIDS and so on through the use of sports<sup>45</sup>. During the time of self quarantine in the pandemic COVID-19, sport based youth development (SBYD) organizations ponder about the mental condition people in America and strive to help them through using internet services<sup>46</sup>.

Different stakeholders, such as member states of the United Nations, sports related associations, non-governmental organizations (NGOs), civil society, academic institutions, and private sector are functioning in collaboration with the United Nations for realizing the goal of development and peace for sustainable development through sports<sup>10, 37</sup>. San Marcos- municipal violence prevention project with the support of UNICEF provides swimming lesson to children in order to develop skills and protect them from homicide, gang violence and crime<sup>47</sup>. Barca foundation is functioning in more than 100 countries like Brazil, China, and South Africa, etc. collaboration with UNICEF for education attainment, skill development and empowerment through the participation of children in sports since 2006<sup>48</sup>. UN Environment Programme started using the

popularity of sports in the awareness about the environmental issues in the 90s and followed by the International Olympic Committee<sup>49</sup>. The 2000 Sydney Olympic Game in Australia is regarded as a first 'Green Olympic Game'<sup>9</sup>. In this way, national and international agencies avail the popularity of sports in addressing issues related to poverty, inequality, climate change, environmental degradation, peace and justice.

Despite of Inclusive nature, sometime sports reproduce social inequality in the world<sup>35</sup>. Disable people, poor people and women are excluded from sports on the basis of the incapability to incur the expense of sports due to poverty and social inequality<sup>50</sup>. Hence, there is a need of political engagement and education practice to bring systematic transformation in social life. Sport based interventions can only proceed towards development, if there is an appropriate condition, accurate resources and self-consciously designed planning<sup>35</sup>. There is a need of formulating a multi-sectoral policy for peace and development through the agency of sports. Social institutions, such as health, sport, policy maker, education, media, urban planning, local government and financial or economic planning should coordinate to develop sport based interventions<sup>41</sup>. Darnell (2012) illustrates the significance of considering social issues, such as inequality, illiteracy, insecurity, lack of transparency, corruption, poverty, displacement and conflict while planning of development programmes via sports<sup>37</sup>. There is a little scientific evidence on the efficacy of sport based development programmes<sup>33, 51</sup>. The impact of these programmes should be evaluated on the basis of interdisciplinary framework that incorporates organizational, sport, educational, cultural elements<sup>51</sup>.

### **The virtue of peace and development with the achievement of SDGs**

The 17 SDGs along with 169 targets focus on five locales or '5Ps', such as '*People*', '*Prosperity*', '*Planet*', '*Peace*' and '*Partnerships*'. The Agenda 2030 for Sustainable Development illustrates 'People' in goals 1-5, 'Planet' in goals 6,12,13,14 and 15, 'Prosperity' in goals 7-11, 'Peace' in goal 16 and 'Partnership' in goal 17<sup>52</sup>. WHO (2016) amalgamates all three dimensions of development- economic, social and environmental through the eradication of poverty, the reduction of inequality, promotion of economic growth and preservation of environment<sup>20</sup>. Human development index not only measures economic growth, but also health (life expectancy), education and decent standard of living<sup>53</sup>. The Agenda 2030 for Sustainable development envisions a world that is free from poverty, diseases, violence and other challenges as well as it provides access to quality education, health care, social protection and acts as peaceful and inclusive society<sup>54</sup>. The integrative nature of SDGs can be visualized with the realization of one goal through the achievement of another goal. For instance, actions related to eradicate poverty (SDG 1), diminish inequalities (SDG 10), provide quality education (SDG 4), promote gender equality (SDG 5), address issues related to climate change (SDG 13), strengthen peace and institutions (SDG 16) and endorse partnerships at different levels (SDG 17) can bring mutual results<sup>54-55</sup>.

The aim of sustainable development cannot be achieved without peace and security. In the same way, peace and security are at stake without the achievement of sustainable development<sup>54</sup>. Armed violence, insecurity, sexual violence, crime, exploitation, conflict and no rule of law influence the development of one country. Sustainable development goal 16 addresses the predicament of violence, conflict, corruption, inequality and exclusion. These hurdles undermine the effectiveness of public delivery services and economic development. The goal 16 emphasises

on fostering effective and transparent institutions, and promoting justice, rule of law, fundamental freedom and inclusive society through the reduction of violence, crime, and corruption<sup>55-56</sup>. The peace building fund (PBF), an organization contributed to the achievement of SDGs with the grant more or less \$368 million from 2015-2018 to promote peace, justice, gender equality, quality education, inclusive institutions, decent employment and livelihood. Armed Conflict for example, in Colombia damaged property, institution, production, security and trust. Peace can bring new business opportunities, increase stability, and improve economic and social reputation of any country. In Cauca, presidential agency for international cooperation, department for social prosperity, national government and so on are working in the area on preventing conflict and violence in Cauca with coordination of UN agencies like UNDP<sup>55</sup>.

According to 2019 SDG index, Denmark, Sweden and Finland were countries which secured top position by showing the best outcome in the 17 SDGs, whereas Congo, Chad and Central African Republic were lowest in the scoreboard. Even those countries which performed well on SDG index had at least red score (sign of major challenges remains) in one SDG. For example, Denmark had performed better in achieving SDGs as compared to other countries with the score of 85.2 in the 2019 SDG index. However, Denmark failed to achieve the goal 12 and 14. There was uneven progress in the achievement among 17 SDGs in different countries. Latin American and Caribbean countries performed better in the SDG-1, SDG- 7, SDG- 6 and SDG-8. There is a scope of improvement in the SDG-10, SDG-3, SDG-4 and SDG-16<sup>57</sup>.

Various reasons are responsible for not this unevenness in the performance of SDGs. Along with unavailability of data, lack of adequate infrastructure, armed conflict, civil war, gender inequality, disparity in health care and education services are identified as some of the reasons. High level political forum at regional, national and international levels requires for the purpose of review and monitoring the achievement of programmes related to SDGs<sup>58</sup>. Strategies, such as accountability, transparency, eradication of poverty and inequality, rural development, multi stakeholder partnership, online platform for information, additional funds, institutional coherence, international support, improvement in public services, adequate human resources and data monitoring policy can be proved effective in the achievement of SDGs<sup>54</sup>. There is a need of alternate development perspective which incorporates the voice of subaltern for understanding the need of indigenous country<sup>59</sup>.

**CONCLUSION:** Different countries have been using sports for various purposes in the human history, for example, in Ancient Greece, sports used for religious purpose; in ancient china for education, defense, and health; Aborigines in Canada for spiritual training and Egypt for health and fitness<sup>27</sup>. Each culture has separate value and attitude towards sports as social phenomena<sup>7</sup>. Most of European and South American countries, for example, represent their passion towards football. Sports industry, media, corporate, government, international agencies and NGOs use this popularity of sport in fulfilling their goals<sup>33</sup>. With the emergence of sports as professional, amateur and leisure activity, sports create lots of opportunities in different facets of social life, including personality development, healthy lifestyle, mental well being and development of skill and human values which further contributes in the development of individuals and their communities. Sports maintain socio-psychological stability, instill cultural and ideological beliefs, perform an integrative function, and social mobility<sup>9</sup>. The contribution of sports is recognized to promote peace, social integration, inclusion and development at both national and

international levels. Jomo Sono, a soccer player and 2010 FIFA World Cup is an example of upward social mobility and uniting people of South Africa as one<sup>8</sup>.

Sports recognized as an instrument in the achievement of SDGs, particularly in the area of health, education, equality, environment, peace, development and partnership. SDGs can be achieved through the expansion of funds, mobilization of resources, enhancing infrastructure, improving services, transparent governance, partnership model, eradicating poverty, inequality, and conflict. Development and peace are two sides of same coin. Maintenance of peace is essential to achieve the goal of development and vice versa<sup>54</sup>. Sports and SDGs can go hand in hand. Any International agencies like the United Nations and WHO, NGOs like Canadian based Right to Play, sport based corporations like Nike, sport federation, such as International Olympic Committee connect sports with development strategies<sup>49</sup>. Magic Bus, for example, a foundation is functioning with others stakeholders for individual wellbeing, crime reduction, education, economic and safety purposes<sup>60</sup>. Despite of numerous initiatives, there is an example of intolerance, racism, violence, corruption, exclusion and malpractice in sports related activities and events which create impediments in achieving the goals of sustainable development. Malpractices in sports are betting, match fixing, use of drugs, etc. that hurdle the integrity of sports<sup>61-62</sup>. Many studies (Mechelen, 1997; Timpka et al., 2008; Kane & White, 2009; Timpka et al. 2014) shed light on the vulnerability of sports related injuries and illness among athletes while participating in the sports. These injuries and illness entail the medical attention to recuperate, escalates health care expenses, loss of time for working and sporting during medical treatment as well as permanent disability can also be happened in case of serious injuries and delay in treatment<sup>63-66</sup>.

Sports epidemiologists and public health informaticians should play their role jointly while synchronizing development related programmes to prevent sports related injuries and diseases<sup>60</sup>. Holistic approach is indispensable to integrate all sections of the society in order to bring sustainable development, including sports. Public support is essential for the promotion of campaign and programme against malpractices in sports, such as an anti-doping campaign<sup>67</sup>. There is a requirement of political commitment, transparency, adequate funding, holistic approach and public –private partnership for development and peace. Further longitudinal researches and academic works based on critical sociology are also required in the area of understanding the actual need, barriers and solutions in the domain of sports for bringing positive transformations in the world<sup>51</sup>. There is also a need of separating of sport from ‘sport politics’ for the development of true ideas of sport, such as fair play, equality, tolerance, teamwork, cooperation and dedication<sup>8</sup>.

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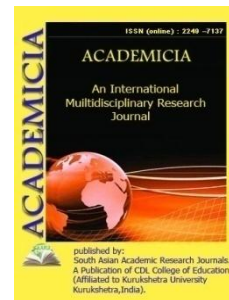
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## THE PHILOSOPHY OF KNOWLEDGE IN THE WORKS OF ALISHER NAVOI

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### ABSTRACT

*This article analyzes the philosophical views of the great poet and thinker of the Middle Ages Alisher Navoi. The article, in particular, examines his views on the problem of cognition, which were reflected in the writings of the thinker. Navoi believes that the correct reflection of reality is of great importance, which is one of the most important tasks of the cognitive process. According to Navoi, real reality is the source of knowledge, man receives knowledge from the world around him, knowledge is the reflection of this world (the opposite world).*

**KEYWORDS:** *Philosophy, Cognition, Knowledge, Man, Worldview, The Process Of Cognition, Creativity, The World, Pictures Of The World.*

### INTRODUCTION

Knowledge is one of the most important issues in the Navoi philosophical system. Therefore, it is important to identify and describe Navoi's views on the theory of knowledge in order to scientifically know his worldview and creativity. Navoi believes that the correct reflection of reality is of great importance, which is one of the most important tasks of the cognitive process. According to Navoi, real reality is the source of knowledge, man receives knowledge from the world around him, knowledge is the reflection of this world (the opposite world). All this exists outside the subject. Navoi says in his own poetic language: "The members of knowledge are the cup, and the world is the wine. When you pour pure wine into a glass, that is, you reflect the world correctly, you will see the reflection of events, their essence. Navoi's philosophical work Hayratul Abror has a special chapter on this issue. All things in the universe are objects of perception. Whoever has the ability to comprehend will not doubt it. Man is unique because he has the ability to perceive reality, nature, things and events around him. It differs from other living beings by these features and stands out.

According to Saddi Iskandariy, the individual receives knowledge from the outside world. It does not depend on the person and the will. Man receives his knowledge from the external world through the senses. Navoi explains his views on the perception of events through the senses as follows:

Босирау сомиау ломиса,  
Зойиқау шомма бил хомиса.  
Ҳарнеки оламда бўлар мудраки,  
Кимдаки идрок мунга йўқ шаки[4, 96].

Navoi believed that these senses were a gift from God to man. Man can only know the outside of things and events through them. But the essence, complex changes and contradictions of complex things and events cannot be known through the sense organs. Here we can see the influence of Farobi, Ibn Rushd, Ibn Sino, Nasir Khisrov on the worldview of Navoi. According to Navoi, man has the ability to know reality, existence. It has five external sensory organs, a strong mind, and a reliable memory. Man perceives, accepts, thinks, stores what he perceives, analyzes, synthesizes, draws conclusions. All of these categories are inextricably linked, complement each other, and help us to know the truth, which is a common, single goal. Although there is such a correlation between the members of cognition, each of them has a specific function of its own. Through them, a person will be able to know objects and events. But only when the members of cognition work together can they give accurate information about the universe.

Navoi figuratively expresses the role and place of intuition and mind in the process of cognition. The poet attributes the human body and head to the citadel 2, to the castle, to the external reality surrounding the citadel, to the mind to the king in the citadel, to the five paths or agent (representative) connecting the other sensory organs with the citadel (and the king). resembles a memory head or guardian (treasure collector). From the citadel, the five paths (five sensory organs) lead to the outside world. In other words, the citadel has five trusted agents. Through these five ways, various materials, data (information, messages) and knowledge come to the citadel in the external world. These five ways are:

1. Eyes, organs of vision (print);
2. Ears, organs of hearing (somia);
3. Sensory organs (lomisa);
4. The sense of smell (shomia);
5. Full knowledge, taste sense organs (zoiqa).

Everything that exists in the universe is an object of perception [4].

The second step is to transfer this information (emotional material) to memory. The role of memory in the process of knowing reality is enormous. With the help of memory, a person creates and stores structured knowledge. Memory collects emotional information and passes it on to the next stage. Then the thought (contemplation, reflection) comes into action and begins to process (analyze, systematize) the emotional material. This is where the mind begins to perform

its function. According to the thinker, the mind is the highest stage of perception of being, which is also a gift from God. Navoi gives an objective assessment of the mind, its role in understanding the complex phenomena around it. A wise man will be wise and knowledgeable. Therefore, the thinker writes in his poem, emphasizing the role of the mind in the process of human cognition:

Ҳар кимки хирад йўли сори мойил эса,  
 Бу дўст анга ҳар нечаки қойил эса,  
 Бир дўстдин ортиқдур аган жоҳил эса,  
 Андоқ душманки, зийраку оқил эса[1, 38]

But according to the thinker, the role of the mind in the process of cognition is limited. Man believes that the mind is incapable of understanding the mysteries of all things, of changes in the world, of their essence. Because human knowledge and intellect are limited in understanding the essence of the unseen world. However, Alisher Navoi does not completely deny the role of the mind in the process of human cognition. The following opinion of the poet is noteworthy:

Деди: “ҳар ишки қилмиш одамизод,  
 Тафаккур бирла билмиш одамизод” [3,132].

The mind is manifested in the universe, nature, social life, in the knowledge of man, in the spiritual and moral upbringing, in the struggle against evil, in short, in all spheres of human life.

According to Navoi, he is the "king", the "chief judge" and makes the final verdict on them. In doing so, the mind truly distinguishes between falsehood and stabilizes truth. Then a certain, systematic knowledge emerges. On this basis, the following scheme is formed approximately:

- sensory organs - source, manufacturer, supplier;
- memory collector, keeper;
- thinking-consumer, processor;
- mind-chief judge, determiner, ultimate truth-setter. Hence, Navoi describes the scheme of the cognitive process in this way.

Navoi describes the problems of theoretical knowledge through the development of the productive forces of society, and hence through the state of the strata interested in the study of nature. For Navoi, one of the main points in solving the problems of the theory of knowledge was to have a humanistic attitude towards man, to ensure his organic connection with nature, to improve his condition. Navoi deifies man along with nature. He sees man as a holy, perfect, wonderful being. This is because man is a perfect, higher manifestation of God.

Thus, Navoi, who came to the conclusion that there is a unity of being, in reality there is an immeasurable wealth. It is available for human well-being, a real reliable source. can bestow true happiness. Therefore, it is necessary to know, study this reality, and use all the riches. According to Navoi, in order to build a happy life on earth, it is necessary to know this reality (nature), to reveal its secrets. This is one of the important tasks of the learning process. But since not everything that is necessary for man in nature is readily available, it requires the effective activity of man. Man adapts what he is not ready to according to his own needs.



In "Khamsa" Navoi emphasizes the importance of the role of science and scientists in society. Because he knew that science was of great importance in the sharp struggle against ignorance, limitation. The poet writes that at that time the scientist was despised and the ignorant was dear, and described the plight of the workers of science. Even Navoi does not hide his attitude towards substances that he considers science to be a means of accumulating personal wealth.

The most important integral quality of man is his love of science. This requires a person to know the secrets of nature, to strive for a happy life. Nature is the source of prosperity, but to achieve this, nature must be studied in order for it to serve man. So, for this, it is necessary to study the sciences. The mind is such a light that it allows the human eye to see. Man reveals the secrets of nature, reality. At the same time, the secrets of nature and reality are obtained. However, all people can think scientifically, master science. In this way, Navoi contradicts the idea that it is enough to master only the elective science. And man is not deprived of the ability and opportunity to know them. He can know everything. 1 Navoi's favorite heroes are Alexander, Farhod, Aristotle, Socrates, and Plato. At the same time, heroes such as Shopur and Gulandom are distinguished by their knowledge of this or that field of science.

Navoi attached great importance to ancient Greek culture and philosophy. He felt the impact of these on world civilization and the way of thinking. This is evidenced by the process of learning about it, the role of emotion, the quotes given by ancient Greek scholars and philosophers. It is believed that because of ancient Greek philosophy, the path of the Central Asian mashipains (peripatetics) was light and clear. He sees Greece as a land of science and wisdom. He therefore describes the country as follows:

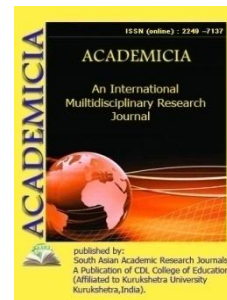
Анга ким тушда очмоқ изтироби.  
Бу бўлди ул муаммонинг ҳисоби:  
Ки Юнон мулки ул фарҳунда кишвар,  
Ки ҳикмат бирла топди зебу зевар[3, 134].

According to Navoi, it is necessary to go to Greece because of the distance and the importance of the country to study science. Therefore, Alisher Navoi concludes that it is necessary for people to be educated, to enrich science, to cultivate intellect and thinking. In his view, intellect and science are one of the most essential qualities of man. Knowledge is the most important duty of every human being. The essence of science is that it serves the happiness and well-being of the people and the country. Navoi, like Farabi, Ibn Sina and other thinkers, gives a moral character to science. According to him, science should be, first of all, a means of spiritual perfection of man. Philosophy as a science is a tool for educating people in the spirit of high qualities, not greed for wealth.

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## PHYSIOLOGICAL INDICATORS OF LOCAL GOATS BREEDED IN THE REPUBLIC OF KARAKALPAKSTAN

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### ABSTRACT

*This article presents physiological and hemological indicators of local goats bred in the northern part of the Republic of Karakalpakstan. It also provides a description of the study of the morphological composition of the blood of goats, depending on the season of the year. Animal health and vitality is one of the factors that determine the profitability of the industry. The harsh continental climate of Karakalpakstan with cold, windy and hot dry summers requires the selection of those who have more flexibility and endurance in raising animals in scarce pasture conditions. Goat breeding is bred everywhere, mainly local coarse-wooled goats are bred on private farms and farms. Goats are more resistant to desert pastures of the northern regions, consisting of sedge shrubs and semi-shrubs, sedge-saline plants, etc.*

**KEYWORDS:** *Body Temperature, Respiratory Rate, Pulse Rate, Erythrocyte, Hemoglobin, Leukocyte.*

### INTRODUCTION

Livestock is an important component of agriculture in the Republic of Karakalpakstan, which provides the population with food, industry and raw materials. Its importance is especially growing in connection with the intensive growth of industry, the production of new products, the increase in the number of people living in cities and centralized settlements.

The standard of living of people living here often depends on the condition of livestock and pastures. Therefore, one of the main problems of sustainable development of the region is to ensure the rational management of pasture animal husbandry.

The main types of pasture livestock in the Republic of Karakalpakstan are sheep and goats. Goat breeding is bred everywhere, mainly local coarse-wooled goats are bred on private farms and farms. Goats are more resistant to desert pastures of the northern regions, consisting of sedge shrubs and semi-shrubs, sedge-saline plants, etc.

Reliable and continuous growth of livestock production is possible only if the necessary conditions for feeding and storage, well adapted and high-yielding, are created. Animal health and vitality is one of the factors that determine the profitability of the industry. The harsh continental climate of Karakalpakstan with cold, windy and hot dry summers requires the selection of those who have more flexibility and endurance in raising animals in scarce pasture conditions. Therefore, the study of their physiological state and flexibility of goats is an urgent scientific and practical task.

[1.], It has been established that the respiration and heart rate of local goats in Tajikistan depends on the age, the area of cultivation, and this is explained by the change in the ambient temperature, the degree of metabolic processes. Subsequently, he showed that in the goats isolated for the experiment, no changes in hematological parameters associated with breeding were found, but an increase in these indicators was observed with age.

[2] According to the data obtained, the study of the morphological composition of the blood of goats, depending on the season, made it possible to introduce a number of changes. Thus, the number of red grains in the blood was almost the same at all seasons, only in the summer their number decreased. This can be a reaction of the body, i.e. a decrease in the number of erythrocytes leads to a decrease in blood flow, which accelerates blood circulation and improves heat transfer in the animal's body.

**Research methods.** The study used zootechnical, biological methods, changes in the body of goats, blood composition, physiological and statistical methods. Statistical processing of data by N. A. Calculated according to the instructions of Ploksinsky.

**Results of research.** Vpervye izuchenie fiziologicheskix characteristics and morphology of the blood of local goats in Karakalpakstan caused opredelennyy scientific interest, poskolku ranee takie issledovaniya ne provodilis.

Analysis data show that the body temperature of the goats at all seasons was within the physiological norm (38.0 / 39.0) and no changes were observed. Although some changes are observed seasonally, no clear patterns are observed. [3].

It is known that the respiration rate of goats varies and depends on age, ambient temperature, atmospheric pressure and other factors. Thus, in our experiment, it was found that an increase in air temperature was observed in summer, especially in spring (72.5%) and autumn (38.1%), the respiratory rate in spring and winter was almost the same, and (30.2%).  $\pm 1.3$  and  $30.3 \pm 1.5$  are within the physiological norm.

Approximately the same phenomenon was observed when analyzing the heartbeat of animals, i.e., the heart rate increased with increasing air temperature. In our opinion, this is an adaptive reaction of the organism.

Measurement of physiological parameters and blood sampling were carried out in goats aged 3–4 years during the day (14–16 hours) in spring (April), summer (July), autumn (October) and winter (January). Blood was taken from a vein, the analysis of which was carried out in the veterinary laboratory of the Karaozak region. The data obtained are presented in table 1.

**TABLE 1. PHYSIOLOGICAL AND HEMATOLOGICAL EXAMINATIONS OF DOMESTIC GOATS INDICATORS (N-5)**

Indicators	Spring	Summer	Autumn	Winter
	X±Sx	X±Sx	X±Sx	X±Sx
Body temperature, °C	38,7±0,18	38,9±1,9	38,4±1,7	38,1±1,6
Respiratory rate	30,2±1,3	52,1±1,5	41,7±1,6	30,3±1,5
Heart rate	72,6±1,6	92,8±1,7	82,4±1,6	72,2±1,4
The amount of erythrocytes in the blood, 10 <sup>12</sup> /л.	15,6±0,53	13,4±0,61	15,1±0,41	15,4±0,56
The amount of hemoglobin in the blood, г/л	92,4±0,71	93,1±0,80	92,9±0,80	92,6±0,79
The amount of leukocytes in the blood, 10 <sup>9</sup> /л.	9,0±0,21	9,9±0,24	9,8±0,19	9,0±0,23
Atmospheric temperature	+18 <sup>0</sup>	+44 <sup>0</sup>	+29 <sup>0</sup>	-13 <sup>0</sup>

The number of hemoglobin and leukocytes was within the normal range at all seasons. In the summer-autumn seasons, a slight increase in hemoglobin was observed. A similar trend was observed in the structure of the number of leukocytes in the blood.

**Output.** Thus, it can be concluded that local goats have suffered from climate change within physiological norms. A number of differences associated with changes in the level of nutrition, environmental factors, are the reaction of the body and show its good adaptability with a high proportion.

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## SOCIO-PSYCHOLOGICAL ASPECTS OF COOPERATION OF COUPLE RELATIONS

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### ABSTRACT

*This article analyzes the socio-psychological aspects of the coordination of marital relations, the psychological crises in families and the impact of these crises on personal development and interpersonal relationships, the results of research on the aspects of equality in marital relations. A separate family budget is a major cause of family disagreements. If one spouse is silent about having money and the other is in need of it, it causes a family conflict. Nutrition is also a difficult point. Consequently, peace and stability will prevail in the state only if the neighborhood and the country are strong. It is obvious that the issues of family life are becoming one of the priorities of modern science.*

**KEYWORDS:** *Family, Marriage, Love, Jealousy, Attitude, Role, Conflict, Relationship, Domination, Gentleness, Incompatibility.*

### INTRODUCTION

Due to the constant commonality of family life and the development of society, in all periods of the development of society, family problems have been in the focus of attention of its advanced representatives. Family life is so important for the development of society and the maturity of children that it cannot be ignored for a second. President of the Republic of Uzbekistan, Sh.M. Mirziyoyev also stressed that "it is necessary to further strengthen the foundations of the family, which is sacred to us, to create an atmosphere of peace, harmony and mutual respect in the home, to fill the spiritual and educational work with concrete content."

Issues such as family life, the strength of interpersonal relationships and its well-being are a topical issue in the main category of social psychology and the basis of interpersonal relationships. This is evidenced by the Decree "On measures to radically improve the activities"

and other normative and legal acts in this area, a number of scientific studies on the implementation of family and marriage traditions, strengthening the family.

In the East, the family has long been considered a sacred homeland. If the family is healthy and strong, peace and harmony will be achieved in the neighborhood. Consequently, peace and stability will prevail in the state only if the neighborhood and the country are strong. It is obvious that the issues of family life are becoming one of the priorities of modern science. The establishment of the Family Research and Practice Center in the country and the adoption of the Family Code (1998) by the government is one of the most important practical steps taken today to maintain the strength and stability of families.

Unfortunately, the weakening of family-marriage relations to this day is evident in almost all countries of the world: the United States, Britain, France, Germany, the Baltic states, Russia and a number of other countries.

Although the weakening and deterioration of family-marriage relations in the life of Uzbek families is much less than in the above-mentioned countries, unfortunately, the complications of divorce have led to extremely tragic consequences, unpleasant situations and events between family members and relatives. Hence, the breakdown of families and the various complications that result from it require extensive study as a subject of study in the sciences of social psychology and ethnopsychology.

Coordination of couple relationships in the family is the main mechanism that serves to ensure the optimal psychological and socio-psychological environment. The psychological crises that are expected in families today depend on the maturity of the individual, interpersonal relationships, their social environment, the violation of values, and conflicting situations.

In a couple's relationship in the family, one can observe the processes of relationship between the couple, parents and children, bride and mother-in-law, bride and father-in-law, bride and brother-in-law, sister-in-law, friends and other close relatives.

In order to ensure equality in family relationships, it is also necessary to cover the analysis of conflict situations. Although the rhythm of a couple's relationship is also important in the context of life, it is a sad fact that family members do not form harmony and coherence between 'I' and 'us', and that identification and socialization of individuals are not normal. In order to clarify this situation, we found it necessary to provide a psychological interpretation of the results obtained from the application of the methodology of Y.E. Aleshina and L.Y. Gozman.

The results are presented in Table 1.

**1<sup>ST</sup> TABLE THE NATURE OF SPOUSES AND THE INTERACTION OF CONTRADICTIONS IN FAMILY RELATIONSHIPS**

Relationship components		X	$\sigma$	t
Problems in relationships with relatives and friends	Husband	0,17	0,55	0,280
	Wife	0,14	0,43	
Violation of role expectation rules	Husband	0,28	0,57	0,661
	Wife	0,18	0,45	
Non-compliance with standards of conduct	Husband	0,23	0,42	0,736
	Wife	0,15	0,41	

Demonstrating the dominance of the spouse	Husband	0,31	0,49	1,763
	Wife	0,05	0,51	
A show of jealousy	Husband	0,10	0,52	0,706
	Wife	0,03	0,50	
Inconsistencies in money	Husband	0,21	0,50	2,359*
	Wife	-0,05	0,41	

Note: \* $p \leq 0,05$

We tried to rely on responses from family members, i.e., couples, to analyze the results. Because in family relationships, spouses, relatives and friends, children are the central symbol. It was also intended to evaluate the results of the methodology to determine the degree of agreement (or disagreement) of the subjects in the most conflicting situations in the marital relationship, the degree of conflict in the couple.

1-aspect. The results on the problems in relations with relatives and friends were satisfied with 0.17-0.55 points and 0.14-0.43 points within the level of agreement (or disagreement) of the couple in conflict situations. It should be noted that all members of the established relatives and friends should work in the same direction to create strong family ties and comfortable microclimate. Often, the problematic aspects and conflicts that arise in a relationship with a spouse arise because the situation cannot form a healthy relationship. All these because no one has taught you how to build a healthy relationship properly, avoid conflicts, and communicate properly. Also, the moral environment, the psychological environment in family relationships, the social activities and structure of the family depend not only on the couple themselves, but also on general laws, requiring specific circumstances that affect the emergence of a new family and its subsequent activities.

2-aspect. Violation of role expectation rules. This aspect affects the couple's level of education and their culture, financial status, applicable traditions and life guidelines, place of residence, social status, and moral beliefs. The above-mentioned results of this aspect demonstrate the reunification and strengthening of the family, the constructive resolution of conflicting situations.

Our results also confirmed that tertiary indicators of role expectation violations were not appropriate. Men scored 0.28-0.57 points for violating the role expectation rules, while women scored 0.18-0.45 points ( $t = 0.66$   $p < 0.05$ ). This, in turn, requires women to be patient with the man in the family and, accordingly, the woman with her demands. For the normality of demand, the husband is expected to provide for the family financially, to be in agreement with his wife in the process of upbringing, or to have an adverse effect on the activity. If the results of the study are the opposite, i.e. the high rate of demanding or intolerant in a woman, the interpretation of its consequences also leads to a more complex psychological description.

3-aspect. Aspect of non-compliance with standards of conduct. This aspect helps to identify insecurity, suspicion, jealousy, resentment.

It is natural that in the family, insecurity, suspicion, jealousy and resentment are involved in the couple's relationship as destructive factors. In these relations, it is desirable to create a socio-psychological environment in the relationship between spouses, which is devoid of the above-mentioned features in ensuring equality. In terms of results, both men and women have

secondary outcomes (0.23-0.42 points and 0.15-0.41 points for non-compliance with behavioral standards). ( $t = 0.73$ ,  $p > 0.05$ ). This confirms the predominance of jealousy, suspicion and stubbornness in couples. (Of course, it varies according to the life experience of the families, as the tables in the apps show).

It is desirable that for the stability of the family of spouses and others in the control of their behavior and attitudes, there is a subjective, that is, interactive mechanism in the activity.

4-aspect. Demonstrate the dominance of the spouse. This aspect provides an opportunity to evaluate criticism, composure, gentleness, submissiveness, shyness. The results showed that, according to the nature of the methodology, the manifestation of the dominance of the spouse was 0.31-0.41 points (on lands), 0.05-0.51 points ( $t = 1.76$ ).

Our research shows that in real life, men should not always give in to family relationships, in a sense, give in to "masculine pride", the desire for dominance and freedom in relationships, and in their "ideals" for men in family relationships should be carefree, calm, critical of their behavior, and allows you to conclude that there is no need for shyness, dependence and embarrassment.

5-aspect. Demonstration of jealousy. "Jealousy" is a Persian word that means to be jealous of something that belongs to oneself, that one considers to be one's right, in which the heart is dissatisfied and distressed by someone else's association. Jealousy is more pronounced between husband and wife and goes stronger. In this sense, woman and man are common. Sometimes jealousy is stronger in women.

According to the results of this aspect, the couple rated the jealousy display as follows: the men's jealousy score was 0.10-0.52 points. (reliability of differences  $t = 0.70$ .  $R < 0.05$ ); the women scored 0.03-0.50.

Depending on whether families are built on the basis of love - love or premarital acquaintance, there are also feelings of jealousy and suspicion. Jealousy, on the one hand, is seen as a mechanism to protect the family as a sign of love and honor, and on the other hand, it is one of the main means of family breakdown.

6-aspect. Incompatible with money. If the family budget is set up illiterately, there will be a barrier between spouses for family life. This only happens with young people who don't know how to take advantage of each other's character. They each have their own needs. If the interests of family members are taken into account, saving the family budget will have a positive effect.

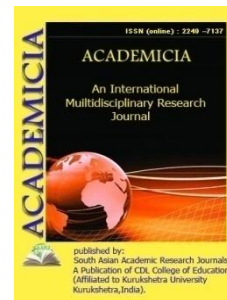
According to the results of this aspect, the couples rated their inconsistency with money as follows: 0.21-0.50 points for men and -0.05-0.41 points for women ( $t = 2.35$ , the reliability of the differences was not observed).

Separating the money will be a serious test for young people. A separate family budget is a major cause of family disagreements. If one spouse is silent about having money and the other is in need of it, it causes a family conflict. Nutrition is also a difficult point. In fact, people don't buy products, but they do buy a set of valuable ingredients. But not many people pay attention to the fact that delicious and healthy food can be prepared from cheap purchases.

The socio-psychological aspects of the coordination of marital relations in the family show that the values of kindness, compassion, impartiality, trustworthiness, self-sacrifice, obedience, thrift, tolerance, independence, personality traits are necessary aspects in couples.

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## **SPORT AS A PART OF YOUTH LEISURE**

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### **ABSTARCT**

*In this article, the authors highlight how meaningful leisure is provided by a person, giving him many aspects of a young person's personality, especially his ability to develop his talents. It includes the promotion of individual, team and cultural values of nature, as well as activities such as recreation and entertainment. Most sociological surveys of youth involved in sports indicate that sport forms the initial idea of life, society, the world as such. It is in sport that the most important and most important values for modern society are manifested most vividly and vividly, as the equal chances of success, success, the desire to be the first. Thus, the problems of reducing the number of young people engaged in gyms arise both because of economic conditions and because nowadays the circle of activities attractive for young people is rapidly expanding, and the possibility of an alternative choice of their leisure time is increasing.*

**KEYWORDS:** Sport, Leisure, Personality, Talent, Sports Skills, Physical Culture.



## INTRODUCTION

Leisure gives the opportunity to the modern young man to develop many aspects of his personality, even his own talent. For this, it is necessary that he approach leisure time from the standpoint of his life task, his vocation – to comprehensively develop his own abilities, to consciously shape himself.

## MATERIAL AND METHODS

Leisure in itself is a combination of personal activities that perform the function of restoring the physical and mental strengths of an individual. It includes activities related to the consumption of cultural values of an individual, collectively spectacular nature, as well as activities related to recreation and entertainment. Including - it is physically active and passive rest, communication, entertainment in the company, empty time, walking, classes of an anti-cultural nature (drinking alcohol, gambling, etc.), casual classes without goals, desires and needs. Hence the problem of its regulation as the impact of society on the spiritual and physical development of the individual. At the same time, leisure is a relatively independent (personal) sphere, and overall satisfaction with the life of a young person depends on their satisfaction. It is in the field of leisure that young people more than elsewhere act as free individuals. This is due to an increase in the choice of occupations and lack of free time. The problem of his value arises every time a young man makes an independent choice, makes a decision. The sphere of leisure itself is characterized by freedom from professional and family responsibilities, in addition, within its framework, institutional pressure on the personality of a young person is weakened.

## RESULTS AND DISCUSSION

Today, significant changes have taken place in the field of youth recreation, for example, new forms of leisure activity are appearing, their character and content of forms are changing. It becomes more and more obvious that modern types of youth leisure activities have features that noticeably distinguish them from traditional types, more appropriate to the prevailing conditions. In the choice of types of leisure activities, the level of personality development, its orientation, and the degree of formation of one's life position are particularly clearly reflected. And here the feedback is manifested - the more responsible the free time is used, the more focused it is and the personality's life position is formed more quickly. We also have to admit the fact that a significant part of youth is actively involved in the process of consumption of mass culture, instilling a cult of individualism, violence, hypocrisy, sex and entertainment, and not providing reliable support and incentives for mastering the positive achievements of world culture.

Children and youth have the right to games and leisure. Young people, as the future of any society, should receive physical education and acquire basic sports skills. Therefore, she must be involved - within or outside the school curriculum - in sports and daily exercise.

Society is obligated to ensure that this right can be realized through physical education and sports. Society as a whole, in collaboration with all interested organizations, should provide young people with the opportunity to achieve this goal. Sports should be aimed at: developing mental, physical and social qualities, teaching ethical values, justice, discipline, fostering respect for oneself and other people, including minority groups, teaching tolerance and responsibility, fostering self-control and developing positive personal qualities and promoting a healthy

lifestyle. Programs should reflect the needs and take into account the capabilities of all young people of different ages and levels of development, differentially approaching each of them.

Currently, quite a lot of attention is paid to sports. In fact, physical culture and sport are necessary for the social formation of a young man, being an important means of his comprehensive and harmonious development. But, if we note the importance of sports for young people, you can see the opposite process. The fact is that, despite the introduction of physical culture in the educational process of universities and schools, most young people rarely go in for sports. Most young people perceive health at the level of physical well-being, and considers the main condition for maintaining it to be abandonment of bad habits, motor mode and proper nutrition.

Most sociological surveys of youth involved in sports indicate that sport forms the initial idea of life, society, the world as such. It is in sport that the most important and most important values for modern society are manifested most vividly and vividly, as the equal chances of success, success, the desire to be the first. However, their minds have not yet formed an attitude towards health and one of the main ways to preserve it - sports as one of the most significant values. In the value world of youth, sport is in a low position. In general, the number of young people involved in sports is quite small. By the way, the individual's attitude to his physical constitution is an indicator of his true culture, his attitude to the rest of the world. Convenient forms of familiarization with physical education and sports - sports clubs, sections, health groups.

There are three main factors that impede sports among modern youth. The first factor is the commercial nature of sports facilities. Many students live in dormitories, in rented apartments, many combine work with study. "Not enough strength or money! What kind of sport can we talk about ?!"

Another reason is the huge variety of recreational facilities: cafes, clubs, cinemas and other institutions. Students visit them in order to relax, but on the contrary, after visiting such entertainment facilities, the body is depleted. For example, in cinemas, excessive noise negatively affects hearing and does not interfere with the harmonious development of a healthy personality. With all this, the same students believe that "it is better to meet friends in a cafe than to run around the gym." As a result, modern youth goes to clubs, walks in parks, and often alcohol and smoking are a means of relief, reassurance. Golden youth can not imagine holding parties, picnics and various kinds of entertainment without drugs. As a result, the third factor is easy access to drugs.

Thus, the problems of reducing the number of young people engaged in gyms arise both because of economic conditions and because nowadays the circle of activities attractive for young people is rapidly expanding, and the possibility of an alternative choice of their leisure time is increasing. Previously, sports for young people could serve as an incentive to advance within a certain social group, and as a means of relaxation from mental stress, entertainment, the ability to "show themselves", now entertainment centers and entertainment drinks are such a means and incentive.

Youth sport is a prerequisite for the successful development of modern society and the achievement of national strategic interests. The knowledge of the significant impact of a healthy lifestyle on most young people has not yet become their beliefs, and the enormous value of health is sufficient motivation to maintain it. Many people perceive health at the level of physical

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well-being and consider the main condition for maintaining it to be abandonment of bad habits, motor regimen and proper nutrition. But in their minds, the attitude to health as one of the main values has not yet formed.

In general, the number of those involved in sports is low. It affects the impact of various factors. For many, this is a lack of conditions, an underdeveloped infrastructure, and a lack of professionals in this field. Other reasons for the poor orientation of people to health and insufficient orientation to a high level of physical development are insufficient motivation, underdeveloped cultural and historical traditions that stimulate a healthy lifestyle and physical perfection.

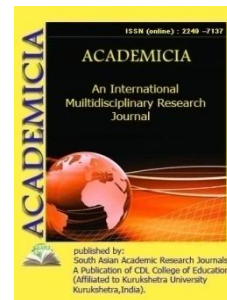
### CONCLUSIONS

The country's sports infrastructure is underdeveloped. But she is improving. The government is allocating more and more financial resources to create optimal conditions for the development of sports and attract young people to it.

Young people, as the future of any society, should receive physical education and acquire basic sports skills. Therefore, she must be involved - within or outside the school curriculum - in sports and daily exercise. As has long been done in many European countries, where youth sports are well developed.

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## DIFFICULTIES ENCOUNTERED IN TEACHING SPEAKING SKILLS TO HIGH SCHOOL STUDENTS AND RECOMMENDED SOLUTIONS

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### ABSTRACT

*One of important issues in teaching process of language is dealing with common arguments against teaching speaking skills in the classroom. Students won't talk or say anything. One way to tackle this problem is to find the root of the problem and start from there. If the problem is cultural, that is in your culture it is unusual for students to talk out loud in class, or if students feel really shy about talking in front of other students then one way to go about breaking this cultural barrier is to create and establish your own classroom culture where speaking out loud in English is the norm. One way to do this is to distinguish your classroom from other classrooms in your school by arranging the classroom desks differently, in groups instead of lines etc. or by decorating the walls in English language and culture posters. From day one teach your students classroom language and keep on teaching it and encourage your students to ask for things and to ask questions in English. Giving positive feedback also helps to encourage and relax shy students to speak more. Another way to get students motivated to speak more is to allocate a percentage of their final grade to speaking skills and let the students know they are being assessed continually on their speaking practice in class throughout the term.*

**KEYWORDS:** *English Language, Culture Posters, Teaching Process, EFL.*

### INTRODUCTION

#### Main part

To learn English language has become a requirement in schools, and perhaps the most spoken language around the world is English, and many people choose to learn the language simply to place them in a better position to secure work, or communicate more effectively with more

people from around the globe. English might be a popular language to learn, but this doesn't necessarily mean it is a simple language to master, there are many challenges students face when learning English and if teachers are aware of these beforehand they can stand a much greater chance of teaching the language.

## **MATERIAL AND METHODS**

Speaking is the active use of language to express meaning, and for young learners, the spoken language is the medium through which a new language is encountered, understood, practiced, and learnt. Rather than oral skills being simply one aspect of learning language, the spoken form in the young learner's classroom acts as the prime source of language learning. However, speaking problems can be major challenges to effective foreign language learning and communication. English as foreign language (EFL) learners, no matter how much they know about the English language, still face many speaking difficulties. Many studies have indicated that oral language development has largely been neglected in the classroom, and most of the time, oral language in the classroom is used more by teachers than by students. However, oral language, even as used by the teacher, hardly ever functions as a means for students to gain knowledge and explore ideas. To develop the knowledge to deal with oral communication problems in an EFL context, researchers first need to know the real nature of those problems and the circumstances in which 'problems' are constructed. [1]

Speaking is the process of how to build and share the meaning between two or more through using verbal and non-verbal symbols, and this can be used in a variety of context. So, speaking is the most important of the four language skills in second language learning and teaching because student nowadays perceive communication with others as being so important and they realize the fact that this may open more opportunities for them to get acquainted with different culture. There are many difficulties that face the students in practicing the speaking skill. According to the researchers' experienced, they see these difficulties from many angles, the first one refers to the psychological factors which affect the learners when they are speak, and some other refer to the teachers who deal with the learners, and others refer to the learners themselves and others to the environment. The great difference between the native language and second language, affects in oral communication as the researcher has found some learners feel shy and others afraid to make mistake during speaking process. [2]

Speaking is an important aspect to people in their lives. Because by speaking people can communicate their feeling, share the ideas and opinions. Speaking is the most important skill and the mastery of speaking skills in English is importance for second and foreign language learners. Speaking is one of important parts in teaching language also because it includes one of four basic language skills. To speak in the foreign language in order to share understanding with other people who need attention to accurate the specific language. A speaker need to find the most appropriate words and correct grammar to express meaning accurately and specifically and needs to organize the discourse so that the listener will understand. So that, speaking is a fundamental skill that foreign language learners should master.

Speaking is a productive skill, because the people produce language by speaking. Speaking is one of an observable skill in language skills. Then Brown (2004: 140) states that "Speaking skill can be directly and empirically observed. Those observations are invariably colored by the accuracy and effectiveness of a test-takers listening skill, which necessarily compromises the



reliability and validity of an oral production tests". Moreover, Brown (2004: 272) divides speaking skill into two, namely: micro and macro skills of speaking. The micro skills refer to producing the smaller chunks of language such as phonemes, morphemes, words, collocations, and phrasal units. The macro skills imply the speaker's focus on the larger elements: fluency, discourse, function, style, cohesion, nonverbal communication and strategic options. [3]

Speaking is a complex skill requiring the simultaneous use of number of different abilities, which often develop at the different rates. Harmer (2001), when discussing the elements of speaking that are necessary for fluent oral production, distinguishes between two aspects – knowledge of 'language features', and the ability to process information on the spot, it means 'mental/social processing'. The first aspect, language features, necessary for spoken production involves, according to Harmer, the following features: connected speech, expressive devices, lexis and grammar, and negotiation language. For a clearer view of what the individual features include, here is a brief overview:

- connected speech – conveying fluent connected speech including assimilation, elision, linking 'r', contractions and stress patterning – weakened sounds);
- Expressive devices – pitch, stress, speed, volume, physical – non-verbal means for conveying meanings (super segmental features);
- Lexis and grammar – supplying common lexical phrases for different functions (agreeing, disagreeing, expressing shock, surprise, approval, etc.);
- Negotiation language – in order to seek clarification and to show the structure of what we are saying.

Speaking learning materials also play important role to succeed students in learning speaking. Materials created in the class must concern the students' need to learn. With highly respects to the students' need, the students have to be able to use the materials in practicing whether using the real-world tasks or pedagogical task. Real-world tasks or target tasks are formulated to involve the students in to how the real situations bring in to the classroom. In addition, material used must be able to invite the students to speak through the pedagogical task to achieve the target task. Reviewing this situation, the teachers need to choose the appropriate teaching methodology to perform students to speak. [4]

Speaking is required by people to interact among them. In speaking activity, many things that should be paid attention, not only relate to what is being spoken, what the language is used, but also who is our interlocutor. In addition, a good speaker should pay attention what the topic is being spoken by him, what the language that he/she uses in order to be understood easily by his listener, and to whom he/she speaks. Hence, speaking is a tool to communicate ideas that are arranged and developed accordance with listener's need (Tarigan, 1987, cited in Musaddat, 2008). It means that the speaker must strive communicate his/her ideas clearly so that those ideas can be accepted well accordance with what is wanted by the listeners.

For most foreign language learners, speaking in target language is not an easy thing to undertake because learning to speak a foreign language requires more than knowing its grammatical and semantic rules. Speaking is required by people to interact among them. In



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## Results

Many students equate being able to speak a language as knowing the language and therefore view learning the language as learning how to speak the language. In this research we found out several problems which students face in learning speaking in English classes.

- Spelling problems;
- Interests of students;
- Pronunciation difficulties;
- Writing compositions;
- Fair to speak in classroom.

Based on the materials of this research in order to teach speaking skills we recommended several ways of making students be confident and improve communication in English language.

- Produce the English speech sounds and sound patterns
- Use word and sentence stress, intonation patterns and the rhythm of the second language.
- Select appropriate words and sentences according to the proper social setting, audience, situation and subject matter.
- Organize their thoughts in a meaningful and logical sequence.
- Use language as a means of expressing values and judgments.

- Use the language quickly and confidently with few unnatural pauses, which is called as fluency.

## DISCUSSION

English teachers should create a classroom environment where students have real-life communication, authentic activities, and meaningful tasks that promote oral language. This can occur when students collaborate in groups to achieve a goal or to complete a task.

One of the obstacles students should overcome is spelling which is not easy even for native speakers. Students may not know the correct pronunciation of a word and spelling and pronunciation are not well-matched in English. To explain the correct rules of spelling and to repeat each new word at least four times in every class are the best ways to help students remembering correct pronunciations.

Another problem is that some students may lose their interests in English class and teachers should find ways for keeping the lesson interesting. To plan lessons in which there is a great deal of variety and devoting the longest time span in each lesson to oral practice activities and subdivide those activities into four or five different types to avoid boredom will help make the lesson be successful.

In order to solve pronunciation problems students should listen to new words before they produce them orally. The underlying educational principle is that perception and listening should precede production and speaking.

Most students are afraid to speak in classroom. Starting with choral repetition, followed by individual repetition; calling on the more able or less timid students first; trying to avoid continuous looking at their faces when they speak and using paired activities are some of good ways to hold this problem.

Developing the students' speaking skills, can be initiated by a letting them speak about what they already know (experienced knowledge). For instance, speaking about themselves, who they are, what they do, what they like, is one example. Also, asking them to talk about their families, (father, mother, brothers, sisters, etc.) is a good start. They not only know about it but the majority, if not all, like to talk about their own things and know about others'.

A speaking course for students of General English that aimed to be relatively complete would have to cover the following content:

- segmental and suprasegmental features of pronunciation
- Interactive communication strategies such as showing interest and asking for clarification
- Compensation strategies such as paraphrasing, or simplifying the message
- discourse management strategies
- informal spoken lexis
- a few awareness-raising classes which draw attention to some key differences between spoken and written grammar
- Coverage of a broad range of topics and functions

-coverage of transactional and interactional situations.

## CONCLUSION

Teaching speaking is a very important part of a language learning. The ability to communicate in a second language clearly and efficiently contributes to the success of the learner in school and success later in every phase of life. Therefore, it is essential that language teachers pay great attention to teaching speaking. In this research several ways of tackling problems faced in English language classes were recommended. In order to make the lesson process effective and interesting, to improve students' speaking skills teachers should produce the English speech sounds, use word and sentence stress, intonation patterns and the rhythm of the second language, organize dialogues in class in which students have to work in pairs. Moreover, using language as a means of expressing values and judgments will help to affect the ability of feeling freedom in face to face conversations of students'. Fluency is another issue of pronunciation skills and to use the language quickly and confidently with few unnatural pauses, which is called as fluency can give the students understand how to make the speech in a correct way. Role-plays will help in improving speaking. Giving a context of personal interest, and asking the students to write and act out and recording their role playing will help improve their intonation, pronunciation, using relevant phrases. Giving a story from their regional language and asking the students to narrate the same in English will make them strong in thought translation.

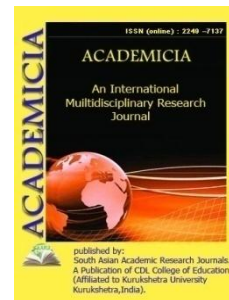
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## **EFFECT OF MINERAL NUTRITION ON OVERALL LEAF AREA AND YIELD OF STEVIA (STEVIA REBAUDIANA BERTONI)**

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### **ABSTRACT**

*Maintaining and improving product quality in the cultivation of agricultural crops is one of the most pressing tasks. Due to this, the study of product quality is required in all scientific works. The quality of the product in the stevia crop depends primarily on the chemical composition of the plant, the presence of minerals and vitamins in the plant and their amount. In the experiment, the leaf yield of the stevia crop was 20 c / ha in the control variant without the use of mineral fertilizers. The highest rate of stevia leaf yield was recorded in the variant where 175 kg / ha of phosphorus fertilizers were applied at a high rate of 31 c / ha, with an additional yield of 11 c / ha due to mineral fertilizers.*

**KEYWORDS:** *Stevia, Medicinal Plant, Chemical Composition, Mineral Fertilizers, Calcium, Nitrogen, Phosphorus, Potassium, Iron, Physiological Process, Yield.*

## INTRODUCTION

Maintaining and improving product quality in the cultivation of agricultural crops is one of the most pressing tasks. Due to this, the study of product quality is required in all scientific works. The stevia plant is grown for its leaves, so it is advisable to study the leaf quality of stevia in practice, as well as the factors that affect leaf quality. The quality of the product in the stevia crop depends primarily on the chemical composition of the plant, the presence of minerals and vitamins in the plant and their amount.

Scientific research on the product quality, yield and cultivation technology of the stevia plant has been studied mainly in foreign countries in the research work of scientists such as P.J.Larkin, T.A.Thorpe, J.K.Yasil, M.J.Aparajta. However, this research has been conducted in Europe and Russia, Ukraine, Germany, Poland, Sweden, North America in the USA and Canada, and in East Asia in countries such as Japan, China and Korea, Australia and New Zealand.

Especially in countries such as Japan, China, Korea, there is a growing interest in the stevia plant. In Japan, stevia cultivation has risen to the level of national value.

In Uzbekistan, too, in recent years, interest in the stevia plant is growing. In this regard I.Belolipov, T.M.Duseynov, T.K.Duseynov, J.Tursinov. It has been studied in the scientific works of such a scientist as Baykabilov. The scientific work mainly studied the morphology, systematics and biological properties of the plant. However, the technology of growing stevia in the conditions of our country is not sufficiently studied, there is insufficient scientific data in this regard.

## EXPERIMENTAL METHODS

The experiment was conducted in Uychi district of Namangan region. The experimental field consists of meadow-gray soils, moderately sandy mechanical composition, irrigated from time immemorial, not saline. The driving layer is 0-30 and 0-40 cm, in some places there is a layer of sand at a depth of 60-70 cm below the driving layer. Field experiments were carried out according to BA Dospekhov's (1982) "Methods of conducting field experiments".

The second field experiment consisted of 4 variants and was conducted in four repetitions. All returns were placed in one tier. All phenological observations and accounts were carried out in the calculated areas of each variant, in separate plants.

Leaf level of stevia and total leaf area per hectare are determined by the method of A.A.Nichiporovich, biological productivity is determined by the method of I.S.Shatilov, M.K.Kayumov.

## RESULTS

According to the results of many years of scientific research, the total leaf area in the field should be at least 30-35 thousand m<sup>2</sup> / ha for sustainable high yields from crops.

Academic A.A.Nichiporovich, along with studying the importance of the leaf in plant life, developed the most acceptable and convenient method of determining the leaf surface. Today, in many scientific studies, the "vischka" method, developed by a scientist, is widely used to determine the leaf surface.

The photosynthetic activity of the cultivar depends primarily on the formation of a sufficient leaf surface in the field. According to the results of many years of scientific research, the total leaf area in the field should be at least 30-35 thousand  $\text{m}^2$  / ha for sustainable high yields from crops.

Data on the positive effect of mineral fertilizers on the formation of the overall leaf area of stevia in the experiment are given in Table 1.

**TABLE 1 EFFECT OF THE NORM OF MINERAL FERTILIZERS ON COMMON LEAF AREA OF STEVIA, THOUSAND  $\text{M}^2$  / HA**

№	Options	Total leaf area, thousand $\text{m}^2$ / ha			Average 3 years thousand $\text{m}^2$ / ha
		2017	2018	2019	
1	Control	25.5	24.2	22.5	24.1
2	$\text{N}_{50} \text{P}_{175} \text{K}_{50}$	34.1	31.9	31.3	32.4
3	$\text{N}_{50} \text{P}_{150} \text{K}_{50}$	31.9	30.8	30.8	30.1
4	$\text{N}_{50} \text{K}_{50}$	27.5	25.3	26.4	26.4

In the first 2017 experiment, in the control variant without the use of mineral fertilizers, the total leaf area of the stevia plant was 25.5 thousand  $\text{m}^2$  / ha. In the fourth variant, where nitrogen and potassium were given and phosphorus was not given, this figure was 27.5 thousand  $\text{m}^2$  / ha.

In the third variant, given the norm of 150 kg / ha of phosphorus, the total leaf area of the stevia plant was 31.9 thousand  $\text{m}^2$  / ha. In the second variant, where phosphorus was applied at a rate of 175 kg / ha, the total leaf area of the plant was 34.1 thousand  $\text{m}^2$  / ha. It was observed that the difference in the control option due to the application of phosphorus fertilizers was 4.4-6.6 thousand  $\text{m}^2$  / ha.

In the second year of the experiment, i.e. in 2018, the predominance of stevia on the leaf surface was noted in the variants using mineral fertilizers. In all variants using mineral fertilizers, it was found that the total leaf surface area of stevia was higher than that of the control variant.

In the control variant without mineral fertilizers, the total leaf area of stevia was 24.2 thousand  $\text{m}^2$  / ha, in the case of application of phosphorus fertilizers at the rate of 175 kg / ha, at the rate of 31.9 thousand  $\text{m}^2$  / ha, in the case of phosphorus fertilizers at the rate of 150 kg / ha, 30.8 thousand  $\text{m}^2$  / ha, no phosphorus fertilizers, only when nitrogen and potassium fertilizers were applied at the rate of 50 kg / ha, 25.3 thousand  $\text{m}^2$  / ha were observed.

In the experiment, it was noted that the total leaf area of stevia increased by 1.1-7.7 thousand  $\text{m}^2$  / ha due to mineral fertilizers. In particular, it was found that phosphorus nutrition has a positive effect on the formation of the overall leaf surface of the stevia plant.

In irrigated gray soils, it is advisable to apply mineral fertilizers in the amount of  $\text{N}_{50}\text{P}_{150}\text{K}_{50}$  kg / ha during the season to form a sufficient total leaf layer, which ensures the optimal course of physiological processes in the Stevia plant.

This means that in irrigated gray soils, the Stevia plant has a high need for mineral nutrients, including phosphorus fertilizers, throughout the growing season. The above data indicate that the level of phosphorus supply in irrigated gray soils is low.

Stevia plant is grown for its leaves. The leaves of the stevia plant contain the substance stevioside, which has a very high level of sweetness, and many valuable minerals.



The sweetness level of stivioside was found to be 200 times higher than that of succharose. Due to this, in recent years in most countries the attention to the crop of stivioside is growing.

There is also a growing interest in the stevia crop in our country, and a number of scientific studies have been conducted in this regard.

However, scientific research on stevia cultivation under irrigated conditions is insufficient and no clear recommendations have been made.

Due to this, the effect of mineral nutrition of stevia plant on leaf yield in irrigated gray soil conditions was studied in the experiment. Data on the effect of mineral nutrition on the mass of a single plant in the Stevia plant are given in Table 2.

The table below shows that the productivity of a mineral-fed stevia crop depends on the level of adequate supply of mineral nutrients to the plant during the season.

In the experiment, it was observed that in the variants where all mineral fertilizers were applied, the productivity of stevia was higher than in the control variant without mineral fertilizers.

**TABLE 2 EFFECT OF THE NORM OF MINERAL FERTILIZERS ON MASS OF PER PLANT**

№	Control	Average mass of per plant	Dry mass, gr/plant	
			overall	leaf
1	Control	20.3	4.3	2.5
2	N <sub>50</sub> P <sub>175</sub> K <sub>50</sub>	31.8	7.6	5.7
3	N <sub>50</sub> P <sub>150</sub> K <sub>50</sub>	30.3	7.0	5.1
4	N <sub>50</sub> K <sub>50</sub>	25.5	5.2	3.4

The biological mass of one plant was 20.3-31.8 grams according to the options. The lowest value was recorded in the 20 g / plant control variant, and the highest value was recorded in the variant used at the high 175 kg / ha norms of 31.8 g / plant phosphorus fertilizers.

In the experiment, no phosphorus fertilizers were used, only nitrogen and potassium fertilizers were used, the mass of one plant was 25.5 g / plant, the difference compared to the control option was 5.2 g / plant. In the experiment, an increase in the mass of one plant by 5.2 -10.5 grams was observed due to mineral nutrition.

In practice, the study of the biological mass of a plant, as well as the mass of a plant, is of great scientific and practical importance. In this regard, the positive effect of agro-technical measures, including mineral nutrition, on the formation of dry mass of stevia was studied in the experiment.

In the experiment, the dry biological mass of one plant in stevia was 4.3-7.6 grams according to the options. The lowest value by dry mass was observed in the control variant without the use of 4.3 g / plant mineral fertilizers. The highest value was observed under the conditions of application of 7.6 g / kg of plant mineral fertilizers N<sub>50</sub> P<sub>175</sub> K<sub>50</sub> kg / ha.

Dry leaf mass on options consisted of 2.5-5.7 g / plant. The lowest value was recorded in the 2.5 g / plant control option, only 3.4 g / plant under conditions where nitrogen and potassium fertilizers were used in the N<sub>50</sub>K<sub>50</sub> norm. Under the conditions of application of mineral fertilizers N<sub>50</sub>P<sub>150</sub>K<sub>50</sub> norm, the dry leaf mass was 5.1 g / plant. A relatively high rate of dry leaf

mass was observed under the conditions of normal application of 5.7 g / plant mineral fertilizers  $N_{50}P_{175}K_{50}$  kg / ha.

Therefore, in order to increase the productivity of the stevia plant under irrigated conditions, it is recommended to fully meet the plant's need for mineral nutrients, including phosphorus fertilizers, during the season. Experiments have shown that incomplete satisfaction of the plant's need for phosphorus nutrients has a negative effect on the level of stevia accumulation.

Yield is one of the most important indicators in the cultivation of agricultural crops. Productivity is the expected result, the final product. In any scientific work, the main focus is on improving product quality and increasing productivity.

The main consumable product in the stevia crop is the leaf of this plant, i.e. stivioside, a substance that replaces succharose from the stevia leaf. Stevioside is distinguished from succharose by its high sweetness level, low calorie content and easy digestion.

Due to the low potency of stevioside, the human body is not adversely affected. It is recommended to consume stivioside products, especially for patients with sugary diabetes. Because despite of the very high level of sweetness of stevia, it does not pose a risk to people with diabetes.

However, because the sweetness equivalent is so high, many foreign countries are gradually switching to stivia cultivation.

Stevia products are widely consumed, especially in Southeast Asian countries. In countries such as China, Japan, South Korea, and Vietnam, more than 50% of sugar consumption is found in stevia products.

In recent years, in most developed countries in all regions of the world, there is a growing interest in this crop and the need for its products.

However, in our country there is not enough experience in the cultivation of stevia, the laws of formation of the general leaf layer in this crop, the course of the process of photosynthesis are not sufficiently studied.

In the experiment, the positive effect of mineral nutrition on the leaf yield of Stevia plant in irrigated gray soil conditions was studied. The results of the experiments obtained are presented in Table 3.

**TABLE 3 EFFECT OF MINERAL NUTRITION ON STEVIA LEAF YIELD**

№	Options	Leaf yield		Additional yield, c / ha
		Kg / m <sup>2</sup>	c / ha	
1	Control	0.20	20	-
2	$N_{50}P_{175}K_{50}$	0.31	31	11
3	$N_{50}P_{150}K_{50}$	0.30	30	10
4	$N_{50}K_{50}$	0.25	25	5

In the experiment, mineral nutrition showed a positive effect of stevia plant on leaf yield. In all variants using mineral fertilizers, stevia leaf yields were found to be higher than in the control variant without mineral fertilizers.

In the experiment, the leaf yield of the stevia crop was 20 c / ha in the control variant without the use of mineral fertilizers. The highest rate of stevia leaf yield was recorded in the variant where 175 kg / ha of phosphorus fertilizers were applied at a high rate of 31 c / ha, with an additional yield of 11 c / ha due to mineral fertilizers.

When phosphorus fertilizers were applied at the rate of 150 kg / ha, the yield of stevia was 30 c / ha, and 10 c / ha was grown due to mineral nutrition.

Phosphorus fertilizers were not used, only small amounts of nitrogen and potassium fertilizers were used, the yield of stevia was 25 c / ha, and only 5 c / ha of additional crops were grown due to mineral fertilizers.

The most important indicator in the cultivation of agricultural crops is productivity, and the reliability of the data obtained on yield depends on the correct performance of the experiment.

The reliability of the data will be at such a high level that productivity data will be detected across all iterations.

In the experiment, the effect of mineral nutrition on the yield of Stevia was studied in the calculated areas of experiment field in all variants and repetitions according to the standard requirements. Plant productivity records were kept in accordance with the adopted methodology.

Data on the positive effect of mineral nutrition on the overall leaf yield of Stevia plant on the repetitions in the experiment are given in Table 4.

**TABLE 4 STEVIA YIELDS BY REPETITIONS**

№	Options	Yield by repetitions, c / ha				Average yield, c / ha
		I	II	III	IV	
1	Control	19.6	22.1	21.5	18.9	20.5
2	N <sub>50</sub> P <sub>175</sub> K <sub>50</sub>	30.5	32.2	31.7	29.8	31.0
3	N <sub>50</sub> P <sub>150</sub> K <sub>50</sub>	29.2	31.5	31.0	28.6	30.1
4	N <sub>50</sub> K <sub>50</sub>	24.3	26.9	26.4	23.7	25.3

Experimental results showed that mineral nutrition had a significant effect on Stevia productivity. In all repetitions, the lowest yields were recorded in the control variant without the use of mineral fertilizers.

In the control variant, Stevia's yield on repetitions was 18.9 from 22.1 c / ha. The difference in recurrences of stevia on leaf yield was 0.7–2.2 c / ha. In the control variant, the average leaf yield of Stevia was 20.5 c / ha. In all studied variants, stevia yields were higher than in the control variant.

Of the mineral fertilizers used only nitrogen and potassium fertilizers, in the absence of phosphorus fertilizers, the average yield of stevia was 25.3 c / ha, the difference compared to the control option was 4.8 c / ha. Under the conditions of normal application of mineral fertilizers N<sub>50</sub> P<sub>150</sub> K<sub>50</sub>, the yield of stevia was 30.1 c / ha.

In the experiment, relatively high yields of stevia were observed in the second variant of mineral fertilizers N<sub>50</sub> P<sub>175</sub> K<sub>50</sub> norm applied to 29.8–32.2 c / ha. In this variant, the average yield of Stevia was 31.0 c / ha.

Under conditions of normal application of mineral fertilizers  $N_{50}P_{150}K_{50}$ , the leaf yield of stevia was 28.6-31.5 c / ha, the average yield was 30.1 c / ha. Stevia plant needs phosphorus fertilizers throughout the growing season.

The results of the experiments showed that the yield of stevia depends on the adequate supply of phosphorus fertilizers to the plant during the growing season.

Therefore, it is recommended to use mineral fertilizers, including phosphorus fertilizers, at a relatively high  $N_{50}P_{175}K_{50}$  rate to grow high leaf yields from the stevia plant under irrigated conditions.

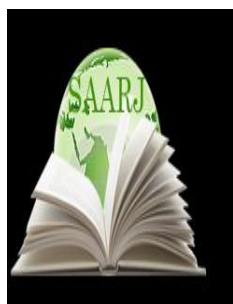
## CONCLUSION

1. Soil moisture is a necessary condition for seed germination in the conditions of introduction. This feature is related to the origin of the species, i.e. high air humidity (75-80%) and air temperature (25-35 C).
2. It was found that the germination of plant seeds at high temperatures (28°C) under laboratory conditions and in moist sand under the film is 24-8%.
3. In introduction conditions, soil moisture is a necessary factor for plant growth from seed. In the natural habitat, the influence of air temperature and humidity is also important in the origin of the species.
4. The short day tropical *S.rebaudiana* introduced in Namangan region has fully passed all stages of ontogeny. Air temperature affects the onset times of vegetation. The onset of budding and flowering depends on the reduction of daylight.
5. *S.rebaudiana* plant can produce leaf biomass from 3.5-4 tons per hectare, which is a source of high quality raw materials for various sectors of the economy.

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## RELIGION AND SOCIAL IDENTITY ANALYSIS IN VIRTUAL SPACE

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### ABSTRACT

*The article analyzes the manifestation of technocratic, deconstructive, psychoanalytic models of being and existence of ontological features of virtual space and cyberspace of virtual space and cyberspace, in particular, the ontological model. In addition the essence of identity and the content of the identification process in cyberspace, as well as their manifestation through mobile messengers, are highlighted, analyzing the primary place in current processes. Also, questions of religion and social identity in the virtual space are revealed using examples of transformational features of formal identity under the influence of infologemes. The article provides generalizations and suggestions on the characteristics of the socio-religious identity of the religious factor in cyberspace.*

**KEYWORDS:** *Cyberspace, Virtual Space, Identity, Religion, Identification, Formal Identity, Infologeme, Content, Identity, Religious Identity.*

### INTRODUCTION

Today, in the world, information and communication technologies make a huge contribution to the development of the world civilization in terms of their rational use, as well as some complex and contradictory processes. In the XXI century Information Society, the fact that information resources were not only a means of carrying out certain tasks for people, but also a means of changing their worldview, the formation of social character and identity, affecting the consciousness of individuals of all ages and categories with information in the social, cultural, religious sphere, became a Real reality. Therefore, scientific research on the transformational



characteristics of the human consciousness in the process of Human Identification, which is manifested as the reflection of an informed society, is of paramount importance.

The relevance of this problem is also evident in the research work in the field of Philosophy, Sociology, theology in the next five to six years. Particular attention is paid to the analysis and research of socialization and processes related to religion from a historical, religious, philosophical, sociological and psychological point of view. The social situation in cyberspace, which is characterized by a phenomenal phenomenon in the processes associated with religion, geostrategic characteristics of the factor of religion, through content and systematic analysis, has further exacerbated the need for research, which includes a new approach, a modern methodological framework and the basis of national, universal, social development. After all, the so-called "informed society", when a society looks at the stages of its rivalries, first of all, the idea and its manipulative properties find their proof in the primary place. [1:3].

**Main part.** Taking into account the extremely strong historical, cultural, National-mental role of the factor of religion in Uzbekistan, one can not deny the theme of religion as an integral sphere of the culture of an informed society and its impact on the consciousness, lifestyle, behavior of society through the Internet. In addition, the attention paid to the religious sphere in the state policy is reflected in the regular thinking and active work on the improvement of our spiritual life, the preservation of our population, primarily our youth from various harmful influences, the upbringing of them as mature people, in order to raise them to the level of state policy on the basis of. [2:3].

From a social point of view, cyberspace is understood by a team of people who are connected to each other through a computer network and at the same time wrapped up in the graphical quality data of any existing computer intersecting at different geographic points.

In highlighting the essence of cyberspace, its ontological feature occupies a primary place. The difference of the ontological model from the others is that it has the property to illuminate both the existence and the minute points of existence. In this regard, there are three ontological models of cyberspace, which include technocratic, deconstructive and psychoanalytic models. In social identity analysis, it is important to first understand such terms as "identity" and "identification". After all, the difference between them is not in essence, but in semantic and practical terms. For example, while both are single phenomenological reality, the first is the identity result, the second is the identity process. [3:261]. For this reason, in the process of socialization, one of the main criteria is the perception of an individual's own identity. Because as a result of understanding this, the individual gets an answer to the question "Who Am I?". In this regard, cyberspace acts not only as a communication channel, but also as a separate environment for a person, such as Real existence and identity. Identification in this environment, however, covers personal, social and language components. Communication in the cyber space has the opportunity to give the individual the status he wants, unlike reality. As a result of this, many Indians make it possible to construct virtual identities.

Identity is characterized by the creation of social groups or strata, as a result of the similarity of certain stereotypes, dressing, thinking, behavior, psychological states, dividing into national, ethnic, professional, regional, religious –confessional, gender and other types, the economic, political, household, spiritual, cultural, mental aspects of people under its coverage in a way of life. What kind of character or feature does identity have, what kind of affiliation matter individual

belonging to the same identity in its functional or visual practice shows that someone belongs to a group.

## RESULTS AND DISCUSSIONS

From the point of view of social anthropology, identity is also divided into natural and artificial forms of identity, regardless of its division into species. It covers natural identity, national, religious, gender identity, while artificial identity exemplifies professional and cultural identities. Also, this can be cited as an example of the membership of groups in social networks of people who have their place in society, closed groups, etc.

Researchers S.Strayker and P.In the opinion of Berks, there are three types of application of the term identity, among which, the first is understood the knowledge of the individual in his / her own group or in other groups and their relationship to them; the second is the person belonging to one social group and his reason is understood; to the third, the person is understood exactly in proportion with his opinion and belonging group, that is, his nationality, nationality, social status. [4:63].

There are also basic vital functions of social identity, which include the following. The first is that the adaptation function finds its expression in the adaptation to new social processes. The second is an orientative function, which is an intangible in finding its place in the social space. And the systematical function determines the belonging of a person to the "I", the purposeful function is the formation of a model of self-conduct, the existential function of self-understanding and forecasting.

In addition to performing the above tasks, social identity consists of a basic, functional, personal block, which in its fundamental essence covers cognitive, motivational and ideological values.

In an informed society, the crisis of social identity, which is caused by the factor of religion, is caused by a change in the functional blocks. That is, it is isolated by the change of individual-individual and base blocks, and transformational manifestations occur with the motivation of motivation as a result of the change in the degree of affiliation, character of the groups mentioned. For example, as a result of the change of national identity to "formal identity" as a result of the impact of information on the religious content in social networks, the transformation of ethnic, regional, national, family affiliation moves from traditional values, to "non-traditional" views.

The analysis on the issue of direct religion and identity plays an important role in clarifying the terms of religious identity first. Another term related to the term religious identity, 2002 year R. Entered into the scientific lexicon by Rozer is "spiritual identity". R with this term. Rozer is said by each individual person in relation to a conscious understanding of the existential essence of global, universal, universal values and existence. [5:53].

From this point of view, the characteristic feature of religious identity that arises as a result of the factor of religion in an informed society is manifested at this point. In the theory of social identity, there is such an opinion that individuals or groups consider the identity to which they belong as the most appropriate and correct image for themselves. In their eyes, this identity is associated with their life standards, beliefs, ideals, expectations of dreams and future plans, and the identity they choose seems to be the most preferred way of truth, as a way of great prospects to them.

That is, the main root of such views as spiritual identity, religious identity, confessional identity and the factor that provokes the management system are religion. It is also worth noting that the above types of identity are axamaic in that it can manifest itself in an informed society at the same time in a single or syncretic form. Because, in an informed society, the phenomenon of cyberspace has become one of the new life aspects of modern man. It is precisely in cyberspace that society has begun to realize a transformational function as a means of communication, social. That is, emerging phenomenological manifestations such as "Real I" and "virtual I", electronic communication technologies have sent full-fledged changes to the paradigms of modern communication. The cluster model of identification processes in cyberspace is manifested as follows: socio-professional, family-reproductive, national-regional, religious-ideological, gender and spiritual. Information society's identification processes are diverse, and the Internet environment has its own expression in its connection with the so-called cyberspace or virtual reality species. Dressing the individual, the degree of self-esteem and self-esteem that is inherent in Man, and the specificity is characteristic of alokhi for "cyberspace". Because, as elements that make up the cyberspace information environment, it is manifested in the objects of perception of existence in human activities, various Internet games and similar communication access. In a virtual environment like the above, a person's verb creates the opportunity to not only search, process and send information, but also to receive, broadcast, analyze and make individual conclusions. In the process of making the same "conclusion", it is observed that on the account of the lack of a specialist in religion and the issue of experience, some negative conclusions are now formed, along with positive ones in Esh. Human cybersecurity is understood as information communication technologies and the influence of modern information flow in the context of the life of the individual's consciousness structure and the processes of change of the individual's motivational-exteriors Matrix. In exactly the same jaraens, the researcher E.V. According to kuznesova, a culturally diffuse state occurs, as a result of the absorption of traditional religion, "detemporalization" and "delocalization" of traditions, which are the basis of national identity, occurs. [6:52].

The mechanism of constructiveness of social identity of an informed society, V.Z. It is carried out by Kogan under the influence of "infologema", which is included in scientific practice. Infologema is a phenomenon of poor quality or false information, based on special artifacts. [7:51] Infologems are carried out specifically for the purpose of manipulative influence, bringing not only society, but also individual stereotypes of generations, individual and social moral norms into the deorientation of generations by transformation. It seems that by the help of ifologems, a person feels as if he gives a rational assessment of his behavior and the surrounding reality. There are ideological, political, religious types of Social Psychological infologems, on the basis of which the purpose lies as to arouse a xenophobic mood in people and a punitive mood by finding the culprit. Most of the above examples are practical expression in mobile messengers. The fact that it has become the main source of information providing adolescents and young people with information, dominates the establishment of communication among young people, manifests itself in the formation of the outlook of users, their attitude to the surrounding people and their socialization to society as an impetus. Therefore, it is also important to research the behavior and motivation of the members of the audience of mobile social networks, the electronic messages that affect them, the topics of the conversation that is going on between them, and the various pictures (avatars) that are being used on the pages of the mobile social network, using the content-analysis method. Because, the Internet as a global network

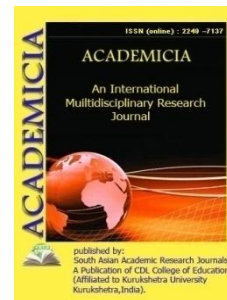
provides a number of opportunities to its users. In particular, through the use of the internet, it is possible to anonymously distribute information and ideas of various forms (political, scientific, cultural, religious and other). It can also quickly and easily capture any information that interests itself. [9:2].

## CONCLUSION

In summary, today mobile messengers serve as the main type of service for communication among young people and, as a result of their transformation into one of their vital criteria, the formation of social identity of an information society takes a primary place, as a result of the emergence of such harmful consequences as setegolism or subjugation to networks. As a result of the transformational impact of the religion factor in the informatized society on the constructiveness of social identity of mobile messengers, traditional religious identity is dressing formal identity through virtual identity.

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## THE IMPORTANCE OF FEEDING SILKWORMS UNDER POLYETHYLENE

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### ABSTRACT

*During the feeding of silkworms, the technology of feeding worms under polyethylene was studied to ensure that the leaves given to them do not wither and are almost completely eaten, to improve the process of growth and development, to reduce the number of nutrients, to reduce food consumption. When worms are fed under polyethylene, the moisture content in the polyethylene is high, and the leaves given to the worms are consumed less due to the long-term retention of moisture in the given leaves (at a young age they are fed 3 times instead of 10-12 times a day). The development of the worms was smooth, and the biological, genetic, and technological characteristics of the cocoons they wrapped proved to be better than those of worms fed in the normal way.*

**KEYWORDS:** *Monophagous, Offspring, Waste, Young Larvae, Adult Larvae, Larvae, Varietal Cocoons, Non-Cocoons, Black Cocoons, Deaf Cocoons, Live Cocoons.*

### INTRODUCTION

Increasing the volume and improving the quality of finished silk products, mastering its most popular types and designs, ensuring the certification and standardization of industry products by international requirements are among the most pressing issues today. Under the leadership of the President, special attention is paid to the further development of silkworm breeding in the process of reforming the agricultural sector. The introduction of advanced agro-technical methods, modern technologies, and the strengthening of the fodder base are contributing to the



increase in productivity. All living things on earth are in direct contact with the environment through food.

Types of foods, their composition, quantity, characteristics of animal survival, growth, development, and reproduction influence the appearance of Mulberry silkworms belong to the group of monophagous insects (feeding only on the same food) and feed only on mulberry leaves. The larva gets all the water, protein, carbohydrates, vitamins and other nutrients it needs from the mulberry leaves.

This means that the composition of mulberry leaves, rich in nutrients, plays a key role in nutrition. If a mulberry leaf is deficient in this or that substance, it is immediately reflected in the growth and development of worms and their metabolism.

The amount of food that silkworms eat and digest in the body depends on the amount of water in the leaf and whether the leaf is moist or not. It is known that due to the temperature in the hive 25-27°C, the leaves wither and dry out in 1-1.5 hours. As a result, the worms do not eat such leaves, and the remaining leaves become rotten, and we have to give the worms new leaves. This leads to higher food consumption and increased waste. All this leads to overwork and economic loss.

With this in mind, the technology of feeding worms under polyethylene has been developed to ensure that the leaves given to the worms do not wither and are almost completely eaten, to improve the process of growth and development, to reduce the number of nutrients, to reduce food consumption. It is expedient to study and apply it in practice.

### **The Main Findings and Results**

To positively address these important processes, if the technology of feeding silkworms under polyethylene at an early age is developed, it will be enough to feed them 3-4 times a day instead of 10-12 times a day. This saves on feed, increases the number of worms fed on the farm, and cocoons lead to an increase in the weight of cultivation.

Our research focuses on this issue by feeding worms under polyethylene to young worms by feeding those leaves 3 times a day instead of 10-12 times a day.

Also, silkworms do not eat all the leaves. After a while, the given leaf loses its water, it withers, and is not eaten by worms. Some of the leaves are excreted in the feces without being properly digested. With this in mind, we have focused on this process below and conducted experiments to study it in more depth.

Three variants were set up for the experiment, and 200 worms were obtained for feeding in all three variants. Of these, options 1 and 2 were experimental and option 3 was the control option. Temperature and relative humidity in the cage and under the polyethylene was measured every 3 hours.

The data show that the temperature and humidity levels under the polyethylene also depend on how high the polyethylene is covered over the worms. In particular, when feeding young polyethylene at a height of 20-40 cm, the temperature under the polyethylene is + 25.8-26.0, which is almost equal to room temperature and the relative humidity, is 13-15. %. When the worms in this variant were observed to develop, they were able to eat evenly, fall asleep en masse, and wake up.



Comparing them with control worms fed under normal conditions, it was found that the development of experimental worms was one day earlier. In all experimental variants, the worms were given leaves 3 times a day for 1-3 years, while in the control variant, the worms were given 10-12 times a day at 1 year of age, 9-10 times in 2 years of age, 7-8 times in 3 years of age, 4- leaves are given 6-7 times at age and 5-6 times at age 5. In the experimental version, the humidity of the air under the polyethylene is always 88-90%, so the given leaves do not wither quickly, and the worms can feed it for a long time, up to 8 hours. The air under the polyethylene is changed when the worms give leaves, and it is enough until the next leaf is given.

Proper care and feeding of the worms is one of the prerequisites for high cocoon yields. When this is done, the amount of silk in the cocoon increases and its quality improves. Even if the worms are well fed, the results will be worse if the cocoon wrapping conditions are not good. One of the factors that influence the formation of cocoons is room temperature and humidity.

The best cocoon quality is when the cocoon temperature is + 25°C during the cocoon wrapping period. When the temperature rises, the worm wraps the cocoon faster, does not fit the silk in the cocoon well, and the cocoon's shell becomes sticky. The silk of such cocoons is much more difficult to spin, and the silk is often torn at the time of spinning. The moisture content of the cocoon from the time of cocoon wrapping also has a significant effect on the quality of the cocoon. When the worm is 5 years old, a lot of moisture evaporates from the leaves. Besides, the worms produce wet feces when they clean their intestines before packing. The thickening of the gut also increases the humidity in the wormhole. If the humidity in the cocoon increases during cocoon wrapping, the quality of the cocoon will decrease, the number of defective cocoons will increase, and it will be more difficult to pull the silk from such cocoons. The relative humidity of the air during the cocoon wrapping period should not exceed 65%. If the temperature and humidity of the worm's air rise, ventilating the worm quickly will give a good result.

**TABLE 1 VARIATION RATES OF COCOONS OF WORMS FED UNDER POLYETHYLENE**

Variants	Number of worms taken for feeding	Total wrapped cocoons		Including:							
				varietal cocoons		non varietal cocoons		Black cocoons		Kar cocoons	
		number	%	number	%	number	%	number	%	number	%
V <sub>1</sub>	200	190	95.0	184	92.0	3	1.5	1	1.5	2	1.0
V <sub>2</sub>	200	193	96.5	188	94.0	3	1.5	1	1.0	1	0.5
V <sub>3n</sub>	200	188	94.0	182	91.0	3	1.5	2	1.5	1	0.5

Analyzing the data in the table, we can see that the distance between the worms and the polyethylene when the worms are fed under polyethylene affects the quantity and quality of the

total cocoons differently. In particular, in the experimental variant, when the worms were fed with polyethylene, 190-193 out of 200 worms, or 95-96.5% of cocoons were wrapped, while in the control variant this figure was 94.0%. This means that in the experimental variant, the amount of cocoon wrapping increased by 1-1.5%. This indicates that it is advisable to cover the worms with polyethylene. The correctness of our opinion can also be determined by the number of cocoons in these variants. If 92.0-94.0% of the total cocoons in the experimental variants were varietal and 6.0-8.0% was non-varietal cocoons, this figure was 91% in the control variant. Decreased by 6–8% compared to the experimental variants, while the number of varietal cocoons increased by 4.0–1.0%.

The results of the study show that covering the worms with polyethylene at a height of 20-40 cm not only saves the amount of food given to the worms, but also the quantity and quality of the cocoons wrapped, which is slightly higher than that of worms fed under normal conditions was observed to be high.

Silkworms thrive at a young age due to the high humidity when fed under polyethylene. However, in adulthood and during cocoon wrapping, high humidity does not have a positive effect on worms. Therefore, at the age of 4-5 years and during the cocoon wrapping, the polyethylene covered with worms was removed and fed in the open. However, the fact that the worms in the experimental variants developed uniformly when covered with polyethylene allowed them to enter the stalk more quickly and to wrap quality cocoons. The cocoons of these worms were found to be slightly heavier than the cocoons of worms fed under normal conditions without polyethylene.

For example, when worms are fed under polyethylene (closed at a height of 20-40 cm), the average weight of the cocoons is 2.16-2.26 grams, while those fed in the open (controlled) worms the weight of one cocoon was 2.12 grams. In other words, the experimental variants showed that the weight of the worm-wrapped cocoons was 2-3% higher.

When the worms were fed with polyethylene covered at a height of 20–40 cm, the average weight of the cocoon wrapped by the worms was 520–540 mg, which was 10% higher than in the control variant (490 mg).

The fact that the biological parameters of living cocoons are high in experimental variants is confirmed by the silkiness of the cocoon shell. In particular, if the silkworm is covered with polyethylene at a height of 20-40 cm, the silkworm cocoon will be 23.7-24.0%, which is 0.8-1.0% higher than the control variant (23.1%) proved.

The productivity of silkworms fed under polyethylene can now be seen in Table 2 below. The results of this experimental table show that the productivity of silkworms reared in the simplest way (control variant) was much lower than that of silkworms of options 1 and 2. The cocoon yield from 1 gram of silkworm was 3,915 kg in variant 1, 3,986 kg in variant 2, 3,605 kg in variant 3, 310 grams in variant 1, and 381 grams in variant 2 which is heavy.

As a result, the cocoon yield from 1 box of silkworms averaged 70.66 kg in Option 1, 73.06 kg in Option 2, and 64.38 kg in Option 3.

These data show that the cocoon yield from each box of silkworms reared in the normal way was 6.28 kg more than option 1 and 8.68 kg more than option 2. The quality of these cocoons is 92.0% of the 70.66 kg cocoons grown in the 1st variant, 94.0% of the 73.06 kg cocoons grown in

the 2nd variant, and 91.0% of the 64.38 kg cocoons grown in the 3rd variant formed by a mixture of varietal cocoons.

It can be seen that the silkworms reared in Option 3 were 1.0% better in Option 1 and 3.0% higher in Option 2.

**TABLE 2. THE PRODUCTIVITY OF COCOONS WRAPPED IN WORMS FED UNDER POLYETHYLENE**

Options	Duration of the worm cycle, days.	The average weight of a cocoon, gr.	Weight of one cocoon shell, mg	The silkiness of the cocoon shell, %	Average cocoon yield per gram of worm, kg.	Average yield per box of worms, kg.	A mixture of cocoons, %
V <sub>1</sub>	25 ± 0.26	2.16 ± 0.12	520 ± 7.10	23.7 ± 0.24	3,915	70.66	92 , 0
V <sub>2</sub>	25 ± 0.25	2.26 ± 0.16	540 ± 7.25	24.0 ± 0.26	3,986	73, 06	94 , 0
V <sub>3</sub> (control)	27 ± 0.30	2.12 ± 0.11	490 ± 6.80	23.1 ± 0.20	3,605	64.38	91.0

Following the experiment, samples of dried cocoons were taken and the silk was spun on a cocoon spinning machine. The amount of silk produced from the cocoon, the continuous length of the washed silk fiber, the total length of the silk fiber, and the metric number of the silk were then calculated, as shown in Table 3.

**TABLE 3. TECHNOLOGICAL CHARACTERISTICS OF SILKWORM COCOONS FED UNDER POLYETHYLENE**

Indicators	V <sub>1</sub> cocoon	V <sub>2</sub> cocoon	V <sub>3</sub> (control) cocoon
Average weight of cocoon, gr	2,16±0,12	2,26±0,16	2,12±0,11
Moisture content of cocoon shell, %	10	10	10
Output of dry cocoon from live cocoon, %	2,68±0,15	2,64±0,11	2,72±0,13
Output of raw silk from cocoons, %	35±0,21	38±0,25	33±0,20
Continuous length of silk, m	642±27,1	685±25,5	593±36,3
Total length of silk, m	1810±25	1857±27	1573±23
The metric number of silk fiber g / m	3071±0,021	3290±0,032	2950±0,027

As can be seen from the table, there are almost no differences in some of the options. The average weight of one cocoon was 1-6% higher than the control, the number of live cocoons used to make one kilogram of dry cocoon was 1.5-3.0% less, and the yield of raw silk from dry cocoons was reduced by 2-5%. It was found that the continuous length of the obtained silk fiber

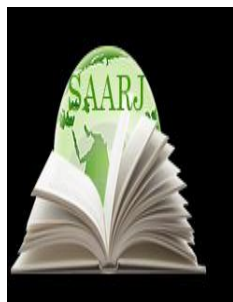
increased by 8.2-15.5% and the total length of the silk fiber spun from one cocoon by 15-18%, and the metric number of the spun silk fiber increased by 4.1-11.5%.

### CONCLUSION

In short, when worms are fed under polyethylene, the moisture content in the polyethylene is high, and the leaves given to the worms are consumed less due to the longer retention of moisture in the given leaves (at a young age they are fed 3 times instead of 10-12 times a day). The development of the worms was smooth, and the biological, genetic, and technological characteristics of the cocoons they wrapped proved to be better than those of worms fed in the normal way.

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## STRATEGIES IN TEACHING READING

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### ABSTRACT

*The article demonstrates the strategies teachers can use in the classroom to build fluency and develop students' reading comprehension.. The author talks about the principles and activities to use in, and the types of reading with their functions. She explores the types of reading activities and how to activate students in reading.*

**KEYWORDS:** *Reading Comprehension, Building Fluency, Intensive Reading, Extensive Reading, Activity, Active*

### INTRODUCTION

Sometimes we get into deep thought when we see that our students are not engaged in reading or do not want to do reading tasks. They can recognize and pronounce words from the text or story, but they cannot understand, retell or answer questions about what they have just read. Reading isn't really reading and enjoyable if students don't understand what they have read. Reading is a mental process and teaching reading is a complex process. To raise students' interest in reading comprehension is the teacher's main task. To develop an extensive knowledge base and draw on a repertoire of strategies for working with struggling students is not easy and only the best teachers are able to perform this.

Reading comprehension is a complex process and may be influenced by several factors. It is important to state that, according to Bárdos (2000), reading cannot be regarded simply as a mechanical, automated process of recognizing certain signs and the meaning of the different words. It is a more complex endeavor, involving interpretation, the attempt to reveal the communicative function of the text, namely the intention of the writer. He believes that we may consider four levels regarding reading in a foreign language: the level of physically recognizing

the letters; recognizing, decoding the meaning of the word; the level of understanding the meaning of the word, considering the grammatical aspects as well.

### **The Main Findings and Results**

Teaching short, one-syllable words or sight words is not necessary for adult students, as when they come to University they already have base knowledge but teachers have to build vocabulary and fluency in reading. Building vocabulary is an important and integral part of teaching students how to read, as by reading students expand and widen their vocabulary and they will be able to read and comprehend more advanced texts as well as improve their vocabulary. For this teachers should read with their students daily, encourage them to read as much as possible and vary the type of the text they read. Teaching students the definitions of words or other attributes of words, for instance the meanings of common roots, prefixes and suffixes is very important. For this we can use association methods as they help students draw connections between what they do know and words that they do not know, a good example of that is pairing a new word with a known synonym.

Building fluency is raising the ability to read fast and accurately. To teach students fluent reading is hard at beginner and elementary level and students fail as they focus on correct pronunciation rather than the meaning of the words. When they do not understand the meaning of the text they read, they become bored and reading seems useless and difficult. For this reason building fluency in reading is important and the best way to promote fluency is repeated reading, in which students read a paragraph many times while the teacher conducts feedback about speed and accuracy levels, also helps with problem words demonstrating fluent reading. Teachers should help their students improve fluency by finding a text or story they enjoy reading. To ensure that students are familiar with different types of pronunciation is vital due to it maintains to know how punctuation marks will affect the flow and intonation of their reading.

The process of constructing meaning from what a student reads is called reading comprehension. In order to comprehend a text or a story a students must be able to associate the words s/he reads with their actual meaning. The main goal of a teacher is to enable their student to comprehend the text s/he is reading, as without comprehension, reading is meaningless. It is important to assess students reading comprehension and this can be done through asking students to read and answer questions about what they have read, and the formats may include such tasks as multiple choice, short answer, and fill-in-the-blank questions. And also they can assess their knowledge of comprehension strategies by asking questions while reading, after reading and asking them to give a summary of what they have read. Teachers should continue observing their learners' level throughout the learning process. Teachers should also make students feel secure as many adult learners suffer from lack of confidence and from the fear that it is too late for them how to read and improve their reading fluency. Teachers should express confidence in their learning abilities and reassure them that it is never too late to start. It is useful and necessary for teachers to use material that is interesting and relevant to their students, as using relevant materials makes the learning process less of a chore and encourages their students by showing them the practical applications of learning to read. Using authentic materials, like newspaper articles, restaurant menus, advertisements and different signs makes reading practice more enjoyable and fun for students and raise their interest in reading.



By encouraging students to read more and make them engaged in reading process we help them become good readers and good readers use strategies. By using strategies students can reach fluent reading, which is the ability to read at an appropriate rate with acceptable comprehension. There are 8 principles of reading that every teacher should be aware of and keep in mind. And these principles are:

1. Use what readers already know: background knowledge and schema
2. Build strong vocabulary
3. Teach for comprehension
4. Work on increasing reading rate
5. Teach reading strategies
6. Encourage readers to transform strategies into skills
7. Build evaluation into your teaching
8. Use different strategies to further develop as a reading teacher

Using students' background knowledge and schema is important as it opens the door to building and expanding vocabulary and maintains fluency in reading. Building strong vocabulary involves and engages students in learning. When teachers teach students for comprehension they encourage them to transform their strategies into skills and the learning process becomes entertaining and useful for them. Teachers should build evaluation into their teaching and use different strategies to further develop as a reading teacher as these strategies help students become purposeful, active readers who are in control of their own reading comprehension.

It is stated that comprehension strategies are appreciating or intentional plans that people use in order to achieve a goal (Roit, 2005) and are used deliberately to make sense of text (Afflerbach et al. 2008). Good readers use strategies consciously to make sense of the text, remember critical ideas and integrate new learning into existing schema or prior knowledge. Teacher support students to master reading strategies due to they need to learn how to use strategies independently, to recognize and solve problems, and to delve deeper into text to make connections and inferences. Readers use comprehension strategies consciously in order to monitor and check understanding, to clarify confusion, and to process text. Strategies that are helpful in building evaluation in reading are situational and are used intentionally by readers. (McEwan, 2004).

Keeping in mind the reading principles we should remember that the main strategies in reading are intensive and extensive reading. They are also called reading approaches. Intensive reading is a type of reading, where in learners are expected and supposed to read a short text carefully and deeply as their aim and task is gain maximum understanding. Due to the fact that intensive reading is comprehensive by nature, it aims to understand the literal meaning of the text, covers reading of texts, involves reading of a book again and again to extract its literal meaning. And as for reading material it is decided and recommended by teachers. In intensive reading students read short texts, as it helps students to develop their reading skills, vocabulary and grammatical knowledge. Through being involved into intensive reading students get linguistic, literary or detailed meaning of the text. The main aim of intensive reading is to identify the answers to the questions of reading comprehension. It can also be used for the purpose of skimming and scanning, and the concatenation of the sentences. Understanding the gist and subject matter of the text, improving grammar and vocabulary, and understanding the thought of the author behind

the texts are also target goals of intensive reading. The main focus of the student is on the language used, rather than the text.

For these and other reasons texts for intensive reading must be **interesting**, because if students do not enjoy what they read, they will quickly forget the content, and have more mental resistance to the intensive reading process. Texts we select for intensive reading have to be **short**, because the end goal is to understand the text down to the most minute detail. If we choose a longer text, it becomes more laborious to complete such a deep analysis, so it is better to stick to shorter texts in order to avoid mental exhaustion. Intensive reading involves reading the given material, again and again, to understand it in full, developing their critical thinking and students are given opportunity or required to use the dictionary, to understand the meaning of every single word which is not familiar to them.

Extensive reading is a type of reading in which students read and refer to large quantities of reading material, chosen by themselves. Students read texts for getting general understanding. Extensive reading is supplementary and aims to inquire information or for pleasure, it covers reading of novels, magazines and newspapers. Students themselves select reading materials on the topic that matches their interest and helps to develop reading fluency of students. Extensive reading is reading for fun, entertainment and pleasure, and also to gain a basic understanding of something. For extensive reading, students look for easy interesting and amusing books, so as to improve their reading fluency and speed as well. The text is comparatively simple, containing a few unfamiliar words, and the students are not required to use a dictionary, as understanding each and every word contained in the material is not important. Extensive reading does not matter whether students understand each word written in the text or not, to get the basic concept of the reading material.

As Neil J. Anderson (2007) defined in teaching reading teachers should

**A:** Activate prior knowledge

**C:** Cultivate vocabulary

**T:** Teach for comprehension

**I:** Increase reading rate

**V:** Verify reading strategies

**E:** Evaluate process

In order to raise students in reading teachers engage students in pre/before reading, while reading and after reading activities. The main strategies in which teachers involve students are **preview/ before reading activities**, vocabulary sorts, make the predictions, read a few quotes from the texts, ask questions, and complete the KWL organizer.

In **while/during reading activities** students do the tasks/strategies: think aloud with a partner, retell what you understand, ask questions, make more predictions, clarify predictions, complete a graphic organizer.

By involving students into **after reading activities**, teachers encourage students to summarize, retell, role-play a part of the story, ask more questions, extend to another, and complete an exit slip.

It is important to monitor reading. Monitoring reading comprehension is one of the effective strategies as it helps students “fix” problems in their understanding as the problems arise, maintains them become better at monitoring their comprehension. It aid students to:

- Be aware of what they do understand
- Identify what they do not understand
- Use suitable strategies to resolve problems in comprehension

## CONCLUSION

Nowadays teachers demand students to read and read well. McNamara and Kendeou (2011) highlight the importance of teaching reading as a process and stress that strategy instruction has been found to impact students’ appreciation of reading as a process, the goal of which is to understand what is being read. Teaching students to use a repertoire of comprehension strategies and skills can set them securely on the path to becoming lifelong readers. Many opportunities to read independently allow students to begin to coordinate the strategies they have learned; to adjust, modify, or change strategies and skills until they are able to make sense of text. Accordingly, the higher order thinking of strategic readers enhances students’ reading comprehension experience and responses to literature and informational text as well.

One can suggest loads of activities to use in the classroom in order to expand vocabulary and reach fluency in reading comprehension, although they have various purposes all of them lead to improvement of knowledge of students.

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## ISSUES OF CLUSTERING AGRICULTURE IN UZBEKISTAN

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### ABSTRACT

*This article discusses the development of innovative activities in integrated formations. The article presents conceptual structures for the formation of fruit and vegetable clusters that allow integrating the latest technologies in the field of agriculture with the capabilities of the processing industry. The advantages of the cluster system in the production, storage, processing and sale of fruits and vegetables are analyzed*

**KEYWORDS:** *Industry, Cluster, Cluster Technologies, Cooperation, Farms, Mechanism, Farmer, Vegetable, Grape, Market, Export*

### INTRODUCTION

As in all developed countries, in the last three to four years in Uzbekistan clustering has been developing as a field of practical activity. Many cluster projects are being implemented in different regions of the country.

The introduction of the mechanisms of the cluster model, management and administration in practice, in particular in the agricultural sector, as a promising direction of the market economy for the innovative development of the national economy will become the basis for ensuring the integration of science, education and production. The share of agriculture, forestry and fisheries in the country's GDP in 2019 amounted to 28.1%. As a result of the introduction of market

mechanisms and modern technologies in agriculture, more than 80 types of agricultural products grown in Uzbekistan were exported to 66 countries of the world. In 2019, the share of agricultural products in the volume of agricultural production in the country amounted to 50.2%.

The formation and development of new clusters in the context of Uzbekistan requires scientific, methodological and practical justification. Deficiencies in the analytical support of cluster formation processes lead to unjustified decisions of state bodies, as a result of which state support for clusters does not give the expected results. Therefore, research on this topic today is one of the most pressing problems.

According to expert estimates, “clustering covers 50% of the economies of developed countries. There are more than 2000 clusters in the EU, which employ 38% of the workforce.” [4].

Research on the topic, theory and practice of clusters shows that it is also one of the important research subjects of many Russian economists. For example, L.S. Markov’s research and monographs cover “Concepts and important aspects of economic clusters” [5] and “Theoretical and methodological foundations of a cluster approach in economics.” Also, in the monograph of T.V. Mirolubov [6] “Factors and patterns of formation and development of regional clusters”, Belarusian scientists: In the works of N.V. Mordovchenkov in the technological processes of management of the Belarusian agro-industrial complex ... as “agrocluster - innovative organizational and economic mechanisms” [7] and D.M. Krupsky’s research on clusters is based on “... clusters in Belarus, cluster development, cluster policy of the republic” and “evolution of cluster views, real practice, trends and prospects of cluster development” [4].

The introduction of the cluster approach in the agricultural sector of Uzbekistan is a new and innovative approach. However, due to the practical experience of introducing clusters in the agricultural sector in our country in recent years, there is a lack of practical and theoretical research on clusters in economics. Therefore, the study of clusters in the context of this topic is relevant.

In turn, newly introduced new systems, such as the cluster method, must be theoretically-methodologically and scientifically substantiated.

### **Main part**

In our country, the clusters “cotton-textiles”, “fruits-vegetables”, “animal husbandry” and “silk” are considered as a modern form of organization of production in agriculture and animal husbandry. From 2020, it is expected that the state order in the cultivation of cotton and grain will be phased out. This, in turn, requires transformations in the agricultural sector, covering complex economic processes.

Cotton and grain cultivation will no longer take place on unpromising cropland with low efficiency and poor water supply. According to the World Bank, a 50% reduction in the area under cotton and wheat in Uzbekistan, for example, would increase agricultural output by 51% and agricultural employment by 16%, as well as water savings by 11% [8].

The economy uses industrial clusters belonging to the “Innovation and Industrial Clusters”, in agriculture – “Agroclusters” and in tourism – “Tourist Clusters”. Also, in the study of agricultural economics, such terms as “agricultural cluster”, “agro-cluster”, “agrarian cluster” and “agro-industrial cluster” are used. Studies show that in science and practice there is no generally

accepted classification for clusters. In turn, agro-clusters are divided into structural elements such as “production”, “science and education” and “regional bodies of agricultural management”, and the role of each of them in achieving sustainable development is determined.

A cluster is a uniquely integrated structure that arises on the basis of self-formation, which does not arise artificially.

According to A.A. Nastin, an agrocluster is a system that exists in enterprises producing various agricultural products when there is a synergistic effect of organizational economic mechanisms for managing technological processes, ensuring the acquisition of competitive products and profitability of each business unit [9]. According to him, the formation of agro-industrial clusters represents a direct practical application of a systemic approach, namely:

- Firstly, the development of any socio-economic system, including in the region, the development of agriculture in the country begins with local conditions, and development is aimed primarily at solving interrelated issues;
- Second, in the context of the World Trade Organization (WTO), agriculture can be developed using the latest achievements of high-tech science, innovative technologies;
- Thirdly, about 80-90 percent of the gross agricultural output in the country and its various regions is produced by farms and landowners, therefore, the system of agricultural clusters should cover all types of economic entities as participants;
- Fourth, the cluster approach is based on a new theory of economic growth, which considers science, innovation and human capital as key factors in development.
- Fifth, the development of small agricultural structures is seen as qualitative change aimed at improving the living standards and living standards of its owners, ensuring international competitiveness in the context of globalization;
- Sixth, in the XXI century, there is a shortage of food resources and has become a geopolitical tool that creates unlimited demand for food;
- Seventh, the rise in food prices will be a mega-trend in the 21st century, so agribusiness will be more profitable than other sectors;
- Eighth, this requires the formation of clusters as a system to create unique competitive advantages of agro-industrial clusters in the region, which will complement each other and ensure sustainable growth and economic efficiency of agriculture in the region.

In *Clusters and The New Economics of Competition*, M. Porter classifies the members of the California wine cluster into three levels [10]:

The first level is the core of the cluster: wineries (wine producers); winegrowers;

The second level - mixed companies: companies producing fertilizers, pesticides, herbicides; companies producing harvesting equipment; enterprises providing irrigation systems; enterprises producing barrels, labels, glass containers, glass caps and stoppers; enterprises producing grape processing equipment;

Third level - service companies (economic infrastructure): educational, research, and commercial organizations (e.g., Wine Institute, Culinary Institute, and the like); PR and advertising companies; specialized media (for example, “Trading magazine”) and the like; California State Structure - Wine Committee; organizations that enable cluster participants to interact with each other.



Porter's research explored the relationship between the California wine cluster, another agricultural cluster in the state, the food cluster, and the tourism cluster.

Typically, large enterprises demonstrating the viability, regional significance and competitiveness of their operations in production processes are the economic core of the agro-cluster. Around the core will be concentrated small and medium enterprises, suppliers and infrastructure structures that support the technological chain. It should be noted that there may be clusters serving only the local market of the region, and clusters exporting their products outside the region, of course, clusters exporting goods and services to local and global markets will have competitive advantages.

According to the monographic studies of Mirolubova M.V, fruit and vegetable clusters formed in our country include three main tiers (layers, levels), which are [6]:

- The first level or "core of the cluster" are manufacturing companies, which include firms operating in the local market and leading companies exporting their products (goods or services) outside the region (farms, agricultural farms). It is the leading farms that export their goods / services to the regions of the country and to foreign markets, ensuring the economic success of the cluster and attracting financial flows to the region. Such leading companies dominate the cluster.
- The second tier (level) is a mixed company united around the core of the cluster, which includes related companies that manufacture equipment, components (and suppliers), process suppliers, and raw materials, among others. This group can also include large, medium and small businesses.

In many cases, the emergence of small and medium-sized business companies in clusters is associated with the outsourcing of business processes in leading firms. It is well known that small manufacturing enterprises will be more flexible, where innovations will take place faster, and where production costs will be lower than in a base enterprise.

The role of large business in the process of cluster formation is reflected in the involvement of small and medium-sized businesses in production, active cooperation, cooperation and subcontracting, the establishment of active business and information relations. This is because the emergence of cooperative relations in the development of small business in the cluster is of fundamental importance.

- the third tier (level), which is the service companies that make up the economic infrastructure of the cluster - scientific and technical and service centers; financial and credit institutions; investment funds; higher, secondary special education institutions; research organizations, public organizations; insurance and consulting companies, etc.

Thus, the clusters include three levels of participants: 1) parent companies, 2) companies engaged in related economic activities, and 3) companies serving economic activities - economic infrastructure.

It should be noted that the cluster kernel represents its "face", its specialization and naming is determined by the cluster kernel. Companies that belong to one cluster core cannot enter another cluster as its core, but they can participate in the second and third levels of another cluster. As the companies in the cluster core produce the same type of products (goods, services), competition

between them remains. Therefore, competition between the companies that make up the cluster is a fundamentally important feature of the cluster core, that is, competition and cooperation are observed in the core of the cluster. Companies that are part of the cluster core compete with each other for market share, but at the same time they cooperate with each other.

E.V. Malish [11] is based on the Porter methodology in identifying innovative agroclusters, dividing the composition of regional food agroclusters into “cluster core”, “additional facilities”, “service facilities” and “ancillary facilities”. Based on this approach, the composition of fruit and vegetable clusters formed in Uzbekistan will consist of the following elements:

- “core, cluster core” - objects that group, locate and carry out the activities of the cluster - such as agro-firms, farmers, dehkan farms and landowners, processing enterprises, procurement enterprises;
- “additional facilities” - facilities that provide direct operation of the “core” of the cluster - research, higher and secondary education, technology parks, etc. ;
- “service facilities” - service centers, shopping centers, distribution firms, construction, transport and logistics centers (fruit and vegetable storage, primary or deep processing facilities, agriculture, which are not directly related to the operation of “core” facilities with mandatory participation) techniques), objects such as financial structures;
- “ancillary facilities” - facilities whose participation is appropriate (optional) and the “core” of the cluster is not directly related to the operation of other facilities - consulting, advertising, audit, legal, consulting, leasing, factoring, insurance, investment, venture in the cluster businesses.

The formation of a cluster requires the solution of current problems that determine the conditions of operation of the cluster, based on the interaction of its participants with each other, namely: identification of competencies within the cluster; determine the form of value added distribution among all cluster participants; guarantees of technological, economic, social and organizational efficiency of the enterprises participating in the cluster; ensuring the effective development of all participants in the cluster; guaranteeing the socio-ecological and economic development of the region.

## RESULTS AND DISCUSSION

The development of competition and cooperation at the highest level is an important aspect of the cluster economy.

Some studies use the term “agrocluster innovation”, for example, according to N.V. Mordovchenkov: “Agro-cluster innovation” is a new form of organizational-economic interconnected companies, which achieves its competitive advantages through partnerships, improving the technological processes used in practical activities to ensure a quality of life in rural areas, and it is achieved through the formation of various infrastructure [7].

In addition, the formation of a cluster will help small and medium-sized businesses solve current information issues related to production processes, marketing, procurement of materials, risks, requirements and changes in product market data, as well as improve their competitive position.

The cluster will create conditions to reduce the cost of transactions and transport, the creation of infrastructure, which will be achieved through the creation of conditions for training of employees of cluster enterprises, providing access to databases of public authorities.

Due to the development of cluster cooperatives, enterprises: raw material suppliers, skilled workers, agricultural machinery manufacturers and suppliers, as well as service and repair enterprises, will have the opportunity to take advantage of external economic effects. The cluster will attract wholesale buyers and enable them to sell competitive products in the domestic regions and foreign markets of the country. The role of small and medium enterprises in the development of the cluster is determined by the production and processing of quality and competitive agricultural products, as well as the provision of support functions for cluster participants.

The development of cooperatives in agriculture, the use of modern production and processing infrastructure of the cluster, ensuring sustainable sales of products of its participants will significantly increase the production of all types of agricultural products.

Let us now turn to some research related to clustering. In the research of D.M. Krupsky (Republic of Belarus) the formation of the cluster is divided into algorithms consisting of three "preparatory stages", "main stage" and "final stage" [4]:

Preparatory stage: assessment of the relevance of the cluster; assessment of cluster formation opportunities; reveal the motives for creating a cluster; defining the goals and objectives of the cluster.

The main stage: determining the composition of cluster participants; assessment of resource redistribution based on market mechanisms to stimulate regional development bases; selection of organizational and legal form of cluster formation; feasibility study of the organizational project of the cluster; distribution of organizational responsibilities among cluster participants; determine the effects of cluster activity.

The final stage: the formation of a mechanism of interaction with the regional administration; to conduct expert examinations with the interested parties (ministries, departments and structures); development and signing of cluster agreements.

E.M. Tereshin (Russia) divides the process of cluster formation into four stages [12]: In the first stage, the enterprises that are eligible and willing to join the cluster are identified. In such cases, the motives (incentives) of potential participants in the cluster will need to be identified. Motives shape participants (founders and labor collectives) at the expense of production, financial, investment, social, and psychological interests.

In the second stage of cluster organization, internal and organizational principles of cluster formation are developed. It includes the development of a cluster strategy, analysis of common problems and opportunities of the enterprises included in the cluster, development of a plan of further actions for the development and expansion of the cluster, the formation of a coordinated structure of the cluster.

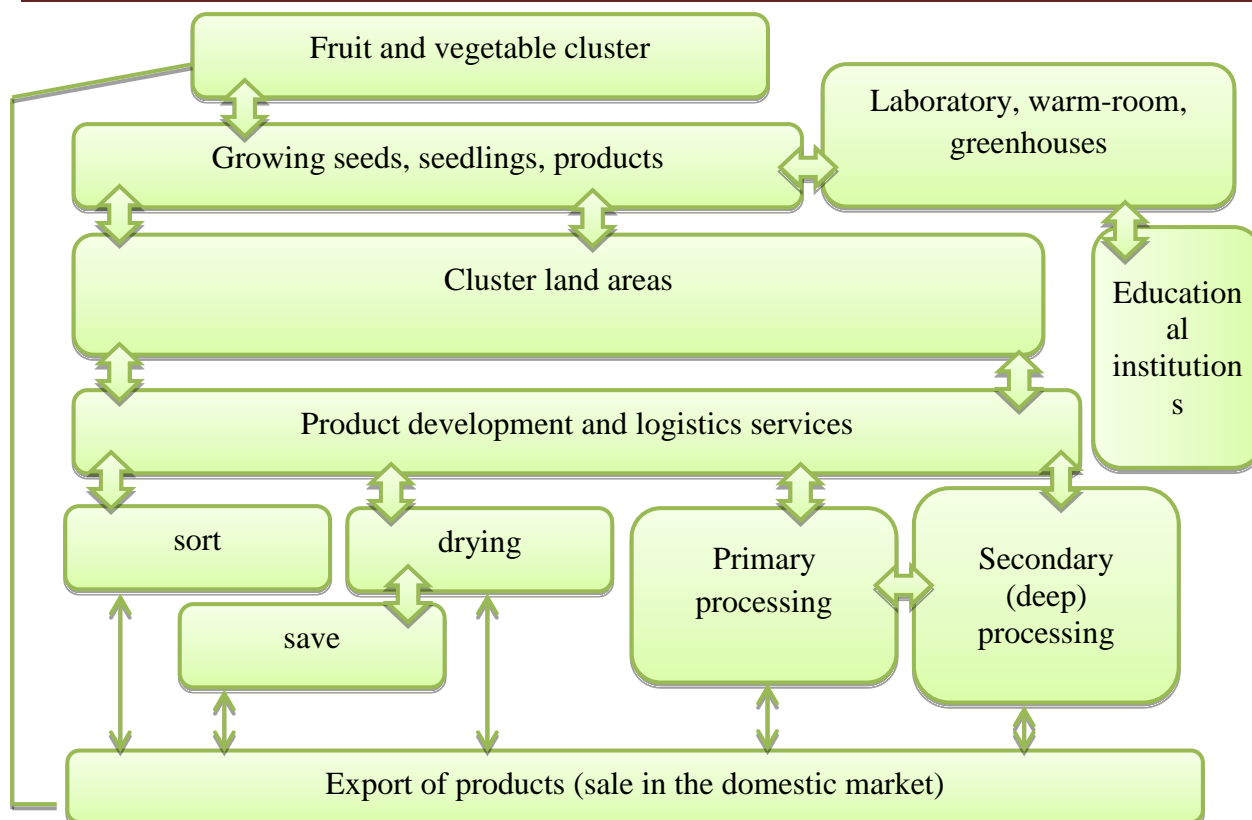
In the third stage, the order of interaction of the participants within the formed cluster is developed. Cluster enterprises will have the opportunity to participate in the organization of joint exhibitions, the creation of a catalog of general products, the joint purchase of raw materials and

supplies. These activities are done in exchange for demonstrating the effectiveness of the cluster in the short term, as well as increasing the interest of the cluster participants in long-term relationships.

In the next stage, when enterprises achieve the required level of specialization and cooperation within the cluster, they will have the opportunity to combine existing resources and introduce new technologies. In the final stage, the cluster reaches the required level of self-sufficiency.

For the rapid and innovative development of fruit and vegetable growing in Uzbekistan, a fruit and vegetable cluster is being established in two directions [1]:

- The first direction: a cluster of organizing the production of fruit and vegetable products within a single or interconnected group of enterprises, independently carrying out an established process from production to the sale of fruit and vegetable products (Figure 2).
- The second direction: on the basis of guaranteed contracts between agricultural producers, manufacturers, processors, exporters, providing agricultural producers with planting material, advance payments for the organization of agricultural work and purchasing their products at agreed prices, "seeds - cluster of organization of production of fruits and vegetables, forming a continuous chain on the principle of "seedlings - cultivation - preparation - storage - processing - transportation - delivery to the market" (Figure 2-3). According to Uzbekiston Holding, there are currently 56 fruit and vegetable clusters in the country. Projects and proposals for the establishment of another 86 such clusters are being formed and gradually implemented. For the rapid and innovative development of fruit and vegetable growing in Uzbekistan, a fruit and vegetable cluster is being established in two directions [1]:
- The first direction: a cluster of organization of fruit and vegetable production within a single or *interconnected group of enterprises*, which independently carries out the established process from production to sale of fruit and vegetable products (Figure 2).



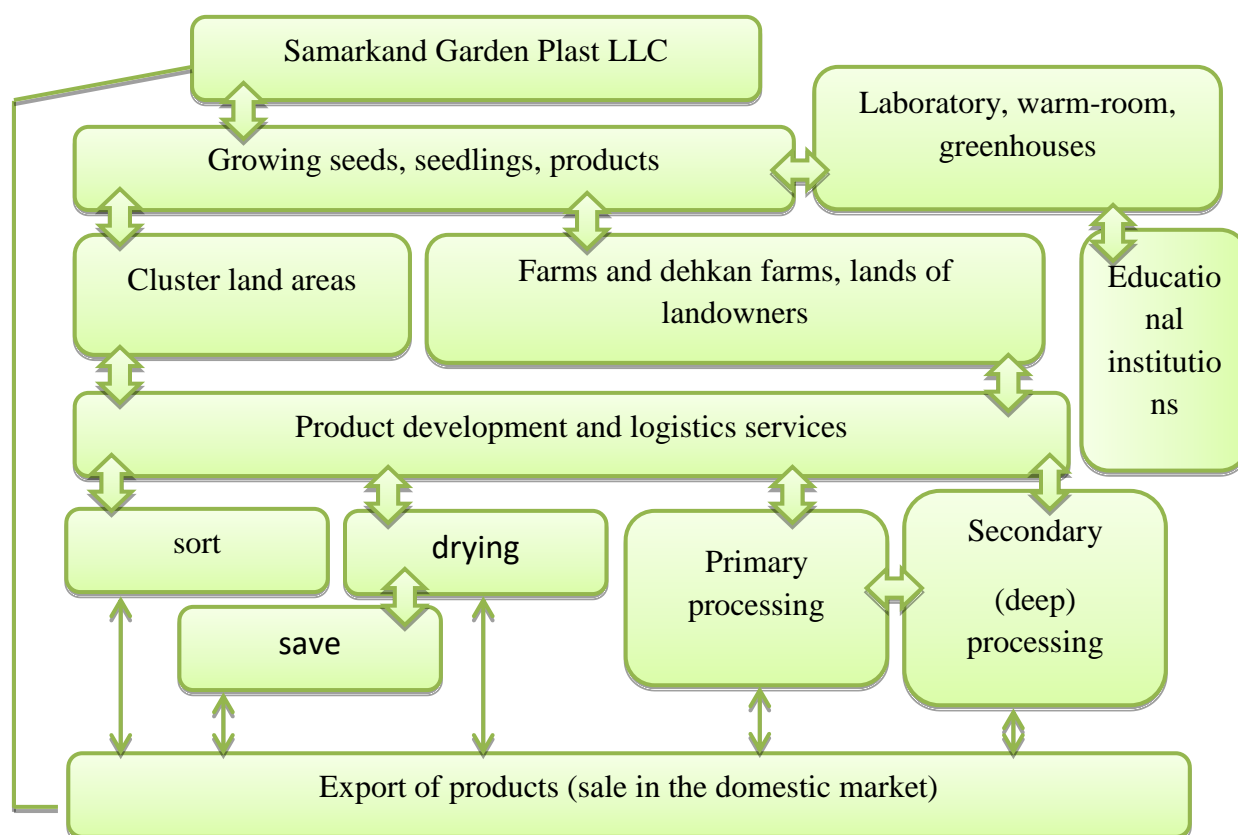
**Figure 1. Scheme of an independent fruit and vegetable cluster \***

\* developed on the basis of picture [1]

- The second direction: on the basis of guaranteed contracts between agricultural producers, manufacturers, processors, exporters, providing agricultural producers with planting material, advance payments for the organization of agricultural work and purchasing their products at agreed prices, “seeds - cluster of organization of production of fruits and vegetables, forming a continuous chain on the principle of “seedlings - cultivation - preparation - storage - processing - transportation - delivery to the market” (Figure 2-3).

There are 13 fruit and vegetable clusters in Samarkand region (February 2020).

These fruit and vegetable clusters are fruit and vegetable processing (4); drying, sorting and packaging of fruits and grapes (3 pieces); processing of grapes (2 pieces); drying and packaging of grapes (1 piece); processing of vegetable products (1 piece); storage and freezing of agricultural products (1); operates in the field of drying, sorting and packaging of fruits and vegetables and legumes (1 piece).



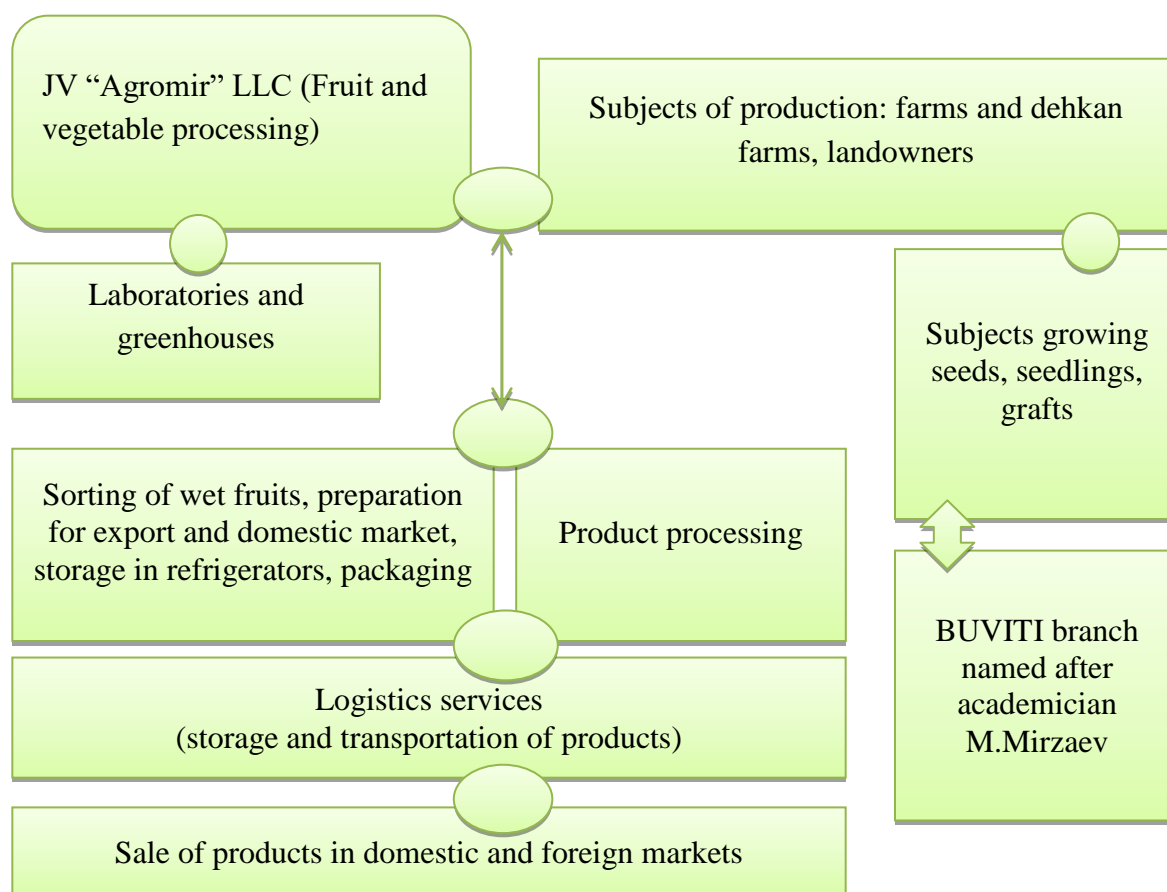
**Figure 2. Scheme of operation of the fruit and vegetable cluster of Garden Plast LLC.**

The total land area assigned to the fruit and vegetable clusters operating in the region is 16 727 hectares, of which 13 737 hectares or 82.1% belong to farms. There are 2,573 farms in regional clusters. The clusters have an infrastructure with a total processing capacity of 351,500 tons (156,919 tons of processed products and 1945.41 tons - sorting and packaging of agricultural products).

Dekhkan farms play a leading role in agriculture in Uzbekistan, especially in the production of fruits, vegetables and grapes. For example, in 2019, 83.8% of potatoes, 70.7% of vegetables, 60% of fruits and berries, 59.8% of melons, and 56.3% of grapes were produced by farms [15].

- In 2019, 14 mln. 280.3 thousand tons of fruits and vegetables (including 9945.5 thousand tons of vegetables, 2739.6 thousand tons of fruits and berries, 1595.2 thousand tons of grapes) were grown. 897.7 thousand tons or 56.3% of grapes were produced by farms and 665.7 thousand tons or 41.7% - by farms.
- In 2019, Uzbekistan exported \$ 1517.5 million worth of food products. This figure is 8.5% of the country's total exports. Food exports in 2019 increased by 132.2% compared to 2018. In 2019, the country exported 1.4 million tons of fruits and vegetables worth \$ 1.2 billion, an increase of 112.7% and 135.5%, respectively, compared to 2018. In 2019, 816.5 thousand tons of vegetables worth \$ 542.2 million and 591.2 thousand tons of fruits and berries worth \$ 658.1 million were exported. The growth of these indicators compared to 2018 was 170.1% and 116%, respectively.

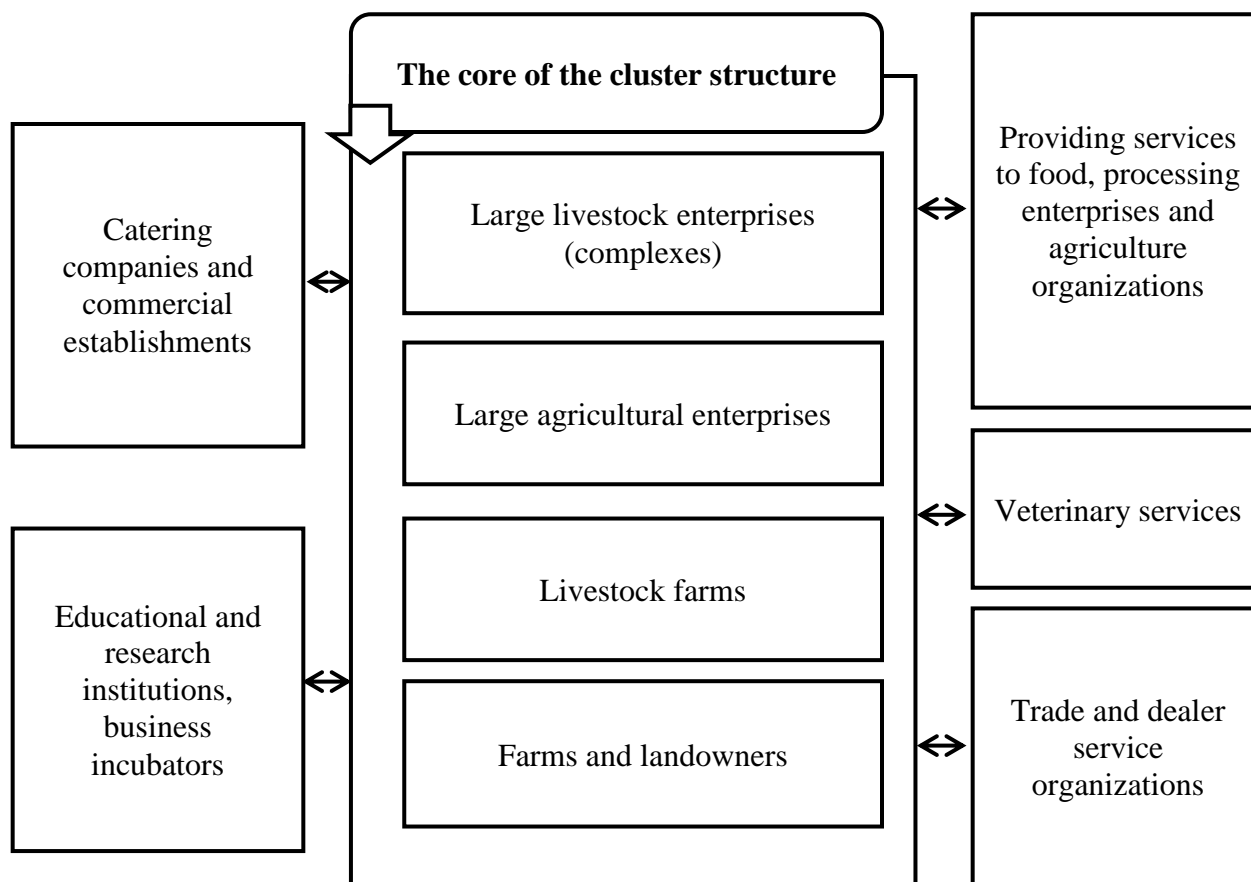




**Figure 3. Scheme of operation of fruit and vegetable cluster of JV "Agromir" LLC \*. \***  
image source [13].

- Exports of fruits and berries amounted to \$ 357.7 million in 2018 and \$ 406.8 million in 2019. That figure was \$ 238.5 million in viticulture in 2018, \$ 328.3 million in 2019, \$ 318.9 million in vegetables in 2018 and \$ 542.4 million in 2019. Foreign exchange earnings in 2019 compared to 2018 were 113.7 in fruit berries, respectively; 137.7 in viticulture; in vegetables increased by 170.1%.
- According to Uzbekiston Holding, in 2017, 793 mln. \$ 1.03 billion in 2018. USD, in 2019 it will be 1.4 bln. doll. food products and fruits and vegetables were exported. In 2020, this parameter will reach 2.3 billion. dollars is expected.

Animal husbandry cluster is an open system in which farms and dehkan farms specializing in animal husbandry interact with agricultural enterprises. It is built around the company-integrator of cooperative relations, economic and social relations. The integrator company performs the functions of cluster link management [15,16].



**Figure 4. Schematic view of a livestock cluster.**

The integrator provides training, provides all necessary infrastructure and production facilities, provides specialists in livestock, feed, veterinary services, technology, provides coordination and monitoring of processes, control of product quality and uniform standards, as well as centralized sales and marketing.

This model, which is used in developed countries, allows you to quickly solve the problem of forming efficient farms engaged in animal husbandry in different conditions.

An integrator is a company that assumes the functions of a dispatcher, an operator, a small breeding center, a technologist, allows farmers to build their own business, and sells livestock from farms. Farmers are supported by the integrator. The integrator forms a central platform (market) where farmers buy a lot of livestock and are interested in its products.

## CONCLUSION

1. In fact, the concept of “cluster” has many meanings and does not have a single interpretation. It is interpreted differently depending on the application as a category, but the core essence of a cluster is used in the sense of combining certain elements into a coherent whole (chain) to perform certain functions..

2. Based on the above analysis, the fruit-vegetable cluster can be classified as follows [14]: fruit and vegetable cluster, - geographically concentrated network, complementary market entities

(agricultural enterprises, farmers, dehqan farms and landowners, processing enterprises, research and educational institutions, enterprises, banks, public authorities) etc.), whose activities include the production, processing and sale of food and other products, focuses on the issues of socio-economic development of rural areas, environmental protection, localization of global problems and forms a system of various complementary market entities that have unique competitive advantages, apply scientific advances, innovative technologies and complement each other (Figures 2-4).

3. Establishment and development of clusters in our country is an optimal and innovative form of organization of agricultural production. Competitive advantages of agricultural enterprises, which are part of the fruit and vegetable cluster, will be formed, and most importantly, flexibility and ability to respond quickly to all changes in the market will increase.

The clustering of agricultural sectors will increase the flow of capital and technology, direct investment, which will lead to the emergence of new innovative technologies, intellectual resources, management skills in the region, as well as financial instruments.

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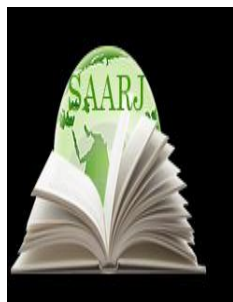
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## A CLASSMA DENOTING "PERSON" IN AUXILIARY CONNECTIONS WITH "BILAN"

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### ABSTRACT

*When they control words with the help of verbs and auxiliaries, they choose a name with such a semantic sememe based on the `person` seme of their sememe. The corresponding `person` seme between this dominant part and the subordinate part is a class of the **compound**. In other words, according to the valence of the verb's sememe based on the person's seme, the person takes the word denoting the compound, directs it. This remains an actant that exhibits its valence. This is because the valences of a verb occur on the basis of the sememe of a particular seme. The manifestation of these valences is reflected in the compounds. This will be the basis for the structure of the sentence. Therefore, in linguistics, it is considered that the meanings of verbs determine its valence, and valence determines the pattern of speech.*

**KEYWORDS:** *Compound, Class "Person", Auxiliary, Sememe, Dominant Part, Valence.*

### INTRODUCTION

The dominant part of the compounds formed with the class "Person" is considered to have a valence similar to this class and manifested by this valence. But these valences are not always the same. He may have been involved in communication with the counterparty **valence**.

The contra lateral valence is more pronounced in verbs with archetypal sememe. This is especially evident in verbs with an integral semantic sememe of directional movement from archaeseemic verbs of 'excitation action'. They enter into a managerial relationship with semantic nouns with the `person` seme. Such nouns consist mainly of famous nouns. They form a compound, the compound having a `person` class. For example, *Eshmatsoqovmulla Zayniddinningkenjasi Rahmiddinbilanborayapti.* (*Eshmat is going with Rahmiddin, the younger brother of the dumb mullah Zayniddin*) (N.Qilich). These semantics of the verb *borayapti* in this

sentence have the `person` semantics, on the basis of which the counterparty valence is formed. The valence of the counterparty was manifested in the famous noun of *Rahmiddin*. The verb “*borayapti*” has been associated with “*bilan*” on the basis of this actant, i.e., directed it. *Rahmiddinis* considered a counterparty agent and *Eshmat* is a dumb agent.

### Main Part

Verbs do not always have to show their counterparty valence in famous nouns. The word chosen as an actant can also be a relative, a profession, a position, a person, or a personal pronoun. For example, *Eryigit, Soyim, men qizchalarimbilanyonma-yon yuguribboraveraman.* (*Eryigit, Soyim, I run side by side with my girls*) (O. Ergashev). *Qizshofyorbilankiribkeldi.* (*The girl came in with a driver*) (O. Yakubov). *Raisxodimlaribilanyetibkeldi.* (*The chairman arrived with the staff*) (A. Qahhor). Thenouns in the first sentence *qizchalarim*, in the second *shofyor*, and in the third *xodimlar* appeared as contractor actants and were formed with the help of *bilan*.

In the following example, we see that the counterparty actant is manifested by the pronoun of personality and identity. For example, *Er-xotin, “yuring biz bilan”, deb Otinoyinihol-jonigaqo’ymadi.* (*the couple did not leave Otinoy alone, saying, "Come with us"*) (O. Hoshimov). *Ertaga u kishiningo’zibilanborsak yaxshiemasmi?* (*Wouldn't it be nice if we could go with him tomorrow?*) (D.Nuriy). In these examples, the rhymes that have shown the counterpartic valence of the verbs “*yuring, borsak*” are the words *biz, o’zi*.

Verbs with an integral semantic semantics of the regenerative action from the archetypal verbs of the excitatory action can also participate in communication with the counterparty valence and show the actant. Its actant will also be a well-known noun, a kinship, a profession, a position, a personal or personal pronoun. For example, *Mezonoyida O’shgamehmonbo’ libkelgan Xonzodabegimbittakanizibilan Buratoqqachiqdi.* (*Khanzodabegim, who visited Osh in the month of Mezon, went to Buratak with one of her maids*) (P. Kadirov). The verb *chiqdi* in this sentence is a semantic with the integral semaphore of “recovery action”, which has a counterparty valence. According to this valence, the counterpart showed an actant. The counterparty actant is expressed in the noun *kaniz*.

State verbs also have the `person` seme in their sememe, on the basis of which they participate in communication with the concurrent valence. A noun also famous as his counterpart; a cognate noun denoting a relative, profession, position; one of the pronouns of personality and identity may be manifested. For example, *Shernazarboyxonbilantanhoqolganidaxazinanito’ldirishyo’ llarihaqidagifkriniaytdi.* (*When Shernazarboy was alone with khan, he expressed his opinion on ways to replenish the treasury*) (J. Sharipov). In this sentence the conditional verb was the word *qolganida*, and with it the word *xon* was directed by his assistant. He appears as a counterparty and is a kindred noun that expresses position.

In some cases, the actant of the contralateral valent verb may also be derived from a word that does not express the person. However, because it is used figuratively, in the verbal state, a person is considered to have entered into communication with a semantic semantic. In it, too, the verb, which is combined with its counterparty actant, forms the class of `person`. For example, *Jismimqaylargadiruchibketganu, ruhimbilanqolgandayedim.* (*I felt as if my body had flown somewhere and I was left with my soul.*) (A.Nurmurodov). In this sentence, the word *ruhim* is used as a counterparty. It has an orbital expression and is manifested by the semantic `person`. It is therefore assumed that he composed the class with the case verb.



Archaesemic verbs of action also have a counterpart valence. In particular, since verbs denoting work have a `person` semantic sememe, a `person` can have a semantic sememe with the help of nouns. In this case, a noun with a "person" semantics is semantically a counterpart. It syntactically serves as a vehicle filler. These nouns will also be one of the most famous nouns, representing kinship, profession, position. For example, Hovligaqaytibkelgach, Dildorabilantushlikovqatgaunnabketdik. (S. Abdullaeva). Men ham yoshligimdaotambilandoimoqo'shqo'shib, g' allayancharedim. (N. Qobil) Shofyorbilanhamshiraqiz Shorahimniqo'ltiq labmashinadantushirishdi. (O. Yoqubov). In the second sentence, the verb unnabketdik directed the noun Dildora, in the second sentence, the verb yancharedim directed the noun otam, and in the third sentence, the verb tushirishdi directed the noun shofyor with the word bilan. These nouns appeared to be the counterpart actant of these verbs. They syntactically served as a tool complement. The word chosen as the counterpart may here also consist of a personal or identity pronoun. For example, Ular bilan mevate rishgabormaganim danachindim. (I was sorry that I did not go to pick fruit with them) (D. Nuri). The third person in the sentence is the counterpart of the verb achindim, and the third person is the plural.

Verbs denoting verbs with an action archetypal sememe can also be represented by counterpart. For example, *Bolalikdan Robiyabil and evordamiyonqo'shnibilano'sgan. (From childhood he grew up next door to Robiya) (P. Kadyrov).* In this sentence, according to the counterpartial valence of the verb *o'smoq* was connected with the noun *Robiya* with the help of *bilan*. A compound classic represents a person.

According to I.K. Kuchkartaev, speech verbs also have a counterpart valence. They also form a compound according to the class of `person` with their **actant**. For example, *Ayvonda Hurmatbibibilan onam harvaqt dagiday gaplashibo'tirishibdi. (Oybek).* In this sentence, the words *gaplashibo'tirishibdi* was connected with the noun *Hurmatbibi* with the help of *bilan*.

While the verbs that express the counterpart valence form a compound through the class of `person`, they sometimes come in conjunction with the ratio. The conjugation ratio has no semantic significance for the content of the counterpartial valence in the verb. Perhaps it is used to indicate that the agent performed the action understood from the verb with the counterpart at the same time. Verbs can have a counterpart valence even without a compound ratio.

As the verb enters into a controlled conjunction with a particular word through its auxiliary, its classicism signifies the person. But the verb seems to be a manifestation of the addressee valence. The addressee valence, as we know, is the person to whom the action or situation perceived is derived from the verb. The person to whom the action is directed is usually varied by the direction of the direction. This situation can be observed in more speech verb control compounds. But it should also be noted that I.K. Kuchkartaev who wrote about the valence of speech verbs while reflecting on the addressee valence of speech verbs in his work, argues that the subordinate part of the conjunctions in the control of the verb is always formed by the conjugation of the direction. As we have said, they are formed with an **assistant**. Another peculiarity of these conjunctions is that the verb of speech, which is the dominant part, is used in an almost conjunctive proportion, or is formed by the affix *-lash*. We know that the *-sh* sound in the *-lash* affix is an element of the conjunction. Therefore, verbs formed with this affix retain their common semantics.

In linguistic works, it is noted that in the semantics of verbs in the singular, there are also those in which, when they have more than one subject, one is the agent and the other is the addressee. That is, the action understood from the verb in the singular is performed by the agent and directed to the addressee. Since the actant of the addressee valence of the verbs in the singular relation also expresses the subject, it also appears as an act-performer. His action will be directed at the subject to whom the agent is acting. But the literature does not say so. They show that verbs in the singular are said to have more than one subject, one to the other and the other to the first. Examples include *Ali bilan Vali mushlashdi.* (*Ali and Vali fought*). It must be understood from him that *Vali* was the object for *Ali* fist, and *Ali* was the object for *Ali's* fist. This idea also has its own objective basis. According to formal linguistics, fillers are generally considered to represent an object. Accordingly, the opinion expressed in the literature is correct. According to the theory of valence, the person to whom the action is directed is always considered the addressee. Therefore, in this view of the joint ratio, while one subject is an agent, the other subject is the addressee to whose action it is directed. Conversely, the situation can also be observed. The subject seen as the addressee is also the executor of the action understood from the verb in the singular, is a relative agent, and for him the agent in turn remains the addressee. It has been said above that the verbs are formed by the actant of the adjective valence. That's right. The addressee actant is in many cases formed by the direction of the future. When it is thus formed, the action, situation, or speech understood from the verb is directed directly to the addressee. In managerial combinations with the helper, the speech understood from the verb is directed from one subject to another. This is the basic semantics in it.

At the same time, in the case of implicit, it is understood that the direction of movement from the addressee actant to the subject. But this is felt in a secondary case. This does not correspond to the valence property of the addressee. Because in the addressee valence the action perceived from the verb is directed from its agent directly to the addressee. The addressee becomes the direct recipient of the action understood from the verb, and does not return that action to the agent in any way, even without **implicit**. Therefore, the above situation should not be considered as a combination of agent and addressee actant through the helper. When a verb enters into a compound with an actant and an auxiliary with a word *bilan* a semantic denominator denoting 'person', the word that enters the compound is always a counterparty.

The actant of the counterparty valence is similar to the actant of the addressee valence and is characterized by either a noun or personal pronouns: kinship, profession, position, or person, identity pronouns. This condition is more common in speech verbs. For example, *Negadir Bashorat Ismoiljonbilanochilibgaplashmasdi.* (*For some reason Bashorat did not talk openly with Ismailjon.*) (S.Ahmad). *Ayolshofyorbilananchavaqtgachanimanidirgaplashibturibqoldi.* (*The woman was talking to the driver for a long time.*) (S.Ahmad). *U bilanhozirginagaplashiboldim.* (*I just talked to him*) (O. Ergashev). In the first of the above, the contra lateral valence of the verb *gaplashmasdi* is expressed by *Ismailjon*, in the second the contra lateral valence of the verb *gaplashib* is *shofyor*, in the third the contralateral valence of the verb *gaplashgan* is expressed by the words *u* in the third person singular. The class of formed compounds has the expression "person".

In some cases, verbs with the *-lash* affix may also have the *-ish* affix of the conjunction. This is acquired not to generate the addressee valence, but to show that the counterparty actant and the agent performed the action understood from the verb at the same time. For example,

*Qizchalarendi biz bilanhayiqibroqgaplashishadi.* (Girls now talk to us more loudly.) (O. Ergashev). *Ulariningharbiribilanqayta-qaytasuhbatlashishgato'g'rikeldi.* (I had to talk to each of them again and again.) (A. Nurmurodov). In these sentences, the verbs that form a compound with the actant of the counterparty valence consist of the verbs *gaplashmoq* and *suhbatlashmoq*, which are used with the affix of the relative pronoun. In his monograph, I.K. Kuchkartaev quite rightly showed that the verbs of speech are controlled by the assistant, while they are manifested by the **counterparty**. This can be observed not only in speech verbs, but in all verbs manifested by the counterparty. Our evidence has shown that.

In the management of communicative verbs, it is also observed that the compound structure is formed by means of the auxiliary, the class of the compound expresses the person, and the verb appears as a counterparty actant, similar to the addressee actant. For example, *Chunkibupaytungayuzma -yuzturganSherxonBerdi aka bilannimahaqdadirimo-ishoraqilardi.* (Sherkhon and Berdi aka, who was facing him at that time, was gesturing about something.) (J. Ikromiy). *KomiljonishninguchinchikuniyoqQo'shoqvoybilanaytishibqoldi.* (Komiljon had an argument with Koshokvoy on the third day of the case.) (S. Ahmad). *Adhambilanpichirlashayotganimiznisezibqoldi.* (He noticed that we were whispering to Adham.) (O. Hoshimov). *U Dadajonva Sherxonbilanxayrlashib, vagongachiqdi.* (He said goodbye to Dadajon and Sherkhan and got into the car.) (J. Ikromiy). In the first of the above statements, the actant of the verb *imo-ishoraqilmoq* is *Berdi aka*, of the verb *aytishmoq* is *Qo'shaqvoy*, of the verb *pichirlashmoq* is *Adham*, of the verb *xayrlashmoq* are *Dadajon and Sherkhan*. All these combinations are based on the "person" class.

While the relation is formed by the auxiliary with the compounds formed in the management of the expressive verbs, this auxiliary is almost always synonymous with the future tense. For example, *U odamlarbilanuchrashmaganbirorxo'jalikyo'qedi.* (There was no farm where he did not meet people.) (I. Suleymanov). As can be seen, it is possible to replace the direction of the auxiliary in place of the auxiliary. However, there is a methodological change in the semantics of the actant that merges with the agent.

As the relation verbs enter into a conjunction with the counterparty actant under the control of the assistant, the action understood from the verb is directed from the agent to the counterparty. This is different from verbs in the singular. That is, the direction of movement from the implicit counterparty to the agent is not observed.

Relative verbs do not have to be semantics with a direct personal pronoun, as long as they control a word through its auxiliaries. It can also be a word in a certain text that has acquired the semantic `person` as a result of certain linguistic processes. The verb that reacts to this word forms the class of `person`. This word is acquired according to the elliptical position. For example, *Bir-ikkiko'rganlarbilanyaqinlashadi, do'stlashadi.* One or two become close friends with those who see them (A. Qahhor). In this sentence, the parts of speech that are approached and become friends are expressed in verbs that have the semantic meaning of `person`. He has guided the word of those who have seen them through his assistant. This word has a semantic `person` according to its speech state. He certainly does not express such a semantics in the lexical sense, only that he "inherited" the meaning of the word people who are elliptical in their speech state. Accordingly, the word *ko'rganlar* is composed of the classic with the verbs of

*yaqinlashadi, do'stlashadi*, and is expressed in the counterparty actant according to the counterparty valence.

In some cases, not only interactive verbs, but also nouns can be combined with a certain noun according to the 'person semantics' with the help of the auxiliary and form the 'person' class. For example, *Maxdumningo'quvchibolalarbilanmuomalasijudayaxshiedi. (Makhdumhad a very good relationship with schoolchildren.) (A.Qodiriy).* In this sentence, the noun *treatment* expressed a reactive action. He therefore, through his assistant, formed a compound with the noun *bolalar* according to the semantics of 'person'. The noun *bolalar* has the meaning of "person". Therefore, it has a combination of interaction with *bolalar* under the control of the word "person". The subordinate clause in the compound is the actant expressed in terms of the contractile valence of the treatment noun. Nouns can also express a reactive action as a result of a shift in meaning. They can also lead a noun with a 'person' semantic sememe through an assistant. This noun may have the legendary 'person' expression. In any case, the compound has a "person" class. For example, *Ulariblisbilantilibir, o'rtoq. (They have a common language with the devil.) (M. Yusuf).* In this sentence, a phrase *tilibir* expresses a reactive action through a figurative meaning. Therefore, he controlled the word of the noun *iblis* through his assistant, according to the "person" semantics. According to legend, this word means a creature represented in a sememe with the semantic 'person'. It was a tool in the formation of the "person" class, which appeared as a counterparty actant of a phrase *tilibir* and formed as a subordinate part of the compound.

Sometimes the counterparty may be used before the agent in the sentence. In this case, if a pause is recorded after the auxiliary and the complement formed by this auxiliary is emphasized, there will be no change in its counterparty semantics. However, as these components in the intonation disappear, the counterparty with the agent has an equal semantics, with the helper passing to the linking function. For example, *U MannonbilanObidSoatovninghuzuridanchalaraqib, chalado'stbo'libchiqdi. (He and Mannon appeared in the presence of ObidSoatov as half-rivals, half-friends.) (H. Sultanov).* In this sentence *Mannon* is used with the word *bilan* as an assistant and came as a counterparty. If the counterparty is given in the first position and followed by an agent, the situation is as follows: with *Mannon*, he turned out to be a half-rival, half-friend in the presence of *ObidSoatov*. There will be no change in the act of content if a part of the sentence is followed by a note with *Mannon* followed by an emphasis. Transformation is given without semantic change. Only the first part of the sentence changes. If the accent intonation is removed from the passage with *Mannon*, the word *agens* with the counterparty *Mannon* word becomes equal in the semantics of that word. This is also observed in their syntactic function and is considered to have organization. This led to the formation of an auxiliary in the form of a binder.

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## RESTORATIVE JUSTICE- AN ISLAMIC PERSPECTIVE

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### ABSTRACT

*The doctrinal method of research is adopted in this paper. It is an exploratory, comparative and non-empirical research. The paper aims to highlight the Islamic approach towards restorative justice system and also focus on various practices of restorative justice followed in Islamic countries across the globe. The paper touches its possibilities in the present Criminal Justice System of India.*

**KEYWORDS:** Restorative Justice, Islamic Law, Criminal Justice, punishment, Crime

### INTRODUCTION

From the beginning of human life upon this earth crimes take place everywhere in the world. To fight against this situation of criminality and disorder various criminal justice systems with their specific features were taken place from time to time and place to place. All criminal justice system in the world aims to establish a peaceful society by keeping a check on violation of the laws. An ideal criminal justice system guarantees a society against disorder and best ways of conflict management. Islamic criminal justice system is one of them. Every criminal justice system has its measures to punish and reform the offenders and to provide justice to the victim as well as society. Every system has adopted its theory of punishment to support the use of punishment to maintain law and order in society. Theories of punishment can be divided into two general categories; utilitarian and retributive. The utilitarian theory of punishment aims to punish offenders to discourage or deter them to commit future wrongdoing rather the retributive theory aims to punish offenders because they deserve to be punished. Islamic criminal law system recognizes both the theories to prevent further criminal acts as well as rehabilitate the offender.

According to the Oxford dictionary, restorative justice is a system of criminal justice which focuses on the rehabilitation of offenders through reconciliation with victims and the community at large. This system accentuates the involvement of the victim in the process of justice. This



system emphasizes providing justice to victim, offender and community as well. When we analyze the history of criminal law system in the Islamic world, we trace out that in dozens of countries where Islamic *sharia* law is applicable, recognition to and practices of restorative justice are exist in the administration of justice.

All Criminal Justice Systems exist in the world aims to maintain peace in society and ensure justice for all. An ideal criminal justice system guarantees the best ways of conflict management in society. Every criminal justice system has its measures to punish and reform the offenders and to provide justice for the victim. Islamic criminal justice system is one of them. With the change in space and time, a prevailing system doesn't need to remain effective. At present, the Criminal law system practised in common law countries is losing its very objective of 'justice for all'. For example in India, in a case of murder, rape and dacoity etc. after a long period of ten or more years spent on trial the accused is convicted and punished. Here both the parties victim as well as accused are crushed and third, the family of the victim and the rest society remains in injustice and in a state of disappointing for this long period. So a question mark upon the prevailing criminal justice system in a humanitarian society is inevitable. This situation has given rise to a movement for reform in the existing criminal law system or a search for an alternative system worldwide, which resulted in the idea of Restorative Justice System.

Restorative Justice System focuses on the rehabilitation of offenders through reconciliation with victims and the community at large. This system emphasizes the involvement of victim in the process of justice and providing justice to victim, offender and community as well. When we analyze the Islamic criminal justice system, we trace out that this branch of Islamic law is full of the ideas about what we call today as the Restorative Justice System. This system is being advocated worldwide since the 1970s. In dozens of Islamic states and also in some western countries like New Zealand has made Restorative justice the hub of its entire juvenile justice system. Both the Restorative Justice practices and Islamic criminal law System emphasize the dignity of the individual, support opportunities for rehabilitation and healing for all the parties affected by the crime. Islamic criminal jurisprudence in general and the principles of *Qisas* and *Tazir* therein, in particular, emphasizes the concept of Restorative Justice.

### **Classification of crimes under Islamic Law:**

Islamic criminal law divides offences into those against God and those against human or society. Crimes against God violate His *Hudud*, or 'limits drawn by God himself so named in Arabic as *Hadud*. Crimes against God's law or limits are known as *Hadud* and crimes against society are known as *Tazeer*. Further, based on the severity of an offence Islamic criminal law divides crimes into three major categories that are different from those employed in most common law and civil law systems. These three categories of crimes are- *Hadd*<sup>2</sup> (The most serious crime) *Tazeer*<sup>3</sup> (least serious crime) and *Qisas*<sup>1</sup> (for which Retaliation, compensation and forgiving is the punishment). These three kinds of offences are discussed in detail as below-

#### **1. *Hadd*:**

The literal meaning of the term *Hadd* is a restriction (imposed by Allah), Under Islamic criminal law *Hadd* are rules stated in *The Holy Quran (the words of Allah)* and *the Hadiths (the words of the Prophet of Allah)*, and whose violation is deemed in Islam as a crime against God, and requires a fixed punishment as mentioned in The Holy Quran.

*Hadd* crimes are those that are punishable by a pre-established punishment found in the Quran. These most serious of all crimes are found by an exact reference in the Quran to a specific act and a specific punishment for that act. There is no plea-bargaining or reducing the punishment for a *Hadd* crime. The punishment system is comparable to the determinate sentence imposed by some judges in common law countries. Every system has adopted its theory of punishment to support the use of punishment to maintain law and order in society. Theories of punishment can be divided into two general categories; utilitarian and retributive. The utilitarian theory of punishment aims to punish offenders to discourage or deter them to commit future wrongdoing rather the retributive theory aims to punish offenders because they deserve to be punished. Islamic criminal law system recognizes both the theories to prevent further criminal acts as well as provides measures to rehabilitate the offenders. *Hadd* crimes have fixed punishments because they are set by Allah and are found in The Holy Quran. No judge can change or reduce the punishment for these serious crimes. The crimes fall under the category of *Hadd* for which Allah set corporal punishments provided in the Holy Quran are as follows:

**i. Murder (Voluntary killing):**

Allah says:

*But whoever is killed unjustly- We have indeed given his heir the right (of retribution according to the legal procedure) he too must not exceed the limits in (retributive) killing.*

*The Holy Quran (Glorious Quran<sup>4</sup>: 17:33)*

At another place in the Holy Quran, Allah says:

*O, believers! Retribution (the law of equality in punishment) is prescribed for you in the case of those who are unjustly slain: a free man for a free man, a slave for a slave and a woman for a woman. Then if he (the murderer) is granted some remission (in retribution) by his brother (the victim's heir), that should be executed fairly according to the law, and (retribution) should be paid (to the heirs of the slain) in a graceful manner. This is a concession and kindness from your lord. So, anyone who transgresses after that, there is painful torment for him.*

*The Holy Quran 2:178*

*And there is a (guarantee) of life for you in retribution (i.e. vengeance of murder), O wise people, so that you may guard (against bloodshed and destruction).*

*The Holy Quran 2:179*

**ii. Zina (i.e. fornication or adultery):**

Allah says:

*Whip a hundred lashes each the (unmarried) adulteress and adulterer (on validation of adultery in accordance with the conditions of the statutory [Hudd] punishment if both are married, then both are to be stoned to death). And you should not feel even the slightest pity in Allah's Din (religion) for either of them (in executing the command) if you have faith in Allah and the Last Day. And a*

*(sizeable) party of Muslims should be present on (the occasion of) award of punishment to both of them.*

*The Holy Quran: 24:2*

**iii. Theft:**

Allah Says:

*(After proper judicial trial as per law,) cut off the hands of both the man as well as the woman who steal, in retribution of (the offence) which they have committed, a deterring punishment from Allah. And Allah is Almighty, Most Wise.*

*The Holy Quran 5:38*

**iv. Perpetrate bloodshed, terrorism, robbery, burglary and massacre amongst Muslims:**

Allah Says:

*Indeed, those who wage war against Allah and His Messenger (Blessings and peace be upon him) and remain engaged in creating mischief in the land (i.e., perpetrate bloodshed, terrorism, robbery, burglary and massacre amongst Muslims), their punishment is that they should be slain, or hanged to death, or their hands and their feet on opposite sides should be cut off, or they should be exiled far from (i.e., deprived of moving about) in the homeland (i.e., either by banishment or by imprisonment). That is the humiliation for them there is a terrible torment in the hereafter (as well),*

*The Holy Quran 5:33*

**v. Slander (falsely charge others of Zina [fornication]):**

Allah Says:

*And those who accuse chaste women (of adultery), then fail to produce four witnesses, whip them eighty lashes (as qadhaf- the punishment for false accusation of adultery) and never accept their evidence. And it is they, who are the evildoers,*

*The Holy Quran 24:4*

There are also corporal punishments for other crimes which are mentioned in the *Sunnah* (Traditions of the Holy Prophet Muhammad P.B.U.H.), like apostasy, homosexuality, of which punishment is death; consuming intoxicants etc. punishment for such offences is 80 lashes.

These sorts of punishment range from public lashing to publicly stoning to death, amputation of hands are set for offences to fall under the category of *Hadd* crimes. The crimes against *hudud* cannot be pardoned by the victim or by the state, and the punishments must be carried out in public. However, the evidentiary standards for these punishments were often impossibly high, and they were thus infrequently implemented in practice. Moreover, the Prophet of Islam [Muhammad](#) (P.B.U.H) ordered Muslim judges to avert the *Hudud* by ambiguities. The severe *Hudud* punishments were meant to convey the gravity of those offences against God and to deter, not to be carried out. If a thief refused to confess, or if a confessed adulterer retracted

his confession, the *Hadd* punishments would be waived. *Hudd* offences are overturned by the slightest of doubts.

There are some safeguards for *Hadd* crimes that the media fail to mention. Some in the media only mention that if you steal, your hand is imputed. Islamic law imposes a higher degree of responsibility upon the judges. The Islamic judge must look at a higher level of proof and reasons why the person committed the crime. A judge can only impose the *Hadd* punishment when a person confesses to the crime or there are enough witnesses to the crime. The usual number of witnesses is two, but in the case of adultery, four witnesses are required. The media often leaves the public with the impression that all are punished with flimsy evidence or limited proof. Islamic law has a very high level of proof for the most serious crimes and punishments. For example, in the case of *Zina* (adultery), there is a punishment of high degree which is stoning or a hundred lashes. But there is a very high level of proof required to punish both the adulterers otherwise one who slander shall be punished with eighty whips.

*And those who accuse chaste women (of adultery), then fail to produce four witnesses, whip them eighty lashes and never accept their evidence. And it is they who are the evildoers.*

*The Holy Quran, 24:4*

When there is doubt about the guilt of a *Hadd* crime, the judge must treat the crime as a lesser *Tazir* crime. If there is no confession to a crime or not enough witnesses to the crime, Islamic law requires the *Hadd* crime to be punished as a *Tazir* crime.

## 2. *Qisas*(Retribution):

*Hudd* is not the only category of crime or form of punishment under Islamic criminal law. There are also two others; *Qisas* and *Tazir*.

The literal mean of *Qisas* is retaliation. Islamic Law has an additional category of crimes that the common law system does not have. A *Qisas* crime is one of retaliation, if anybody commits an offence fall under *Qisas* crime, the victim or his heirs has a right to seek retaliation. The exact punishment for each *Qisas* crime is outlined in the Holy Quran. This supports the retributive theory of punishment. Within the justice system of Islam, equality is the cardinal rule in cases of murder and hurt. The Quran allows *Qisas* in cases of intentional murder:

*“O you who believe, Qisas has been prescribed for you in cases of murder ... But if any remission is made by the brother of the slain, then grant any reasonable demand, and compensate him with handsome gratitude, this is a concession and a mercy from your Lord. After this whoever exceeds the limits shall be in grave penalty.”*

*The Holy Quran 2:178*

The essence of the law of *Qisas* is human equality and security of life in society<sup>5</sup>. The context of the revelation of these verses of the Holy Quran sheds abundant light on the objectives of *Qisas*, the aim was to curb the pre-Islamic practice whereby the blood of some influential tribes and individuals was considered more precious than the blood of poor and weaker segments of society. The blood of women and slaves was also considered less precious compared to the blood

of men and freemen. The Holy Quran prohibited this practice, by making the blood of everyone equally precious; life for life, but allowed an exception, i.e. forgiveness for merciful objectives. The Holy Quran warns of painful punishment for those who transgress these rules.

*.....Then if he (the murderer) is granted some remission (in retribution) by his brother (the victim's heir), that should be executed fairly according to the law, and (retribution) should be paid (to the heirs of the slain) in a graceful manner. This is a concession and kindness from your lord. So, anyone who transgresses after that, there is a painful torment for him.*

The Holy Quran provides two options to deal with someone who is found guilty of intentional murder: *Firstly*, *Qisas* (i.e. that the murderer is killed in the manner in which the victim was murdered) and *secondly*, forgiveness by the heirs of the victim. The conditions for the *second* option are that the victim's heirs are required to ask for fair *Diyah* (blood money or ransom) and the guilty person is obligated to pay *Diyah* in a good way. The heirs of the victim may forgive *Diyah* as well, which is sometimes considered the third option, i.e. forgiving the guilty in the name of Allah.

The option of *Diyah* is an exception to the rule of *Qisas* and a reduction in the punishment. The *Quranic* basis for this reduction is 'mercy and relief' from Allah<sup>6</sup>. Human equality and the protection of life are very objectives of *Qisas*; forgiveness is an exception and aims at achieving merciful objectives. Therefore, *Diyah* should be paid in deserving cases to achieve merciful objectives.

The law of *Qisas* is influencing the common law. The relevant sections of the Pakistan Penal Code, as inherited from the British, were declared incompatible with the Holy Quran and *Sunnah* in Gul Hassan case<sup>7</sup>. The Supreme Court of Pakistan had forced the government to incorporate the law of *Qisas* in the PPC, which resulted into a change in PPC and now the current law of *Qisas* under sections 302, 309 is reflective of The Holy Quran, it allows *Qisas* and the waiver of *Qisas* with or without compensation, i.e. *Diyah*. Judicial oversight over *sulh* (reconciliation i.e. forgiveness with or without *Diyah*) is provided in Section 210.

Section 311 of PPC provides further safeguards by allowing the court to award punishment as *Tazir* in cases with aggravating circumstances, e.g. circumstances amounting to '*fasad fil ard*' (spreading disturbance on the earth) even if the victim's heirs have forgiven the guilty person. Judicial oversight has two main functions, firstly to make sure that the victim's heirs demand fair *Diyah* and that the guilty person pays it in a good way and secondly, to determine whether aggravating circumstances exist demanding additional punishment as *Tazir*.

The *Qisas* crimes are particularly interesting for Restorative Justice System under Islamic criminal law. The crimes include intentional wounding and homicide. They are relevant to the discussion of Restorative Justice in that the victims of *Qisas* crimes retain a central role in the prosecution and sentencing of defendants. In most versions of classical Islamic jurisprudence, the prosecution of the *Qisas* crimes must be instigated by the victim. And, the victims of *Qisas* crimes are given a choice as to the punishment that is to be imposed. They may choose to forgive the defendant and demand no punishment at all, or they may choose to demand payment "*Diyyat*" (blood money) as compensation for the crime. In this sense, the law of *Qisas* has some aspects that advocates of Restorative Justice System to find inspiration for restorative practices.



Furthermore, the law of *Qisas* fulfils some of the objectives of the Restorative Justice movement; allowing victim participating in sentencing and encouraging forgiveness and reconciliation.

### ***Diyah as an exception to Qisas:***

If anybody is killed, then his or her heirs have a right to seek *Qisas* (vengeance as life for life, eye for an eye) as the punishment from the murderer. This form of punishment can come in several forms and also may include *Diyah* (blood-money). *Diyah* is paid to the victim's family as part of the punishment. *Diyat* is an ancient form of restitution for the victim or his family. The family also may seek to have a public execution of the offender or the family may seek to pardon the offender. *Diyah* is used as an alternative to *Qisas*,

The Holy Quran also allows parties who are the victim of an offence to receive monetary compensation (blood-money) instead of *Qisas* or forfeit the right of *Qisas* as an act of charity or in atonement for the victim's past sins.

Allah says,

“We ordained therein for them: "Life for life, eye for an eye, nose for nose, ear for ear, tooth for tooth, and wounds equal for equal."  
But if anyone remits the retaliation by way of charity, it is an act of atonement for him. And if any fail to judge by (the light of) what Allah hath revealed, they are (No better than) wrong-doers.”

*The Holy Quran 5:45*

Sometimes media and few opponents of Islamic law have criticized the thought of *Diyah* or blood money as barbaric. They labelled the practice as undemocratic and inhumane. However, what is often overlooked is that the Holy Quran and the traditions of the Holy Prophet Muhammad (P.B.U.H.) call for forgiveness instead of retaliation. *Qisas* crimes are based upon the criminological assumption of retribution. The concept of retribution was found in the first statutory "Code of Hammurabi" and in the Law of Moses in the form of "an eye for an eye. Islam repeats the Old Testament's eye for an eye principle and uses both capital and corporal punishment for many crimes. Islam and its legal principles support forgiveness and peaceful arrangements between all parties." Islamic criminal law added it to that-

"...punish with an equivalent of that with which you were harmed.  
But if you are patient - it is better for those who are patient."

*The Holy Quran 16:126*

Contemporary common law today still is filled with the assumptions of retribution. The United States federal code contains "mandatory minimum" sentences for drug dealing, and many states have fixed punishment for drugs and violence and using weapons. The United States justice system has adopted a retribution model that sets fixed punishments for each crime. The idea of retribution is fixed in the U.S. system of justice. *Qisas* crime is simple retribution if one commits a crime; he knows what the punishment will be.

*Diyah* has its roots in Islamic Law and dates to the time of the Prophet Muhammed (P.B.U.H.) when there were many local families, tribes, and clans. They were nomadic and travelled extensively. The Prophet was able to convince several tribes to make a monetary payment for



damage to the clan or tribe. This practice grew and now is an acceptable solution to some *Qisas* crimes.

Today, the *Diyah* is paid by the offender to the victim if he is alive. If the victim is dead, the money is paid to the victim's family or the victim's tribe or clan. The assumption is that victims will be compensated for their loss. Under common law, the victim or family must sue the offender in a civil tort action for damages. *Qisas* law combines the process of criminal and civil hearings into one, just as the "civil law" is applied in many nations of the world. *Qisas* crimes are compensated as restitution under common law and civil law.

The *Qisas* crimes require compensation for each crime committed. Each nation sets the damage before the offence and the judge then fixes the proper *Diyah*. If an offender is too poor to pay the *Diyah*, the family of the offender is called upon first to make good the *Diyah* for their kin. If the family is unable to pay, the community, clan, or tribe may be required to pay. This concept is not found in common law or the civil law of most nations. It acts as a great incentive for family and community to teach responsible behaviour. What happens to the debt if the offender dies and has not paid it? Historically, it was passed on to the offender's heirs; today, most nations terminate the debt if the offender left no inheritance.

One question that is often raised is what happens if a victim takes the *Diyat* without government approval? The victim or family has committed a *Tazir* crime by accepting money that was not mandated by a judge, taking *Diyah* must be carried out through proper governmental and judicial authority.

Another concept of *Qisas* crimes is the area of punishment. Each victim has the right to ask for retaliation and, historically, the person's family would carry out that punishment. Modern Islamic law now requires the government to carry out the *Qisas* punishment. Historically, some grieving family member may have tortured the offender in the process of punishment. Now the government is the independent party that administers the punishment because torture and extended pain are contrary to Islamic teachings and Islamic Jurisprudence. Section 311 of the Pakistan Penal Code, which states that if the court considers that the principle of '*Fasad-Fil-Arz*' applies, or if all the heirs do not waive the right to *Qisas*, the court can sentence a person to 14 years of imprisonment.

**3. *Tazir*:** It means to punish, *Tazir* crimes are those minor crimes that are mentioned in The Holy Quran but no fixed punishment is provided, so judges are free to punish the offender in any appropriate way. In the contemporary Muslim world, many of the states where Islamic law is in practice, criminal law is now in written form and is statutory. Islamic concepts of justice argue that a person should know what the crime is and its possible punishment, so in some Islamic Nations, *Tazir* crimes are set by legislation. For example, *Khalwat* (Dating or any form of proximity between unrelated members of the opposite sex), the man who bears false witness or encourages others to bear false witness, failing to perform Friday prayers by anyone above 15 years old, any Muslim disrespecting the month of *Ramadan* are some examples of *Tazir* crimes. This third category of crimes refers to some minor offences which are against the social order and mentioned in The Holy Quran or the Hadiths, but where neither The Holy Quran nor the Hadiths specify a punishment. In *Tazir* cases, the punishment is at the discretion of the state, the ruler, or a *Qazi* (Judge), or court acting on behalf of the ruler. *Tazir* punishment is for deeds which are considered sinful in Islam, undermine the

Muslim community, or threaten public order, but those that are not punishable as *Hadd* or *Qisas* crimes. Crimes punished by *Tazir* do not require proof as that *Hadd* or *Qisas* crimes require, such as four male Muslim witnesses. The judges also have the discretion to forgive *Tazir* offences. It also allows for much greater flexibility in how it punishes an offender. The myth of many people is that judges in Islamic nations have fixed punishments for all crimes. In reality, under the Islamic criminal law system, the judges have much greater flexibility than judges under the common law system. They are not bound by precedents.

The judges are free to award punishment against the offender in almost any way. The judge under Islamic Law is not bound by precedents, rules, or prior decisions as in common law. Judges are free to choose from any number of punishments that they think fit as per the circumstances and which is in favourable to the victim, society as well as the individual offender. The only guiding principle for judges under Islamic Law is that they must answer to Allah and the greater community of Muslims.

..... *And fear Allah. Indeed, Allah is well aware of your works.*

*The Holy Quran, 5:8*

*Mohammed Salam Madkoar*, who was the head of Islamic Law at the University of Cairo, makes the following observation regarding this notion:

*"Tazir* punishments vary according to the circumstances. They change from time to time and from place to place. They vary according to the gravity of the crime and the extent of the criminal disposition of the criminal himself."<sup>8</sup>

*Tazir* crimes can be punished if they harm the societal interest. Islamic Law places an emphasis on societal or public interest. The punishment assumes that greater evil will be prevented in the future if you punish the offender now.

Some of the more common punishment for *Tazir* crimes are Counseling (*Sulh*), Fine, Public or private censure, Family and clan pressure and support, Seizure of property, Confinement in the home or place of detention, Flogging etc. All these sorts of punishments are supportive of the idea of Restorative justice.

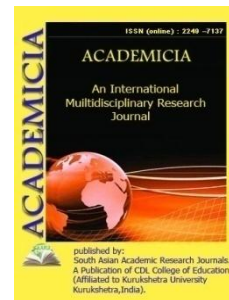
Islamic law has much greater flexibility than the Western media portrays. Each judge is free to punish the offender based upon local norms, customs, and informal rules. Each judge is free to fix the punishment that will deter others from committing a crime and will help to rehabilitate an offender. Thus the Islamic criminal law gives a proper pace for the Restorative Justice system.

**CONCLUSION:** The approach of the western criminal justice system to justice is important. Yet there is also some limits of this system such as victims, offenders and community often feel that justice does not adequately meet their needs. And thus judges, lawyers, prosecutor and parties to justice frequently express a sense of frustration. Parties realize that the process of justice deepens societal wounds and conflicts rather than contributing to healing or peace. In the present time, any criminal law systems prevailed other than Restorative Justice System is not fulfilling the objective of justice completely. In the present criminal law system of common law countries as well continental law countries the inclusion of victim and society in the process of justice is too least, so the victim as well society remains unsatisfied or feel injustice. Inclusion of victim and society in the justice delivery system as the idea of Restorative Justice System

emphasizes is must achieve the true objective of justice. Principles of Islamic Criminal Law System such as *Hudd*, *Qisas*, *Diyah* and *forgiving in the name of Allah* are very similar to the idea behind the Restorative Justice System as I have discussed above. In the present criminal law system followed in India except in compoundable offences, a victim of an offence has no active participation in the process of justice, it is the only state who decides the case and punishes the offender as per the set rules. Frequently it is noticed that when a victim or family does not satisfy with the judgment passed by the court, to satisfy them they commit an offence by taking the law in their own hands to take vengeance against the offender or his family. It further disturbs law and order and promotes feelings of insecurity in society. So it is suggested that the criminal law system based on the concept of Restorative Justice is compatible to meet the needs of present-day society should be adopted. And it seems that the Islamic Criminal Law System which embedded with the principles of Restorative Justice can be followed as an alternative criminal justice system in India and abroad where the situations are similar. Restorative Justice System is offered as a choice within or alongside the existing legal system in any country. It will heal up the victims as well as society.

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2. Minor crimes that are not mentioned in The Holy Quran so judges are free to punish the offender in any appropriate way; in some Islamic Nations *Tazir* crimes are set by legislation. *Khalwat* (Dating or any form of close proximity between unrelated members of opposite sex), the man who bears false witness or encourages others to bear false witness, failing to perform Friday prayers by anyone above 15 years old, any Muslim disrespecting the month of Ramadan are some examples of *Tazir* crimes.
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## DESIGN AND DEVELOPMENT OF AN AUTOMATIC SOLAR TRACKER

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### ABSTRACT

*Energy crisis is one of the most important topics in today's world. Traditional energy resources are not only limited and highly costed, but also the first reason for environmental contamination. The environmental contamination and rising cost of the fossil fuels have drawn considerable attention to renewable energy sources. Solar energy, being the cleanest and most reliable renewable energy source in Uzbekistan, is widely utilized in thermal systems to heat water and air. It offers a vast opportunity for public and private organizations to reduce carbon emissions and cut electricity costs. A viable approach to maximizing the solar panel efficiency is solar tracking. This paper, therefore, proposes an automatic microcontroller-based solar tracker with a hybrid algorithm for locating the sun's position. The proposed hybrid solar tracking algorithm combines both sensors and mathematical models to determine the precise sun's position, thereby harnessing optimal solar energy for all weather conditions. Experimental results consistently show that the hybrid solar tracking algorithm can yield higher solar power than the traditional active and chronological algorithms. A webpage was also developed to facilitate real-time monitoring of solar data. As such, the solar tracking process is fully automated, maximizing the collection and management of solar energy for solar thermal systems.*

**KEYWORDS:** *Environmental Contamination, Renewable, Solar Energy, Mathematical Models, Electromechanical System, Microcontroller.*

## INTRODUCTION

Finding energy sources to satisfy the world's growing demand is one of the foremost challenges for the next half century. Over the recent years, greenhouse effect has caused global warming and irregular climate changes. To generate electricity, few countries still depend on fossil fuels which produce greenhouse gases that can severely impact human and wildlife population. Environmental pollution and rising cost of the fossil fuels around the globe rouse individuals to concentrate on renewable energy sources. As per scientific predictions, the consumption of fossil fuels will decrease by 80% and of non-fossil fuels will increase by 50% within a period of 30 years. Statistics has shown that available fossil fuels will deplete by 2080. Thus, the primary energy source has to be non-convention sources [1].

The earth receives  $16 \times 10^{18}$  units of energy from the sun annually, which is 20,000 times the requirement of mankind on earth [2]. On a sunny day, energy radiated from the sun is about 1 kW/m<sup>2</sup>. As mentioned in [3], "the International Energy Agency predicts that approximately one-quarter of the renewable power, or 11% of worldwide electricity, could be supplied from solar energy in 2050."

This paper, therefore, aims to optimize the harnessing of solar energy by designing and developing an automatic microcontroller-based solar tracker with a hybrid algorithm that can locate the precise sun's position. Experiments were conducted to evaluate the proposed solar tracker's performance under local climate. To facilitate timely monitoring of solar data, a webpage was also developed.

### 1. Design and implementation

#### 1.1. Electromechanical system

The proposed solar tracker has light dependent resistors (LDRs), Arduino mega microcontroller, Arduino Wi-Fi shield, servo motor, stepper motor and driver, HMC5883L magnetometer, current sensor ACS712, and solar panel with supporting metallic servo bracket, as pictured in Fig. 1 (a). This electromechanical system consists of two drivers with a stepper motor and a servo motor: the former is for rotating about north and south directions, and the latter for east and west directions. The solar panel produces a voltage proportional to the sunlight intensity, while the LDRs determine the system misalignment and send signals to the microcontroller, which in turn automatically adjusts the motors to correct the solar panel position.

Time & Date	Voltage (mV)	Current (mA)	Power (mW)
14Apr 2019 11:06:42	12.9	0.6	7.7
14Apr 2019 11:34:21	13.1	0.7	9.4
14Apr 2019 12:03:32	13.4	0.7	9.5
14Apr 2019 12:36:48	13.6	0.7	9.6
14Apr 2019 13:06:42	13.8	0.7	9.7
14Apr 2019	12.8	0.6	7.8

13:34:21			
14Apr 2019 13:06:42	12.5	0.6	7.6
14Apr 2019 14:34:21	12.2	0.6	7.3
14Apr 2019 15:06:42	11.8	0.5	6.0

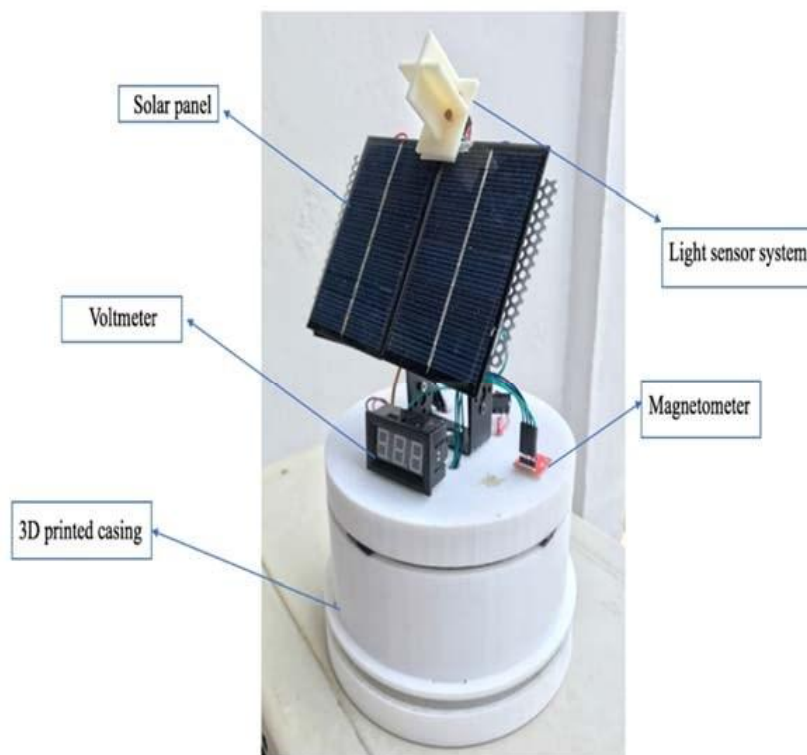


Fig. 1. Data monitoring webpage, Proposed solar tracker.

### 1.2. Hybrid algorithm for solar tracking

Active and chronological algorithms are commonly employed in solar tracking. The active algorithm is a closedloop tracking mechanism based on the control principle with feedback. A light sensor, which detects sun brightness, acts as the input to the system controller. The acquired values are then analysed by the microcontroller, which controls the motor motion to orientate the solar panel towards the sun. While the active solar tracker produces high tracking accuracy during clear and sunny days, its performance may degrade when the weather is cloudy or when the light sensor is sheltered [4].

Conversely, the chronological algorithm controls the solar panel movement by identifying the sun's path using sun tracking mathematical models [5, 6]. The microcontroller calculates the sun's position and directs motors to move the solar panel towards the sun at preset time intervals using defined azimuth and elevation angles. The azimuth angle is the angle in the horizontal plane measured from true north to the horizontal projection of the sun ray, as given in Equation



(1) [1], where  $\varphi$  is the latitude of the location,  $\delta$  is the solar declination angle, and  $\theta$  denotes the hour angle.

$$\text{Azimuth angle} = \tan^{-1} \left[ \frac{\sin \theta}{(\cos \theta \sin \varphi) - (\tan \delta \cos \varphi)} \right] \quad (1)$$

On the other hand, the elevation angle is the angular height of the sun in the sky measured from the horizon of the object. The elevation angle changes throughout the day depending on the day of the year and latitude of that particular location, as given in Equation 2 [5, 6]. Owing to the complexity of sun movement, the chronological solar track may not accurately determine the sun's position.

$$\text{Elevation angle} = \sin^{-1} \left[ (\sin \delta \sin \varphi) + (\cos \delta \cos \varphi \cos \theta) \right] \quad (2)$$

To improve the overall solar tracking accuracy, we propose a hybrid algorithm comprising both active and chronological algorithms. A magnetometer HMC58831 was also incorporated into the proposed solar tracker to guide the solar panel towards the north direction. Fig. 2 shows a flow diagram representing the hybrid algorithm for solar tracking.

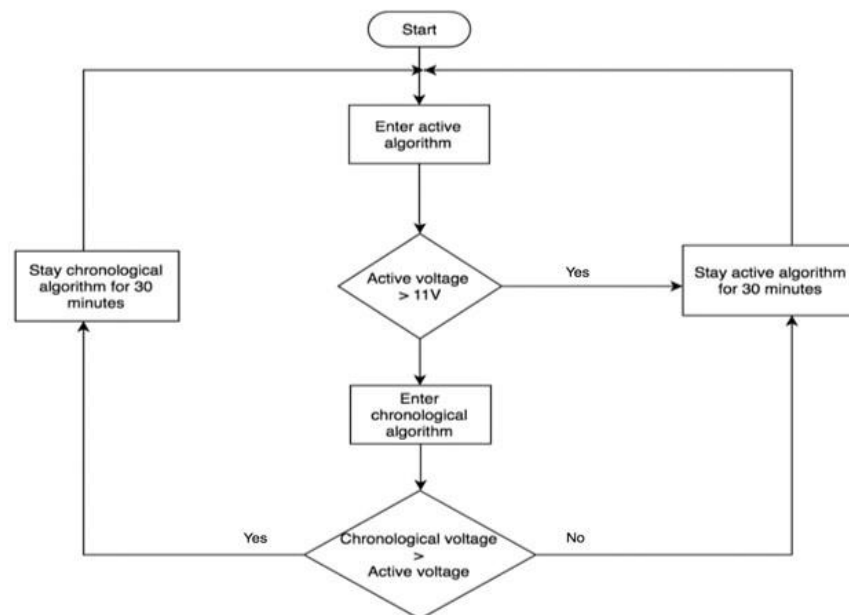


Fig. 2. Proposed hybrid algorithm.

### 2.3. Webpage for data monitoring

In addition to the solar tracker, a webpage was created to facilitate real-time monitoring of solar data, as illustrated in Fig. 1 (b). Basic HTML commands were employed for the webpage development. The computer acts as a server, and the database was created using SQLite. For server-database communication, a combination of SQLite commands with Mongoose format is utilized. The server regularly gets requests from the Arduino mega microcontroller and web

browsers. Upon identifying the request, the server obtains the latest solar data from the database to update the webpage information.

### 3. Experiments

To evaluate the performance of active, chronological, and hybrid algorithms for solar tracking, experiments on sunny and cloudy days were conducted. The solar tracker was positioned at an open field where it can receive sunlight throughout the day. Voltage measurements were taken from morning 8 A.M. to evening 7 P.M. at every 30-minute interval. Readings from traditional fixed-mount solar panel were also recorded to determine the baseline voltage. Subsequently, an analysis was performed to determine the energy generated, consumed, and gained by the hybrid solar tracker.

### 4. RESULTS AND DISCUSSION

Fig. 3 shows the average voltage readings for active and chronological algorithms for six days. It can be found that the chronological algorithm excels over the active algorithm on cloudy weather or when the active output voltage is below 11 V. Conversely, the active algorithm can yield high accuracy during sunny day but not on cloudy days, which may be attributed to low LDR sensitivity.

**TABLE 1. PERCENTAGE OF INCREASED VOLTAGE FOR THREE DIFFERENT SOLAR TRACKING ALGORITHMS**

Solar tracking algorithm	% Increase in voltage as compared to a fixed-mount solar panel	
	Sunny days	Cloudy days
Active	10.0%	7.5%
Chronological	8.5%	9.0%
Hybrid	13%	14%

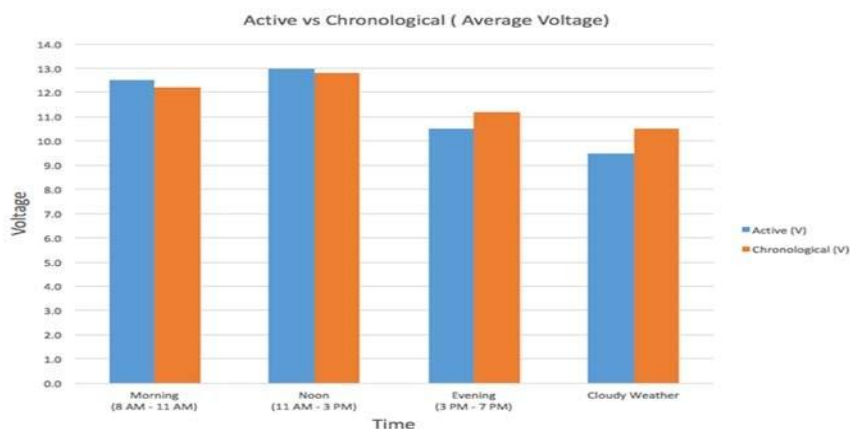


Fig. 3. Average voltage readings for active and chronological algorithms.

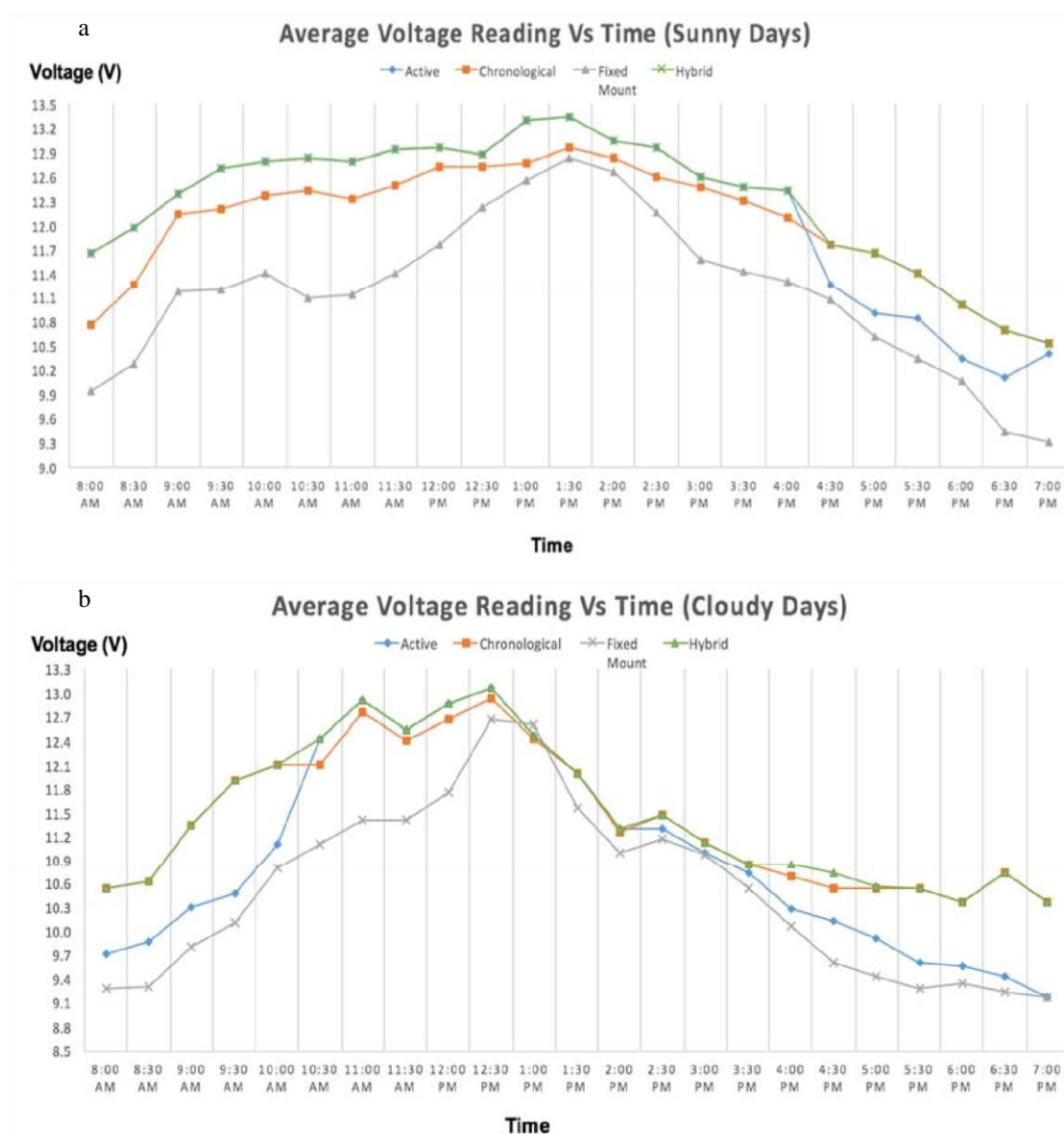


Fig. 4. (a) Averagevoltage readings for sunny days; (b) Average voltage readings for cloudy days.

Fig. 4(a) and Fig. 4(b) depict the average voltage readings for different solar tracking algorithms on sunny days and cloudy days, respectively. The hybrid algorithm consistently yields the highest voltage increment of up to 14% on cloudy days and up to 13% on sunny days. Table 1 summarises the percentage of increased voltage for active, chronological, and hybrid algorithms in relative to a stationary solar panel.

Energy gained by the proposed hybrid solar tracker was calculated by using Equation (3). Furthermore, energy consumed for each actuator was measured and calculated based on its movement.

$$\text{Energy} = \text{Voltage} \times \text{Current} \times \text{Time} \quad (3)$$

**TABLE 2. ENERGY TABLE FOR PROPOSED HYBRID SOLAR TRACKER**

Time	Hybrid (V)	Current (mA)	Energy Generated (Wh)	Energy Consumption (Stepper) (Wh)	Energy Consumption (Servo) (Wh)	Total Energy Consumption (Wh)	Gain (Wh)
8:00	11.67	0.60	25.20	4.80	4.22	9.02	16.18
9:00	11.87	0.61	26.07	4.81	4.21	9.02	17.05
10:00	12.80	0.65	29.95	4.85	4.24	9.09	20.86
11:00	12.80	0.65	29.95	4.78	4.25	9.03	20.92
12:00	12.97	0.68	31.74	4.83	4.28	9.11	22.63
13:00	13.30	0.71	33.99	4.85	4.30	9.15	24.84
14:00	13.03	0.68	31.91	4.87	4.26	9.13	22.78
15:00	12.60	0.64	29.03	4.83	4.24	9.07	19.96
16:00	12.43	0.62	27.83	4.80	4.21	9.01	18.82
17:00	11.67	0.58	24.50	4.82	4.20	9.02	15.48
18:00	11.00	0.55	21.78	4.87	4.26	9.13	12.65
19:00	10.53	0.53	19.97	4.83	4.24	9.07	10.90

Table 2 lists the energy generated, consumed, and gained by the hybrid solar tracker. The most energy generated was about 34 Wh, which occurred in the afternoon at 1 P.M. when the sunlight intensity is the strongest. On the other hand, the least energy generated was about 20 Wh, which occurred in the evening at 7 P.M. Despite energy consumption of stepper and servo motors, which is around 30% of the total energy generated, there is a considerable energy gain of approximately 11 to 25 Wh. This gain can be further increased by implementing a higher power rated solar panel [7].

In summary, with a large-scale implementation, the proposed hybrid solar tracker can harness optimal solar energy for all weather conditions, thereby considerably reducing carbon emissions and cutting electricity costs for public and private organizations.

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## ARTISTIC EFFECTS AND NATIONAL IDENTITY IN RELATION TO COLORS IN POETRY

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### ABSTRACT

*The article examines the reflection of the artistic influence of poetry in national identity. When comparing the poems of the Russian poet S. Yesenin and the Uzbek poet H. Olimjon, it is explained that white is symbolic in connection with the poet's attitude to the national mentality. In this case, the window acts as a means between the inner world in the symbol of the house of the lyric hero and the wonderful miracle of nature, and becomes the cause of the process of understanding that occurs in the thinking of the lyric hero.*

**KEYWORDS:** Color, Image, Characters, Lyrics, Landscape, National Mentality, Artistic Influence, Pathos, White Color, Expression.

### INTRODUCTION

It is well known from linguistics that languages that lived in isolation without communication are extremely poor, and their vocabulary is very small. It is safe to say that this process applies to all cultural layers. In particular, the development of national literature is closely linked with direct literary ties. An artistic discovery in national literature influences the formation of a discovery in a new national form when it takes root in the psyche of another nation.

Such scientists as A.N. Veselovsky, V.M. Zhirmunsky, A. Dima had a great influence on the process, which from the point of view of comparative literary criticism is interpreted as literary relations. We preferred to more accurately express these literary connections by the term "artistic influence", that is, the influence of one specific national literature (representative) on another national literature (representative). Because if we consider that the term "literary connection" refers to a two-way relationship, it becomes clearer that the term "artistic influence" is applied to the appearance of a certain product in one national literature in another.



Thus, in artistic influence, the product of one national literature, that is, the original artistic find in it (image, character, detail, etc.), leads to the appearance of another artistic find specific to this nation, reflecting the mental characteristics of another national literature. In this case, the factors influencing art can exist only in essence or outwardly similar aspects.

Uzbek poetry, which in the 1920s began to radically change in form and content, was influenced by the achievements of new poetic genres that came from the West. If we first observe this process in the works of poets of the new era, such as UsmonNosir, Oybek, Elbek, GafurGulam and Hamid Olimjon, then another unique stage was reflected in the work of the next generation of ErkinVakhidov, Abdulla Aripov, Rauf Parfi, ShavkatRahmon.

In particular, the lyric poetry of such outstanding representatives of Russian poetry as A. Blok, V. Brusov, Y. Pasternak, M. Tsvetaeva, A. Akhmatova had a definite influence on the formation of new Uzbek poetry. Literary critic A. Sabirdinov recognized the influence of Blok on Oybek's work: "While Blok created a number of innovations in form and content in Russian poetry of the 20th century, Oybek fulfilled this task in Uzbek poetry" [1.78]

An example of this is the work of the genius creator of Uzbek literature of the early 20th century, Hamid Olimjon, updated in form and content by Sergei Yesenin, one of the representatives of the "Silver Age" of Russian literature.

Now let's find out how the artistic effect is created. In our opinion, the following three factors reflect the artistic effect: Subject. 2. Object. 3. Status (appearance)

Their influence gives rise to various traits of artistic influence:

1. Regional features;
2. Religious characteristics;
3. Mental characteristics.

Poetry is art based on a figurative depiction of reality. In this, the importance and place of color are incomparable. This is due to the fact that the use of color creates a wide range of opportunities for the creator to express his feelings, arising from a deeper understanding of the essence of the being around him. Another important aspect is that a certain color has a symbolic and figurative meaning in the minds of a particular people within the framework of the national mentality characteristic of the region of residence. While there are many instances of artistic and aesthetic influences on the use of color in specific folk lyrics (often landscape), there is an exaggeration of the creative national mentality.

"The problem of color symbolism is one of the centers for studying the relationship between color and spirit. The origin of colored symbols, their essence, the attitude of human life to this or that event, the diversity of cultures in color symbols - these are the main questions of this problem. " [2.54]

From the above, if we pay attention to the symbolic expression of the use of colors in folk poetry, we will see that this is the correct attitude. In particular, this process is more vividly reflected in the landscape lyrics. In fact, "the landscape shows the ability to see, like an artist, to distinguish colors, to give them life and action through words. Each image of a natural landscape fulfills a certain artistic function and serves the ideological and aesthetic orientation of the

work"[3.6]. At the same time, colors have become one of the leading means of expressing the ideological and aesthetic ideas of artists.

We know that the lyrical mood that accumulates in the hearts of artists "awakens" and "shimmers" under the influence of similar spiritual pathos in the verses of other people. This can be caused by the poetic image and color of the event. As a result, the poet, creatively influenced by this color, expresses his artistic and aesthetic views based on his views on the national mentality. So, such a phenomenon of creative influence is also found in the works of Uzbek poets.

It is known from the life of KhamidOlimjon that in early spring the poet attended a ceremony in Kazakhstan and returned to Uzbekistan by plane. A poet who comes from a snowy place sees a blooming apricot at the entrance to his house and imagines a creative comparison of snow and spring. Soon he will write a poem "When the apricot blossoms".

There is no doubt that the poem of the famous Russian poet Sergei Yesenin "White Birch" evoked a response from him. After all, the lyrics of the famous Russian poet Yesen occupy a special place in the inspiration of a number of Uzbek poets of the 20th century. It is noteworthy that Yesenin's landscape lyrics are inseparable from colors. Each of his poems has its own color. In particular, white plays an important artistic and aesthetic role in reflecting the poet's spiritual landscape. This artistic approach is reflected in the poetry of the Uzbek poet KhamidOlimjon, who was directly influenced by his work. Knows how to skillfully use the ideological and aesthetic function of color in the expression of both pathos and aesthetic ideal. We can substantiate our opinion by comparing the verses of these two poets.

Poem by Sergei Yesenin "White Birch":

*White birch,  
Under my window  
Covered with snow  
Like silver.  
On fluffy branches  
Snow border  
Brushes bloomed  
White fringe.  
(My translation – A.A.)*

*Белая береза,/Под моим окном/ Принакрылась снегом,/Точно серебром./ На пушистых ветках /Снежною каймой/Распустились кисти/Белой бахромой.[4]*

(In front of the window is a picture of a snow-covered white birch, specifically silver, with fingers spread out on soft snow-covered branches, like a white poplar.) (Explanation of the author)

In the poem of Hamid Olimjon "When the apricot blossomed":

*Under my window just one shrub*

*The apricot blossomed as a white flower ...*

*Buds decorating branches*

*They sang the name of Life in the morning ...*

*(White fringe.my translation – A.A.)*

*Теразамнинг олдида бир туп/Ўрик оппоқ бўлиб гуллади.. /Новдаларни безаб гунчалар  
/Тонгда айтди ҳаёт отини.[5.186]*

Apparently, the pathos of both poets continues to form an artistic idea around the symbolic expression of white. It is noteworthy that in both poems the lyrical hero observes the processes taking place in nature from behind the window of his house. In this case, the window acts as a means between the inner world in the symbol of the house of the lyric hero and the wonderful miracle of nature, and becomes the cause of the process of understanding that occurs in the thinking of the lyric hero. The philosophy of life, born of the poet's perception, is manifested in the white symbol, which initially catches the eye.

Yesenin's lyrical protagonist draws attention to the branches of a white birch and describes a snow-covered belly, while Hamid Olimjon's lyric protagonist also looks at an apricot branch and describes the scene when it is covered with buds.

In this case, instead of distinguishing the creative effect from the imitation, it is necessary to pay attention to the following aspects.

It is known that every nation has its own nature, the world of plants. Therefore, none of them can represent the symbol of the nation to which the creator belongs. Likewise, the white birch, which grows in cooler regions of Russia, has also found its expression as a symbol of the Russian nation. Reading the poem, we feel that the lyrical hero, whom we are watching from behind the window, in the form of a white birch, embodies the symbol of a whole people. The poet is able to describe the fact that a white birch stood in the snow, which is the fruit of the snow, as a lyrical landscape in an optimistic mood, emanating from the framework of the symbolic and philosophical expression of white, and thus he manages to illuminate the persistent character of the Russian people.

In the poem by Hamid Olimjon, the expression of the national spirit is felt through the apricot (apricot), which in our country is a thermophilic fruit plant. He, unlike Yesenin, depicts spring white flowers on the branches of trees, and not winter snow. Through these white flowers, he expresses a number of life philosophies and can express the character of Uzbek tolerance in this culmination:

*Here are flowers for the whole world*

*Take it as much as you want.*

*Happiness is the most in him,*

*Stay in this country until death.*

*(White fringe.my translation – A.A.)*

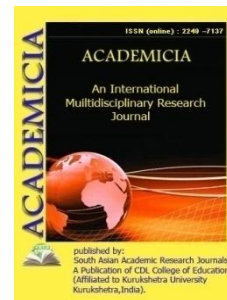
*Мана сенга олам-олам гул,/Этагингга сиққанича ол./Бунда толе ҳар нарсадан мўл,  
/То ўлгунча шу ўлкада қол.[5.186]*

From these quoted poems, it can be seen that the eyes of both lyric characters initially see white. The dynamics of the lyrical plot also arises through the symbolic and philosophical expression of these colors and serves as a manifestation of the artist's artistic idea. In Yesenin's work, white personifies a Russian person with a symbol of patience and will, while Hamid Olimjon manages to demonstrate national qualities such as Uzbek sincerity and impeccable generosity through white.

One gets the impression that the creative influence of other literature serves as an important factor in the artist, not only causing the phenomenon of imitation, but also arousing his pathos and thereby expressing the national mentality through artistic images.

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## INFLUENCE OF THE GOLDEN AGE OF ISLAM ON MODERN DIGITAL UZBEKISTAN

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### ABSTRACT

*In this article the main two periods of development of the Renaissance in the territory of Central Asia where our great philosophers and scientists, such as Muhammad Khorezmi, Ahmad Fergani, Abu Raykhan Beruni, Abu Ali ibn Sina, Mahmud Zamakhshari, Lutfi, Sakkoki, Hafiz Horezmi, Abdurakhman Dzhami, Alisher Navoi, Babur and dozens of other scientists who, with their scientific activities and discoveries of world significance, have made a huge contribution to universal human development and culture of those periods are considered. And, certainly, it did not remain traceless in our today's modern world where our independent Uzbekistan moves by the next vital period and creates the foundation for a new era of Renaissance is the Third Renaissance. The First Renaissance or the Golden Age of Islam in Central Asia is a historical period from about the middle of the VIII to the middle of the XIII century, at the beginning of which the Arab Caliphate was the largest state of its time. The beginning of the era of the Second Renaissance in our region can be considered the creation of a great empire by Amir Temur Sahibkiran in the 15th century where Timurid Renaissance is a phenomenon of flourishing of arts and sciences in the Timurid empire. Since XIX century and till today we can safely tell that the world moves to new opening and achievements, and already today the new culture of values has specific character. We can connect all this with computerization and information development in Uzbekistan where our state pays much attention to the main objectives of digital development of the Republic of Uzbekistan that as a result leads to change of cultural values.*

**KEYWORDS:** *Islamic Revival, Islamic Renaissance, Central Asia, Revival, New Era, The Golden Age Of Islam, Digital Uzbekistan, Digital Culture, Informatization, Digitalization, Third Renaissance, Timurid Empire, The Revival.*

## INTRODUCTION

*The Revival, or the Renaissance*, is a world-wide era in the history of European culture that replaced the Middle Ages and preceded the Enlightenment and the New Age [1]. In Italy, at the stages of the Proto-Renaissance (XIII century) and High Renaissance (XIV-XVI centuries), antiquity was revived in new historical conditions. In the speech of the President of the Republic of Uzbekistan ShavkatMirziyoyev at the solemn meeting dedicated to the Day of Teachers and Mentors, the formation in Uzbekistan of the foundation of a new Renaissance era - the Third Renaissance through large-scale democratic reforms, including in the education system was noted. "As history shows, our land, located at the crossroads of the Great Silk Road, from time immemorial has been one of the centers of high civilization and culture. The rich scientific and cultural heritage of the people, ancient writings, unique architectural monuments, rare manuscripts, various artifacts testify to the three thousand year history of our statehood"[2].

Thanks to the tremendous attention to science and education, the developed countries of the world achieve high progress and prosperity. What was revived and when does the calculation of the First Renaissance take place on the territory of Central Asia and what cultural aspects can we trace on the historical path of the development of society?

*The First Renaissance or the Golden Age of Islam* in Central Asia is a historical period from about the middle of the VIII to the middle of the XIII century, at the beginning of which the Arab Caliphate was the largest state of its time. Within the framework of the Caliphate, a common Muslim cultural space was formed, which continued to exist even after its collapse. Thanks to this, Islamic scholars, writers and artists of this period made a significant contribution to the development of world science and culture. After the collapse of the Arab Caliphate, the development of Islamic culture was briefly picked up by the Persian state of the Samanids, and subsequently by a series of Turkic empires of Ghazni, Karakhanids, Timurids, Seljuk, Hulaguids. Howard Turner writes: "Muslim artists and scientists, workers and princes have together created a unique culture that has a direct and indirect impact on every continent."[3]

During the Islamic Renaissance, mathematics, medicine, philosophy, physics, chemistry and other sciences developed. The Islamic culture, stretching from southern Spain to China, has absorbed the achievements of scholars from a wide variety of nationalities and faiths. She developed the knowledge of the Egyptians, Greeks and Romans, achieving breakthroughs that set the stage for the Renaissance. During this period, a whole galaxy of luminaries of science appeared on our land, whose names and works are still widely known to the whole world today. Muhammad Khorezmi, Ahmad Fergani, Abu RaikhanBeruni, Abu Ali ibn Sina, Mahmud Zamakhshari and dozens of other scientists who, with their scientific activities and discoveries of world significance, have made a huge contribution to universal human development. One cannot fail to mention such great thinkers of the "Golden Age of Islamic Culture" as Imam Bukhari, Imam Termezi, Imam Maturidi, BurkhaniddinMarginoni, AbulMuinNasafi, where they are rightfully the honor and pride of the entire Muslim world.

Already in this period, the introduction of the decimal number system, fractions, trigonometric functions, and many other great achievements, without which it is impossible to imagine modern mathematics, are associated with the name of the outstanding mathematician al-Khwarizmi. He wrote the first book on algebra called al-Jabrwal-Mugabile. The word "al-Jabr" from the title of the book began to sound in the West as "Algebra". The name of the scientist himself has become



a household name and designate a procedure that unambiguously leads to a result - an algorithm, where in the future we will associate this with a more complex concept like "Digital culture".

The beginning of the era of *the Second Renaissance* in our region can be considered the creation of a great empire by Amir Temur Sahibkiran in the 15th century. *Timurid Renaissance* is a phenomenon of flourishing of arts and sciences in the Timurid empire [4]. According to formal and substantive criteria, it was an analogue of the European Renaissance. The Timurid Renaissance reaches its peak in the 15th century, when the era of local migration of peoples and ruinous Mongol rule ends. It is symbolic that Tamerlane is rebuilding Samarkand destroyed by Genghis Khan. In the Timurid era, interest in the Persian classics is revived, large-scale construction of architectural structures begins (mausoleums, madrasahs, kitabhana), Sufi poetry with an emphasis on human relations flourishes, realistic painting is formed (Herat miniature, wall painting), mathematics and astronomy receive a new impetus. At the beginning of the 16th century, Timurid Babur mastered firearms. During this period, we celebrate such outstanding scientists as Kazizoda Rumi, Mirzo Ulugbek, Giyosiddin Koshi, Ali Kushchi, the great poets Lutfi, Sakkoki, Hafiz Khorezmi, Abdurahman Jami, Alisher Navoi, Babur. The fame of the historians Sharafiddin Ali Yazdi, Mirkhond, Khondamir, artists Mahmud Muzakhib, Kamoliddin Behzod, many calligraphers, musicians, musicologists and architects spread around the world.

During this period, the main centers of science in the Timurid empire were Bukhara, Herat, Samarkand. There was Ulugbek Madrasah in Samarkand (1420). Another center of scientific life was the observatory in Samarkand (1424), where such scientists as Al-Kashi, Kazy-had Rumi considered the issues of determining the distance to the Moon and the Sun. In 1437, a team of scientists (including Al-Kashi and Al-Kushchi) created a star atlas, which went down in history as the *GurganZij*. In the field of mathematics, the theory of decimal fractions is systematically presented, equations are solved.

Our ancestors carried the banner of enlightenment in the fight against ignorance, directed all their intellectual and spiritual potential to study and enrich the scientific achievements of mankind, and therefore we managed to reach such great heights in science and culture. And today we have come to the next life period, where the foundation of a new Renaissance era is being created - *the Third Renaissance*. Talking about Uzbekistan, here it is truly necessary to note not a small contribution to the restoration of the rich spiritual and cultural heritage of the first President of the Republic of Uzbekistan Islam Karimov. Where he said more than once: "In order to realize the goals and objectives of preserving our spirituality, it is necessary that each person realizes himself as a worthy citizen of his country, deeper assimilates the history, rich culture and heritage of great ancestors, consciously perceives today's rapidly changing reality, independently thinks and feels his involvement in transformations in the state"[5].

Today the new system of cultural values has specific character and in this difficult transition period with computerization and information development in Uzbekistan, the cultural importance of digital media becomes visible (The Internet, artificial intelligence, the system and applied software, computer graphics, systems of virtual reality etc.). Here our state pays much attention to the main objectives of digital development of the Republic of Uzbekistan:

- ensuring systematic and consecutive development of digital economy, electronic government, information and communication and innovative technologies;

- increase of digital literacy of the population and preparation of highly-skilled personnel in the sphere of digital technologies, creating an enabling environment for retraining of shots, promoting of methods of distant work;
- expansion of telecommunication infrastructure and data-processing centers, formation of necessary infrastructure for granting to scientific community and implementation of innovative projects;
- improvement of standard and legal regulation of digital economy, creation of «regulatory sandboxes» for carrying out the legal experiments connected with regulation of the relations at introduction of new technologies;
- increase of efficiency of collecting and data processing, creation of new economic values, by effective utilization of data, increase of availability of data for the population and subjects of business;
- introduction of modern forms of financing of IT projects and the companies (venture financing, a kraudfanding, IPO, a tokenization of assets), increase of transparency and availability of the state order in the sphere of information technologies, creation of venture funds and technological parks, attraction of foreign investments and development stimulation export - focused production, support in monetization of digital products and services;
- expansion of the international cooperation in the sphere of digital development, active studying and introduction of foreign experience, establishment of cooperation with the large foreign companies on implementation of joint projects.[6]

The development of the spiritual and moral world of citizens, especially young people, is of paramount importance. At the stage of revival with the development of digitalization in the country, it is worth noting its influence on the culture of society in general. Where can this digital cultural development be traced? Several areas in public life can be noted here:

- In art. Today, an elementary trip to the museum will demonstrate to you the achievements in the field of engineering, navigation, architecture, mathematics and medicine on the basis of interactive displays, where the exposition is combined into a single art space, meaningful and interactive. If you go to the cinema, then you will not just feel like a spectator, but as an involved character, where lighting, color, music change in the hall while watching, and scenes from the film fly along the walls. If we talk about art, then there is an interactive cooperation with clients, not only during visits to exhibitions, but also through online formats. The development of digitalization affects all spheres of our life, cultural institutions do not stand aside and demonstrate their readiness to introduce modern technologies.

- in education. Despite the difficult period of the pandemic, where our modern education system is introducing an active stage of computerization and informatization, the cultural significance of digital means, regardless of their advantages and disadvantages, is obvious. These processes are critical, depending on funding, on the level of development of universities, on the level of readiness of the teaching staff, etc. The stage of digitalization, in which we found ourselves spontaneously and independently of infrastructural changes, is a laconic consequence of previous social changes. Digitalization brings each student to the university in his gadget (smartphone, tablet ...), it does not require an implementation program, it does not need additional resources. Extreme ease of use and images, maximum data transfer rate - these are the fundamental components of digitalization. From the speech of the President of the Republic of Uzbekistan ShavkatMirziyoyev, he says: "Today, first of all, I want to appeal to educators, to all

compatriots: dear friends, if we sincerely strive, act harmoniously and decisively, we will be able to achieve the highest goals. We are a people with an ancient history and rich culture, with great spiritual potential. We have in our blood the desire for science, it is in our genes. We all understand perfectly that creating the foundation of a new Renaissance is not even a matter of several years. This requires hundreds, thousands of talented people, selfless individuals"[7]. Here, great importance is attached to the dedication of teachers and mentors, where they carry out a lot of work to radically modernize the education system. And we all understand that these are just the first steps towards achieving a great goal.

- in science. Here it is necessary to note outstanding scientists of our time, such as Vsevolod Romanovsky - Soviet mathematician, founder of the Tashkent mathematical school; Nikolai Nikolaevich Nazarov - (1908, Tashkent - 1947, Tashkent) mathematician, professor of SAGU, master of sports in gymnastics; Tashmukhamed Alievich Sarymsakov (September 10, 1915 - 1995) - Doctor of Physics and Mathematics, Professor, Academician of the Academy of Sciences of the Republic of Uzbekistan, Rector of Tashkent State University (TashSU); Sagdy Khasanovich Sirazhdinov (May 10, 1920 - 1988) - Doctor of Physical and Mathematical Sciences, Academician of the Academy of Sciences of the Republic of Uzbekistan; Dmitry Danilovich Gedeonov (1854-1908) - Russian geodesist and astronomer, in 1878-1880 worked at the Pulkovo Observatory, since 1887 - assistant to the head of the Geodetic Department of the Academy of the General Staff, in 1890-1900 - director of the Tashkent Observatory; Boris Pavlovich Grabovsky (1901 - 1966) - physicist, employee of the SAGU physics laboratory, inventor of "Telephot" - a device for transmitting images at a distance by radio, that is, a prototype of a transmitting and receiving television system. He demonstrated his invention in Tashkent in 1928; Vladimir Grigorievich Shaposhnikov (1905 - 1942) was the head of the time service of the Tashkent Observatory in 1938. A minor planet which were discovered on April 18, 1972, was named after him (1902 Shaposhnikov); Vasiliev Sergei Sergeevich (1908 - 1981) - Soviet scientist, nuclear physicist, associate professor at SAGU, professor at Moscow State University. One of the founders of the Physico-Technical Institute of the Uzbek Academy of Sciences (Tashkent); Vladimir Pazdersky - Professor of the Department of Theoretical Physics, National University of the Republic of Uzbekistan (TashSU); Boris Markovich Nosenko is a professor of the Department of Optics at Tashkent State University (TashSU), who has made a significant contribution to the development of optical spectroscopy in Uzbekistan. For a long time he headed the Department of Optics at Tashkent State University; Vasil Kabulovich Kabulov - Uzbek mathematician and mechanic, academician of the Academy of Sciences of Uzbekistan since 1966 (since 1962 - Corresponding Member). In 1977 he was awarded the title of Honored Scientist of the Uzbek SSR. Member of the Great Patriotic War. Founder and since 1966 director of the Institute of Cybernetics of the Academy of Sciences of Uzbekistan, Advisor to the Academy of Sciences of Uzbekistan. Born in Tashkent, graduated from the Tashkent Institute of Railway Engineers in 1949, Doctor of Physics and Mathematics in 1964, professor since 1965. In 1952 - 1957 he worked at the Institute of Structures of the Academy of Sciences of the Uzbek SSR, in 1957 - 1963 - at the Institute of Mathematics of the Academy of Sciences of the Uzbek SSR, in 1963 - 1966 at the Institute of Mechanics and Computing Center of the Academy of Sciences of the Uzbek SSR. The main works of V.K. Kabulov relate to the field of computational and applied mathematics, algorithmization in the mechanics of continuous media. He is the author of several monographs. V.K. Kabulov is a laureate of the State Prize of the UzSSR named after V.K. Biruni (1971); Sunyaev, Rashid

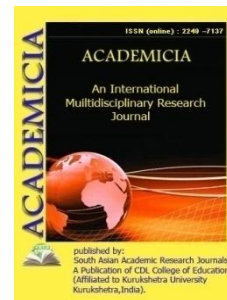
Alievich - an outstanding Soviet and Russian astrophysicist, full member of the Russian Academy of Sciences (1992), was born in Tashkent in 1943. [8]. All of them have made a significant contribution to the development of science and culture in our country. And here our President notes "The greatest wealth is reason and science, the greatest inheritance is a good upbringing, the greatest poverty is lack of knowledge. Indeed, the new era of the Renaissance, the foundation of which we are laying with pure thoughts and high hopes, will contribute to the creation of such enormous wealth in the country, ensuring a decent life for the people and forming a priceless heritage for future generations". [9]

Thanks to opening and achievements of our great ancestors, modern scientists we are on the threshold of the XXI century with new knowledge and achievements in the field of a digitalization of all spheres of human life. The digital space by means of a global network expands human possibilities, allowing to overcome geographical, political boundaries, making world values of culture available for contemplation to everyone, "virtualizing" the economic sphere of human life. Speed of distribution of information streams leads to a situation of a total digitalization of public processes and life of individuals. Our new generation starts to live in a digital format where with the developed system of values this generation perceives a format of traditional culture through a prism of figure and appearing consequences: digital culture, virtual culture, network culture and others.

Digital culture requires from a modern person new knowledge and skills, a special style of thinking, providing the necessary adaptation to social changes and guaranteeing a worthy place in the information environment. Today, the formation of a society's digital culture proceeds as an uncontrollable (spontaneous) process that needs to be structured and systematized, which will allow it to become a tool for mastering and adapting to a new information environment, a way of harmonizing a person's inner world in the process of mastering the entire volume of socially significant information. New technologies turn cultural objects into popular public spaces, and during this period of globalization, the strengthening of the national idea and spiritual and moral immunity in society, the protection of the young generation from the negative influence of harmful ideas and various challenges, the upbringing of a harmoniously developed, devoted to the Motherland independent thinking and strong will of youth.

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## MODERN TEACHING METHODS USING DIDACTIC TEACHING AIDS (ON THE EXAMPLE OF PRACTICAL AND LABORATORY CLASSES)

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### ABSTRACT

*This article shows ways to develop students' scientific and innovative outlook through the use of modern didactic tools in practical and laboratory classes, and shows the use of virtual laboratory and computer programs during the lessons. Today, the modernization and automation of industrial production technologies, the transformation of scientific discoveries and equipment into a direct production force requires professionals to independently and regularly deepen, update, supplement and expand their knowledge. At this time, too, have to use various didactic tools. Therefore, according to the agreement between the educational institution and the affiliated enterprise, the necessary conditions are created in the enterprise for conducting qualifying internships or laboratory and practical training.*

**KEYWORDS:** *Continuing Education, Individualization Of Teaching, Educational Technologies, Didactic Tools, Quality Of Education, Computer Programs, Video Materials, Knowledge, Skills, Qualifications.*

### INTRODUCTION

Socio-economic developments in society the goals, objectives and content of the educational process change in accordance with the requirements of the time, and as a result, the forms and methods are improved. At present, the widespread introduction of information and

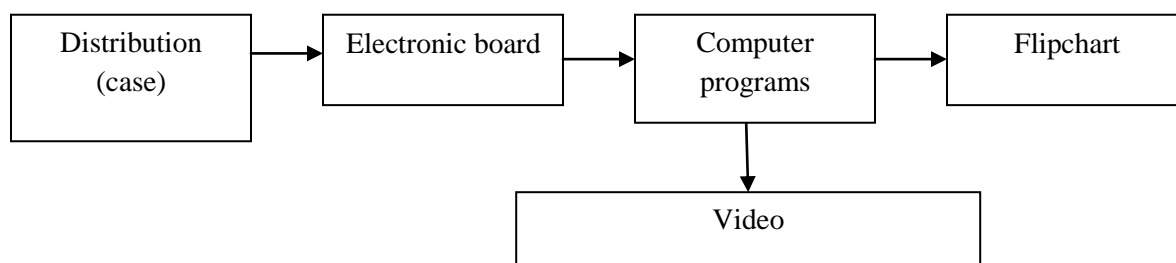


communication technologies in all spheres of society is influencing changes in the forms of education. Today, the use of advanced methods of teaching technologies in the system of continuing education and their targeted use in the classroom is showing effective results. This plays a special role in the individualization of the learning process, i.e. teaching, strengthening the creative potential, the realization of personal interests and individual characteristics of learners. Improving the quality of education, increasing its efficiency serves the purpose of providing mentally stable, competitive professionals with high intelligence. This is a practical help to fully realize the inner potential of the learner.

Today, the modernization and automation of industrial production technologies, the transformation of scientific discoveries and equipment into a direct production force requires professionals to independently and regularly deepen, update, supplement and expand their knowledge. The training of qualified specialists in the higher education system largely depends on the professional knowledge, skills and abilities of special science teachers and pedagogical engineers, as well as pedagogical skills. At the same time, it is important to conduct laboratory and practical classes in accordance with modern requirements in order to improve the skills of students to apply theoretical knowledge in practice. In view of the above, conducting laboratory classes in stand and virtual laboratories, and practical classes using computer programs will further develop students' innovative outlook.

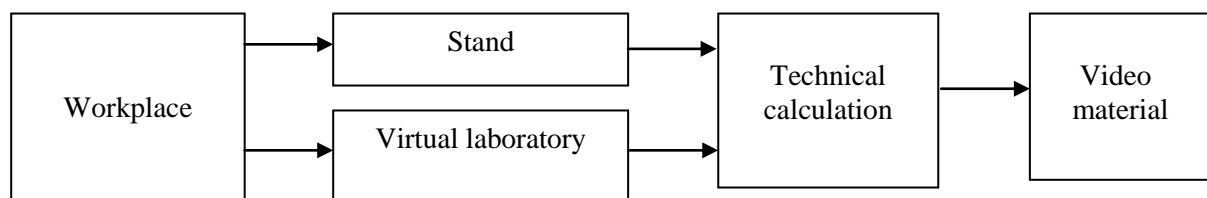
In this type of training, the theoretical knowledge acquired by students is applied and strengthened in practice. Therefore, the materials used in these sessions are designed to work with students individually or in small groups. At the same time, students practice examples and problems, assignments, exercises based on the theoretical knowledge acquired. Therefore, the didactic tools used in practical classes, in contrast to theoretical classes, should be mainly focused on the practical activities of students. To do this, practical training rooms are equipped with computers that use a variety of schemes and drawings, cards and information materials, methodological and traditional and electronic versions of textbooks. It is also widely available in a variety of photo, projection, television or video materials. For example, if we take practical lessons on the subject of "Theoretical Electrical Engineering". The training should take place in a computer room, on an electronic board with the appropriate software and didactic materials on the topic. Such an equipped computer room serves as a complex. The classroom should have visual and handout materials, textbooks, flipchart, pins and computer sets, electronic board. The training will be more effective if there are short audio and video materials on the topic and tools to use them. Based on this, the teacher can develop a lesson plan and a set of applications. For example, case studies on the topic of practical training will be distributed. Once students are familiar with the cases, they rely on it to discuss. As a result of the discussion, the parameters of the problem from a separate case are written on the electronic board. Students solve examples using formulas. Once the answer to the problem is found, a program for this problem is developed by computers. After that, a video on the practical application of the topic will be shown. In the video material, students discuss how well the problem worked and where it can be used in practice. As a result, the final points are written on a flipchart. This complex will look roughly as follows:





Conducting practical classes through modern innovative computer programs will serve to further develop students' scientific-innovative outlook and knowledge potential.

Students will develop professional skills and abilities in the laboratory classes on specialization in the field of energy. In these classes, students practice a variety of technological operations on specialized machines and equipment. That's why they make more use of lab stands in these sessions. It is advisable to compare the laboratory results with the laboratory results, which are carried out through virtual laboratories, along with stands, and conducted in real conditions. Laboratory training is conducted in specially equipped rooms, otherwise the goal cannot be achieved. Students work in the laboratory to test, measure, test, identify, generate, and obtain results to put their theoretical knowledge into practice. For this, the necessary conditions, specially equipped room and the necessary laboratory equipment are used. For this lesson, the teacher should develop a set of didactic tools so that each student can achieve the assigned task. For example, in the laboratory classes on the subject "Theoretical Electrical Engineering" students will have to check the elements of various electrical circuits, measure their parameters, determine the absolute errors through the measurement results, find the parameters of the electrical circuit and show them in graphs. Students are divided into groups and each of them is given a separate methodical instruction, assignment and sample scheme. Students perform classes through laboratory stands as well as virtual labs. At the end of the session, the results obtained through the laboratory stand are compared with the work done through the virtual laboratory and the measurement accuracy is reviewed. They then compare the results with the technical documentation. Video materials on the work done will be provided. In the video you will learn about the use of laboratory work on the subject in the field of energy and what it does. The set used in this lesson can be described as follows:



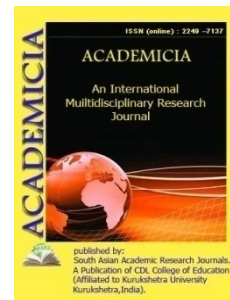
The organization of laboratory classes through a stand and a virtual laboratory to study and analyze the processes taking place in real production serves to further develop students' scientific and innovative outlook. In addition, students explore real-life examples on the topic through videos.

One of the necessary conditions for the training of qualified specialists is to integrate education with production. Although we give students a good education and do not develop in them enough

skills and competencies related to their profession, in the future they will not develop into professionals who can meet the requirements of modern production. Therefore, it is very important to conduct specialized disciplines in production enterprises and departments. This is done in the form of laboratory and practical training or internships in accordance with the agreements concluded by the departments of higher education with industrial enterprises. At this time, too, have to use various didactic tools. Therefore, according to the agreement between the educational institution and the affiliated enterprise, the necessary conditions are created in the enterprise for conducting qualifying internships or laboratory and practical training. There is a separate study area and a classroom. These areas will be provided and equipped with appropriate materials and tools. A closet-module for storing didactic materials, a video projection workplace will be created. Technical safety, work procedures and other relevant instructions are provided here. In addition, qualified specialists from manufacturing enterprises can also be trained. In order to carry out this work effectively, the teacher must prepare the necessary didactic materials here, plan the work so that the subject and the production process are properly linked in order to study the technological processes. As a result, students implement the technological processes they learn directly in the production process, develop a scientific and innovative worldview, apply their theoretical knowledge in practice and collect information for future work. Photo, video and information technology are widely used for this purpose. They also study computer programs used in the automation of industrial enterprises.

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## MATERIALS PROCESSING IN THE SOLAR FURNACE

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### ABSTRACT

*The influence of technological modes of the Big Solar Furnace on the process of synthesis of materials from the melt is studied. It is shown that for the synthesis of materials with a set of specified properties, it is necessary to optimize the density and nature of the energy distribution of concentrated solar radiation in accordance with the degree of blackness, absorption coefficient, melting temperature and thermal conductivity of the charge. It is shown that the melted state and a homogeneous fine-crystalline structure with an optimal combination of crystalline and amorphous phases, which leads to an increase in the wear resistance of the material.*

**KEYWORDS:** *Solar Furnace, Melting, Synthesis, Concentrated Stream, Cooling, Hardening*

### INTRODUCTION

The sun is a free source of energy on Earth. The radiation power of the Sun, at its zenith, on the surface of the Earth is estimated at approximately  $1360 \text{ W/m}^2$ .  $10 \text{ kW}$ , it is necessary to collect solar radiation with an area of  $7.5 \text{ m}^2$ . In the middle lane at summer noon, for every square meter oriented perpendicular to the sun's rays, more than  $1 \text{ kW}$  of solar energy is produced. The main limitations associated with the use of solar energy are caused by its inconstancy. However, these are seasonal differences in day length. The length of the day and night is weakly dependent on

the time of year, that is, to the very middle latitude of Russia. To increase the efficiency of using solar energy, converting it into thermal and electrical systems of mirror concentrating systems (MCS). The radiation is directed to the radiation level to a level that ensures its effective and economical predominance in the required form. Scopes of MCS provide thermo physical, technological and power aspects. Features of the MCS are determined by the geometry of the hub, the quality requirements of the mirrors

The following main indicators are characteristic for MCS

1) focal radiation density:

$$E_F = \rho_{omp} \frac{1}{\varphi_0^2} \sin^2 U_m E_0$$

where  $\rho_{ref}$  is the reflection coefficient of the concentrator;  $U_m$  is the largest opening angle of the parabolic to the side, degrees, (determined by the upper edge of the parabolic);  $E_0$ — density of solar radiation,  $W/m^2$ .

The degree of concentration of sunlight in the parabolic were as

$$n = \left(\frac{D}{d}\right)^2 \rho_{omp}$$

where  $D$  is the diameter of the parabolic reflector;  $d$  is the diameter of the focal spot (taken equal to the size of the smaller semi-axis of the focal spot);  $\rho_{ref}$  is the reflection coefficient.

The optimal values of the degree of concentration characteristic of solar power plants lie in the range from units to hundreds [1]. When concentrating solar radiation, its density not only increases, but its distribution in space, and, consequently, on radiation-perceptive surfaces, changes.

Solar furnaces are widely used to achieve high temperatures [2] including the processing of materials (welding and cladding, surface treatment, coatings and surface hardening and powder metallurgy), the synthesis and processing of non-metallic materials (ceramics, fullerenes, carbon nanotubes, calcium aluminates cements [3] and lime production) and metallurgical processes (silicon and aluminum production). As noted in these works, concentrated solar energy can be an alternative in metallurgical processes. However, further studies should be conducted to consider solar energy processes as an alternative to well-studied traditional processes.

In this work, we studied the effect of concentrated solar radiation of high density on the synthesis of materials of various classes from the melt using the example of  $CaMgSi_2O_6$  pyroxenes  $BaTiO_3$  barium titanate in order to obtain glass crystalline materials with high mechanical and dielectric properties.

For processing and synthesis of materials, the functional and technological capabilities of the Big Solar Furnace (BSF) with a thermal power of 1 MW were used.

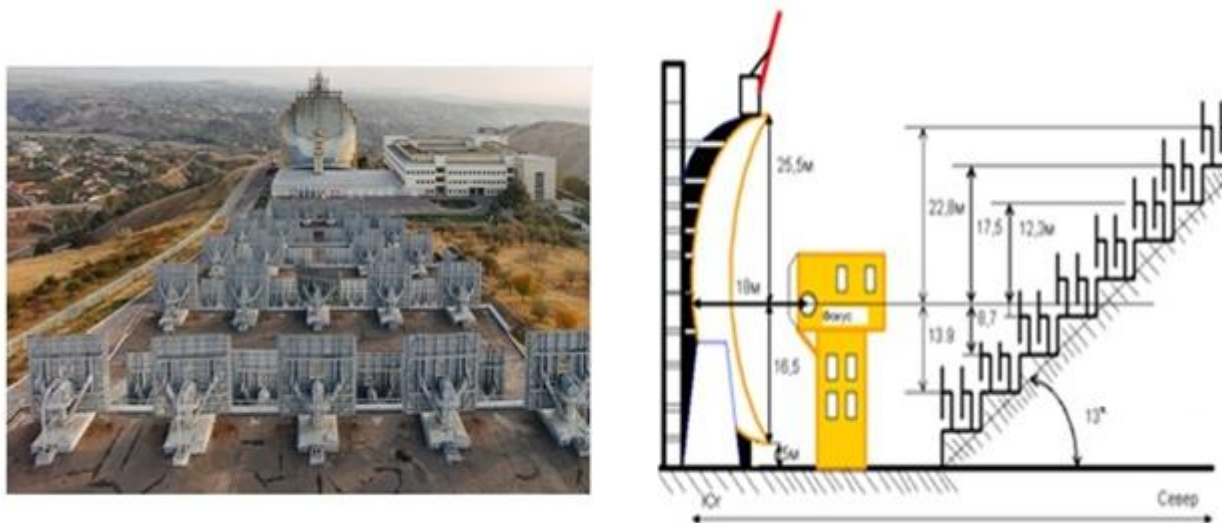


Fig. 1. Big Solar Furnace with a thermal power of 1 MW.

The technology of processing and synthesis of materials on the BSP provided for irradiation of the material mounted on the focal spot with a concentrated stream of high-density solar radiation. Irradiation contributed to the heating of the material due to the absorption of the energy of the light quantum. Heating of the material caused its destruction - melting. The melt could be subjected to further irradiation in order to increase its degree of homogeneity and homogenization. The melt could be cooled at different cooling rates. For example, under conditions of spontaneous cooling on the surface of a water-cooled substrate. In this case, the cooling rate corresponded to  $10^2$  deg/s. And under conditions of melt discharge into water, the cooling rate corresponded to  $10^3$  deg/s. To achieve high cooling rates of the melt, special cracking methods using copper plates were used, which ensured a cooling rate of about  $10^4$  deg/s. With an increase in the cooling rate of the melt, a decrease in particle size is observed (Fig. 2).

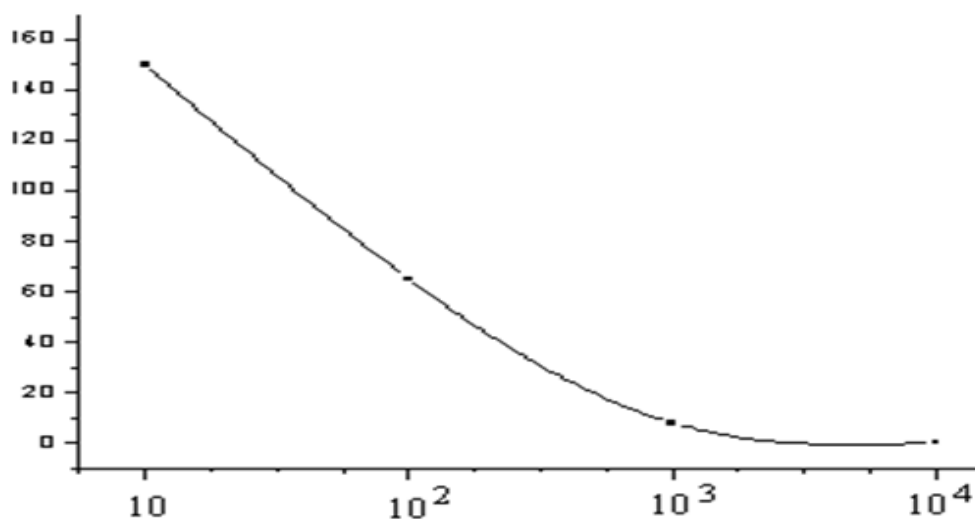


Fig. 2. Particle size versus cooling rate

To obtain a hardened material with nanosized particles, it is necessary to cool the melt at a speed above  $10^6$  deg/s. The melt cooling rate also influenced the wear resistance of the material (Fig. 3).

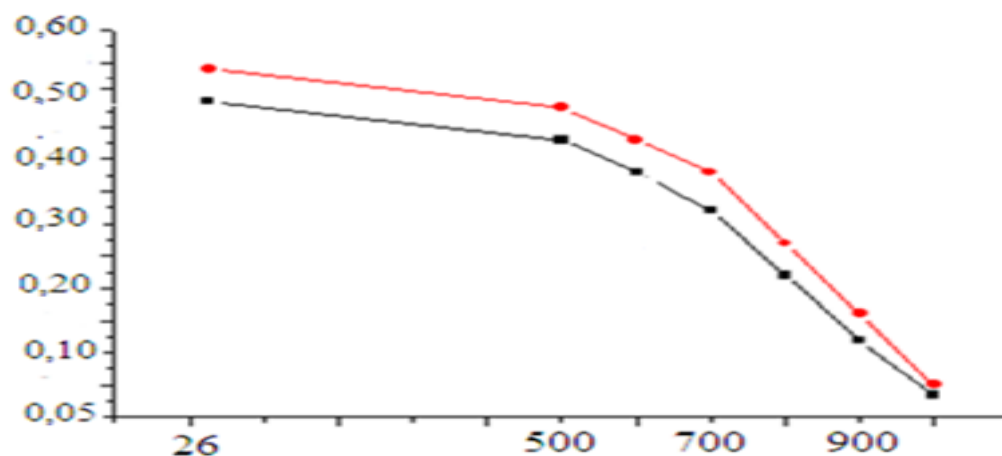


Fig. 3. Dependence of abrasion on cooling rate

The wear resistance of the material obtained by sintering fused basalt rocks at various temperatures increases with increasing sintering temperature.

When any solid is heated, when a certain temperature is reached, it turns into a liquid. This phenomenon is due to the fact that with increasing body temperature, the rate of thermal motion of its molecules increases, and atoms move away from each other at large distances. Due to the increase in the amplitude of atomic vibrations, the destruction of the crystal lattice begins — the long-range order disappears — the solid melts. The melting process takes about 80 s, during which the equilibrium thermodynamic state of the liquid is established. Full melting of the material is achieved with flux densities of concentrated solar radiation corresponding to the optical parameters of the material. Increased flux densities of concentrated solar radiation contribute to increased homogeneity and quality of fused materials.

Thus, the density and nature of the energy distribution of concentrated solar radiation, necessary for the synthesis of materials from a melt on a BLB, corresponds to the optical (absorption coefficient, degree of blackness) and thermo physical (melting point, thermal conductivity) characteristics of the raw material [4-7].

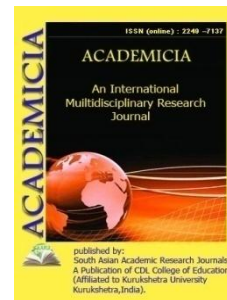
The fixation of the amorphous state of the melt during quenching is related to the cooling rate, which is influenced by such parameters as heat transfer conditions, melt temperature, quenching system material, etc.

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## FACTORS OF PROFESSIONAL TRAINING IN THE SYSTEM OF VOCATIONAL EDUCATION (POWER ENGINEERING)

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### ABSTRACT

*Methods of effective organization of the educational process in the institutions of vocational education with the help of innovative educational technologies. knowledge in accordance with the achievements of science and technology. Its main qualities are the ability to quickly acquire a set of specialized knowledge and practical skills, flexibility, creativity and professional mobility in the constantly changing conditions of activity. Thus, in order to maintain the required level of qualification at all stages of professional activity, there is a need for professional education system electricians to constantly replenish general technical and specialized knowledge in accordance with scientific and technical achievements.*

**KEYWORDS:** *Professional Education, Digital Economy, Modern Expert, Media, Offline Video Lessons, Educational Innovations, Intellectual Ability, Didactic Tools, Telegram Messenger, Knowledge, Skill.*

## INTRODUCTION

The strength and economic development of a society depends largely on its scientific and technological progress. It is important to train technological and engineering specialists based on such a process. The demand for competitive personnel in the global labor market has always been high. To do this, the content and quality of education in vocational education institutions must fully meet the above requirements, and the scope of new knowledge must be constantly increasing and adapt to innovations. In today's globalized world, network technologies are evolving. Production is enriched with the latest achievements of science. The requirements of social life in the digital economy place high demands and tasks on the education system in the training of modern specialists in vocational education institutions. Quality engineering education is the most important aspect and criterion of technological development of a society. The radical changes taking place in the current socio-economic and political life require sufficient changes in the education system.

The problem of substantiation of pedagogical conditions for continuous professional training of electric power specialists in the institutions of vocational education system will be of great importance for their future professional activity. It is important to improve the system of vocational education on the basis of advanced foreign experience, to train qualified and competitive personnel for the labor market through the introduction of primary, secondary and secondary special vocational education and to involve employers in this process.

The modern specialist must be able to keep abreast of innovations in the field of his professional activity, to see the directions of future development and ways to solve the problems that arise. In order to train a specialist of this level, it is necessary to develop and scientifically substantiate a set of effective forms, active methods and modern tools for the implementation of industrial education in vocational education institutions. The specialist of the direction needs to constantly replenish general technical and special knowledge in accordance with the achievements of science and technology. Its main qualities are the ability to quickly acquire a set of specialized knowledge and practical skills, flexibility, creativity and professional mobility in the constantly changing conditions of activity. It was done to better meet the needs of the labor market and to train a skilled workforce capable of finding and working in a constantly changing work environment. Given this context, it is important to ensure that professional educators have knowledge of the system of specialized disciplines and continue to update their knowledge. It would be expedient to organize the training of their qualifications on the methodology of teaching the specific features of the field of vocational education. The content of innovations in the educational process should be not in itself, but in creating all the conditions for the development of spiritual, creative, intellectual abilities of learners and in creating sufficient conditions for the harmonious development of the individual in general.

In order for the professional education system to be highly effective and efficient, special science teachers rely on modern achievements of fundamental disciplines, world and national experience, new educational concepts, systems, technologies, methods and tools to support the idea. The courses should be aimed at improving the content of curricula, developing high-level research activities, introducing distance-learning technologies, introducing and implementing innovative approaches, focusing on the development of e-learning materials, multimedia materials, SMART learning materials.

In the institutions of professional education, it is expedient to effectively organize the educational process with the help of innovative educational technologies and use the media, the Internet, television, video, film, telephone and other means of communication to achieve the intended goals. In today's pandemic, the role of the media in the educational process in the form of distance learning is great. The role of the media in the targeted and effective use of didactic tools in the didactic process is of particular importance. "Media" is derived from the Latin word "media", which means "media", "mediator" or "mass media". In particular, the use of all types of print media, which are print media, has a positive effect on the preparation of supervisors for professional work and the preparation of independent work at the required level of content. It remains one of the main tools in selecting the required resources from the Internet and allows for a more detailed and in-depth analysis of the data. Educational innovations are forms, methods and technologies that can be used to solve an existing problem in the field of education or the learning process on the basis of a new approach and guarantee a more effective result than before.

The use of information and communication technologies (ICT) and educational technologies in the training courses conducted in the institutions of vocational education, which prepare specialists in the field of power engineering, gives good results. It is advisable to use video tutorial technology. These technologies have a positive impact on achieving further strengthening of students' knowledge and improving the quality of mastery.

Vocational education it is difficult to remember the interconnectedness of large amounts of data, as the disciplines in the field of power engineering are subject to clear formulas and laws. To avoid such complexity, it is necessary to study the data many times or to listen to the information given by the science teacher many times. This situation has an impact on the students' full mastery of the lesson topics and the effective conduct of the lessons. To some extent, this problem can be solved using today's modern information technology.

The special science teacher explains the new topic of the lesson and videotapes the part of the lesson with the questions and answers (with the help of a laboratory assistant). Distributes the resulting video file to readers. Students upload this video lesson to their mobile devices or through them to their personal computer.

Students review the video lesson to consolidate their knowledge and receive answers to any questions from the science teacher during the lesson. Video recording of the lessons will allow students to review the topic and reinforce their knowledge. A video archive of specialty lessons is formed by creating a video file of each topic of specialty subjects in such a style. For a video lesson, the science teacher comes with the appropriate preparation for the lesson, and the students also feel responsible and try to be proactive. The result is a quality video lesson, in modern terms, an "offline video lesson".

Finding, using, and delivering resources to users in a short period of time through the use of telephones, telegrams, and audio recordings of communication will have an impact on the content of coursework, the validity of resources and information. In a short period of time, these media outlets are rapidly entering the educational process. A wide range of opportunities has been created for teachers and students to use these educational tools.

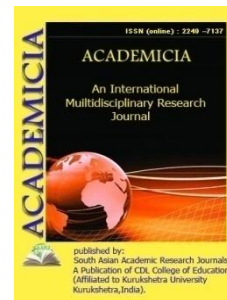
In today's fast-paced world, achieving high results in all areas requires agility in line with the times. The introduction of such speed in the education system will have a positive effect.

Professional education Field-oriented knowledge in the field of power engineering is mainly provided to students in the form of various data. The student learns the information on the topic in the classroom by hearing and seeing it directly from the teacher of the specialty. For this purpose, it is advisable for the student to use the services of social networks on the Internet. In this process, the process of conducting practical training using the Telegram messenger is recommended. A group called science is formed in the academic group and all students and science teachers of the group are accepted as members of this group. Students complete the assignments and post to this group messenger. The science teacher sees the task, marks it, and puts it back in the group. The rest of the group of students directly observes the method and solution of their assignments and corrects the mistakes indicated by the science teacher. In addition, the science teacher can place an assignment in this group and bring it to the students' attention. Subject or science publications can also be distributed through this messenger. The positive result of this experiment is that this proposed method was also used as an experimental test in a small group and a high result was obtained.

Thus, in order to maintain the required level of qualification at all stages of professional activity, there is a need for professional education system electricians to constantly replenish general technical and specialized knowledge in accordance with scientific and technical achievements. Its main qualities are the ability to quickly master this set of specialized knowledge and practical skills, flexibility to constantly changing operating conditions, creativity and professional mobility.

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## PERSONALITY OF KHOJA AKHROR AND HIS FACTOR IN THE SOCIAL-SPIRITUAL LIFE

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### ABSTRACT

*This article describes activity of Khoja Ubaydullah Ahrar (1404-1491), well-known representative of the Naqshbandiyya school of sufizm relying on medieval sources. It analyzes the peace-loving ideas of Khoja Ahrar and its role in spreading feelings of devotion, generosity, mercy, and kindness.*

**KEYWORDS:** Bagistan, Sheikh, Umar Wali, Havand Tahur, Khoja Ahrar, Shash, Tashkent, Sufi, Muslim, Perfect Person, Teacher Of Timurid Princes.

### INTRODUCTION

Many cities in Central Asia have reached prosperity and faced crisis during their history. As it is known, the culture of this land had fallen into decay during the period of Mongol conquest. However, during struggle for freedom against Mongols changes emerged in the religious thought of the people which in turn, caused to the formation of Sufi schools such as Kubrawiyya and Naqshbandiyya.

### Material And Methods

Sufism in Central Asia, is not only a “mystic – ascetic teaching” as some scholars mentioned, but also an influential ideological movement, which responded to the needs of its time and worked as lever for liberation movements. In other words, at that time Islam, particularly Sufi tariqahs were main source in the way of spiritual and ideological unification of Central Asian citizens. A tariqah is a school or order of Sufism, or specifically a concept for the mystical teaching and spiritual practices of such an order with the aim of seeking Haqiqa, which translates as "ultimate truth". A tariqa has a murshid (teacher) who plays the role of leader or spiritual director. The members or followers of a tariqa are known as murid(student).



## Results

One of the main characters in social-cultural, spiritual life of Central Asia was Khodja Ubaydullo Akhror (1404–1490). Khodja Ahror was born in 806 Hijri (on Mart, 1404) on the month of Ramadan in the district of Baghistan, in Shah – Tashkent province. His father Khodja Makhmud and grandfather were educated people. Moreover, they worked in the sphere of agriculture and trade. His mother was daughter of Khoja Dawud, son of Shaeikh Khowand Tokhur[15:Alimova]. Sheikh Khowand Tokhur was a son of Umar Baghistani, a famous sheikh who was honoured by Bakhauddin Naqshband. Khodja Ahror acquired first education in madrasahs (school) of Tashkent. When he was 20, his uncle Khodja Ibrahim led him to Samarkand, where he studied different subjects related to Islam. Khodja Ahror was especially interested in Sufism and this interest took him to Hirat when he was 24, where he met with representatives of Sufism. One of them was a famous Sufi and poet from Tabriz, Sayyid Qosim Anwor (died 1433). Khodja Ahror also met with Bahauddin Umar (died 1453) and Sheikh Zaynuddin Khavafiy (died 1439) and many others [ 3: 43; 4:208].

Khodja Akhror is a remarkable representative of Naqshbandiyya order in Muslim world, who implemented famous slogan of Naqshbandiyya into life “Dil ba yoru, dast ba kor” (The heart to beloved (Allah), and the hand to work).

It can be confessed that, Khodja Akhror is recognized respectfully by many western and eastern scholars. For instance, a famous historian from Afghanistan Abdulhay Khabibi in his article “Tariqat of Jami”, published in 1965 mentioned that “Sa’d Kashgari and Khodja Akhror were great spiritual leaders of their century.

Furthermore, English orientalist Charles Ambrous Stori identifies him as “great wali Khodja Akhror” in his work called “Persian literature”, at the same time Czech scientist Felix Tower said “a saint from Turkistan, famous with name Khodja Akhror, originally sheikh of naqshbandiya Nasiruddin Ubaydulloh ibn Makhmud Shoshiy” [ 8:46].

Various sources on the life of Khodja Akhror give plenty of valuable information and narrations by deeming him as a ‘leader of sufi orders’, ‘saint of saints’, ‘sponsor of the people’. In particular, Fakhriddin Ali ibn Husayn Wa’iz al-Kashi as-Safi (1463-1503) in his “Rashakhat ‘ayn al-hayat” (Drops from life spring) narrates that grandfather of Khodja Akhror Khodja Shakhobiddin Shashi was a peasant and trader[16:Alimova]. Feeling the approach of his death Khodja Shakhobiddin called all his relatives to farewell. At that time, Khodja Akhror was a baby and he was brought to his grandfather wrapped up with sufi *khirq*a (special wearing from rough wool). When Khodja Shakhobiddin saw baby he couldn’t stop his tears, and by putting his hand onto Akhror’s forehead, said: “*This baby will be famous to the world. He will spread shariah, strengthen the tariqah. Governors will obey him. He will show the miracles not shown by previous sheikhs*” [ 2:218,219; 5:43].

## DISCUSSION

As we know, cultural and scientific decrease lasted two centuries during Mongol occupation and finally was ended due to great reformational politics of Amir Temur. Unfortunately, after his death there was a discrepancy between Temurid princes. In such difficult situation Khodja Akhror, spoke for the sake of development of his homeland and always stood by people [7:13,14]. He always taught that it is responsibility of Naqshbandiyya Sufis to care about nation

and call governors for justice: *«In this time there nothing better than going to the rulers and telling them about people who need help. We must deliver the massage of problem-tackling people to the rulers, support them and wholeheartedly help them to deal with challenges. We must give all efforts to stop the injustice and oppression»* [8:76].

During the period of Sultan Abu Said Mirzo and his son Sultan Ahmad Mirzo, Khodja Ubaydullah hold the high position. Amin Ahmad Razi writes about it in his work named “Haft Iqlim”: *“Khodja Nosiruddin Ubaydullah was more superior than all Sheikhs of Turkestan and Maverannahr, because of his position, greatness and abundance of his followers and wealth. He took irshad from Maulana Yaqub Charkhiy and Maulana Nizomuddin Khomush... and rulers and kings of that time were very devoted to him. They hold firmly every saying said by him as a secret pearl. Especially, Mirzo Sulton Abu Said was guided by his advices in all deals of ruling and he was never against his notion. Mirzo Sulton Abu Said walked on his foot when he was with him”* [1: 520].

Authority of Khodja Akhrror reached its peak during the rule of Sultan Abu Sa'id Mirzo and his son Sultan Akhmad Mirzo[11:Alidjanova]. At that time, there were huge territory of lands and wealth in different cities and villages of Mowaraunnahr and Khorasan, which belonged to Khodja Akhrror. With a decree of Abu Sa'id Mirzo the property of Khodja Akhrror imposed taxes to only 1/10<sup>th</sup> part of the benefit, where others were imposed to many other additional taxes. That is why many peasants used to present their properties to Khodja Akhrror and continued to work there in order to lower the taxes[14:Alidjanova].

Khodja Akhrror spent all his wealth for paying extra taxes imposed to the poor people, building mosques, madrassahs and khanakahs (place where live sufis). In particular, it is famous that Khodja Akhrror payed himself 250 000 dinar tax imposed to Tashkent by Umar Sheikh Mirzo and additionally, gave to the tax inspectors 70 000 dinars extra [8:70]. All these gentleness were reasons to see him as a generous and good-hearted person and honour by calling Khojai Akhrror.

Concerning his works, only three tractates of Khodja Akhrror have survived to the present day – “Fakarot ul-orifin” (Parts of orifs words), “Wolidiya” (Devotion to the father), “Hawraiya” (Angels). In addition, some letters of Khodja Akhrror to his contemporaries have remained until today. At this point, it is important to mention that, late orientalist A.Orinbaev with American scientist, professor of New-Jersey university Joe Ann Gross, have translated letters of Khodja Akhrror into English under the name “Letters and murids-followers of Khodja Akhrror” which was published in famous Brill Press of Holland in 2002 [10:Kalandarova].

In his letters, Khodja Akhrror call for all good deeds such as caring about ordinary people and doing the best to help them in tackling their problems[9,12,13:N.Muhamedov]. Once, when Alisher Navai wanted to give up his work at court Khodja Akhrror writes him such letter: *“As I have heard, sometimes you undesired to be overly respectful towards Sultan (governor). My request is that, don't leave the court as long as you can support Muslims, improve situation of poor people and give hope to them. These days, when no one is thinking to help the others, caring about people is the best deed”* [ 4:204,208].

## CONCLUSION

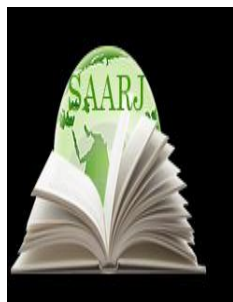
To recapitulate we can say that, mentioning the role of this spiritual leader of the nation, Khodja Akhrror Wali, candidly spent all his power and energy during 25-30 years of his life to unify

people as well as rulers of Central Asia, to prevent chaos. No ruler, mayor, prince could refuse this great man, called “Sheikh of sheikhs”. Because nation respected him excessively. So, we also should esteem our great ancestor.

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## THE PROBLEM OF MOTIVATION AND THE MEANING OF THE CONCEPT "MOTIV"

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### ABSTRACT

*The article discusses the theoretical views of psychologists on the problem of motivation in psychology, the meaning of the concept of "motive". He embodies this or that need in us. As a result, the ability to stimulate human activity and behavior is formed. At first, these objects are only realized, and then they cause a similar need, so that the objects are stimuli of needs, and not of actions and activities. At the same time, he also introduces the concept of a necessary cycle into science. According to him, the need for a cycle is associated with a unit of vital activity that occurs in the body with a lack of energy and substances.*

**KEYWORDS:** *Motivation, Motive, Essence.*

### INTRODUCTION

Psychologists disagree about the meaning of motive. No matter how many differences there are between these views, but under the essence of all views, we can see one thing in common: behind the motive lies a certain psychological phenomenon. That is, scientists with different views on motives interpret this psychological phenomenon in different ways. The characteristics given by psychologists can be viewed in the form of a specific context.

As for the analysis of the motive in the form of a need, in many scientific sources the need is interpreted as a trait that has the power to induce a person to action, to activity. The need motivates a person to be active. According to the great Russian psychologist S.L. Rubinstein,

that an active attitude is hidden at the basis of needs, and it directs a person to realize his potential.

This means that the need explains where a person draws energy for activity [Leontiev AN].

### **The Main Findings and Results**

Based on the definition of needs as stimuli (pathogens), we can observe the following two cases:

- When the subject is in a state of necessary excitement, the body begins to produce and consume energy;
- the stronger the need, the stronger the excitement.

Consequently, it is necessary to increase the power in the case when the existing conditions do not allow satisfying the need, and this leads to a non-target general state of activity of the subject.

It should be noted that, according to D.V. Kolesov, who developed a unique concept for the development of the psyche, the driving force of the psyche is need. Relations with the external environment, in his opinion, are relationships associated with needs. They have different levels of stress, for example - activity and passivity, excitement and inhibition. At the same time, he also introduces the concept of a necessary cycle into science. According to him, the need for a cycle is associated with a unit of vital activity that occurs in the body with a lack of energy and substances. In turn, satisfaction of the need leads to the completion of the demand cycle. According to D. V. Kolesov, satisfaction of a need is the possession and use of an object of need. There are also ways of owning and using the item of need, which depend on the specific conditions associated with satisfying the need.

Psychologists S.L. Rubinstein, K.K. Platonov, L.M. Borisovich, V.A. Ivannikov expressed the following views on the relationship between needs and motives:

- there may be an indirect connection between need and motive;
- the need is the reason for the emergence of the motive;
- the need is part of the motive;
- the need itself is initially a motive.

There are a number of circumstances that do not justify equating the motive with the need, firstly, the need cannot fully explain the reason for a certain action. In other words, one need can be met by many means and ways. Secondly, the need-motive is separated from the ideal goal, and therefore it is difficult to understand why the motive is purposeful. A.N. Leontyev commented on this topic in the following way: "Subjective perceptions, desires and wishes cannot be a motive, because they do not create purposeful activity by themselves. We cannot explain the meaning of activity if we consider it as a motivator for activity. "

Thus, different interpretations of the meaning of the concepts of motive and need by different scientists have also led to the emergence of the aforementioned different ideas. In our opinion, the aforementioned discussions would have been terminated only if a deeper analysis of the linguistic meanings of the concepts of motive and need had been carried out, and if scientists had come to a common solution.



When we analyze the concept of motive in the form of a goal, we mean realizable things. A certain object, subject, actions can also act as a goal.

S.L. Rubinstein considers the goal as the object of satisfying the need. Only when objects become objects of desires, they become the object of the subject's possible actions. In this sense, the idea of A.N. Leont'ev to call a motive an object capable of satisfying a need.

However, he does not deny that the goal can become a motive. In his other work A.N. Leont'ev uses the term "motive" not to express a feeling of need, but to express this need in certain circumstances and conditions. Activities will focus on this objectivity. The perceived (imaginary, mental) object becomes a motive, performing its excitatory function. For example, money or valuables may be the motive for theft.

According to S.L. Manukyan, a certain object and events (objects) generate a need that has a specific objective meaning. If a person meets this object or for some reason comes to life in his imagination, then the content activates the need every time. Therefore, S.L. Manukyan believes that the need does not cause activity, but the object of the need or its image causes activity.

L.I. Bozovic criticizes the idea that objects generate need. In his opinion, S.L. Manukyan does not think about why this or that image appears in a person, inspiring needs. Therefore, it is important to study the reason for the appearance of objects in the human mind.

L.I. Bozovic admits: "... when objects have a certain meaning for a person, and this meaning is reflected in the human mind, they cause a need." However, the author does not explain why a particular object became important at a particular time, but only that the object becomes significant in a particular situation when there is some need for it. Because a person has the ability to satisfy such a need. The appearance of the desired object increases the strength of the need, determines its specific direction. But this object also may not have a driving force in relation to the activity.

In this regard, the following opinion of I. M. Sechenov can be cited: "The needs of life give rise to desires, and they now follow actions, desire becomes such a motive or goal, an action becomes a means to an end ... A desire or impulse that becomes a motive would be meaningless. "

L.I. Bozovic argues that it is impossible to define the purposeful movement of a person by a need, but only by a call to unorganized activity (with the exception of instinctive biological needs associated with innate mechanisms of satisfaction). He embodies this or that need in us. As a result, the ability to stimulate human activity and behavior is formed. At first, these objects are only realized, and then they cause a similar need, so that the objects are stimuli of needs, and not of actions and activities. Under the influence of the object, human activity cannot occur without the revival of need.

Thus, a stimulus (causative agent) indirectly causes an action, that is, it causes through a motive; if a stimulus is the causative agent of the motive, and the stimulus for action is an internally perceived stimulus. Many psychologists call this a motive. Here the assertion of H. Hekause is appropriate: motivation, as he writes, is to induce a person to act with the help of a certain motive (note, this is called not an incentive, but a motive).

The opinion of V.I. Kovalev on this matter. He also evaluates motive as a conscious movement. Excitement is viewed as a separate independent psychological phenomenon. In this sense, he separates motive from attitudes, goals, relationships, situations, inclinations, desires. However, a number of psychologists, including A.A. Faizullaev (1985, 1987, 1989), do not add a motive to arousal and do not even separate arousal from a motive.

We can express the above ideas in the following diagram. Motive - drive - action (H. Heckhausen); excitement (motive) - action (V. I. Kovalev); excitement - motive - action (A.A. Fayzullaev).

While our psychologists emphasize the motivating power of motive, they have of course also investigated where this motivating power came from. Their views on this issue also differed. Some psychologists believe that arousal is called needs, while others believe that it arises from an object that satisfies a need.

Thus, the interpretation of arousal as a motive also has its own characteristics and plays a certain positive role in explaining an important psychological phenomenon called "motivation".

The interpretation of the motive in the form of a stable personality quality can be found mainly in the works of Western psychologists.

They point to stable and changeable factors of motivation (M. Madsen), stable and functional changes (H. Murray), personal and situational determinants (J. Atkinson) as criteria for distinguishing between the concepts of motivation and motivation. According to the authors, the stable qualities of people determine and ensure activity and behavior at the level of external stimuli. A number of Russian scientists (K.K. Platonov, V.S. Merlin, M.Sh. Magomed-Eminov) suggest that stable human qualities can be involved as a motive.

## CONCLUSION

However, it should be noted that having a personality trait in the form of a motive does not solve the problem. In particular, many personality traits are really necessary. For example, the desire for activity, the desire for satisfaction, the need for new experiences, the need for creativity, and so on. At the same time, stable human traits, such as interests, inclinations, ideals, attitudes and worldview, actually influence a person's decision-making, and in this sense, they are close to motives.

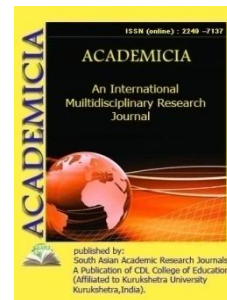
The position of the Uzbek psychologist P.I. Ivanov regarding the motive in a sense corresponds to the views of K. Obukhovsky. According to P.I. Ivanov, motive is a psychological factor that explains why a person chooses this particular goal and not another, and why he did so.

Thus, we briefly examined the interpretation of the above motive as a formulation. In a sense, this interpretation is characterized by the fact that it reflects a specific aspect of an important concept called "motive."

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## INVESTIGATING THE LEARNING DIFFICULTIES OF PHYSICAL SCIENCE AT SECONDARY SCHOOL LEVEL

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### ABSTRACT

*This study explored some of the difficulties students face when learning physical science in the secondary school. The study was prompted by the students' poor performance in their examinations. The main purpose of the study therefore, was to identify some of the difficulties the students face when studying physical science and also look at the practices that would enhance their study of the subject. The study was also aimed at finding out whether the Science school had adequate facilities and equipment that would help to promote effective learning of the subject. Another target was finding out whether had any impact on the study of electro magnetism and carbon compounds. Not only that but also the study sought to identify whether the use of practical activities by students to learn physical science assisted them to understand concepts which were complex.*

**KEYWORDS:** Learning, Secondary school, Physical Science, Difficulties.

### INTRODUCTION:

Science always plays a tremendous role in human life. It changes the entire existence of human beings in such important aspects as health, communication, transportation, and power. To visualise the effect of scientific development just look around in a modern room. For example, the curtain and carpets tinted with dyes, which are not natural products the chemists have prepared these from coal tar. From the same coal tar, fountain pen ink is produced. The artificial silk fabric of sofa covers has been made from wood pulp. The electric light, nickel-plated door

fittings, etc. are all feats (important achievements) of science. The modern world itself is made and Kothari commission has remarked, “Science is universal so can be its benefits. Its material benefits are immense and far-reaching - industrialization of agriculture and release of nuclear energy are two examples - but even more profound is its contribution to culture” (Report of the Education Commission 1964-66, 1966).

### THE NATURE OF SCIENCE

In the last three decades some attempts have been made to understand the nature of science. *Joseph J. Schwab (1964) and Bruner (1962)* have explained the nature of science in technical terms, which is based on the idea of the structure of knowledge or structure of disciplines. According to this idea, the nature of science comprises.

1. Substantive structure of science and
2. Syntactical structure of science.

The Substantiate structure of science represents the major conceptual schemes which constitute the basic knowledge used in science. The substantive structure of science contains different classes of statements, such as definitions, knowledge statements, etc., we may call them ‘key concepts’ or ‘major ideas’. Examples of such major concepts have been given in all major science curricular projects developed in the USA, namely, Physical Science Study Committee (PSSC), CHEM Study, etc.,

The syntactical structure of science is concerned with the so-called processes of scientific inquiry, means by which scientific knowledge is acquired and verified. These processes can be further divided into simple skills so that pupils can practice them without any difficulty. Some of the processes of science are as follows.

Observation, measurement, classification, formulating a hypothesis, experimenting etc., At this stage it is easy to infer that the nature of science has two aspects, that is, concepts of science that build the substantiate structure of science and the processes of science which build the syntactical structure. Both are equally important.

Recently a third dimension to the nature of science has been added which has been recognized by workers. This is known as the social aspect of science.

Science has been taken as a human activity which influences society and is being influenced by society. The applications of science to society and its impact on human lives are first as important as learning content and skills. Some science educators have strongly recommended a new emphasis on science teaching that includes social, moral-ethical aspects of science. In other words, many of the science technology is based on social issues that have moral, ethical and social relevance, such examples are as follows.

Pollution, Acid rain, Nuclear Energy, Bio-Engineering, etc.

### 1.2.3 CHARACTERISTICS OF SCIENCE

Besides the nature of science, explained in the previous paragraphs, it has specialized characteristics which we do not find in other disciplines Showalter and others have described the characteristics of science in the following words.

1. Science grows through the processes of science. Scientific knowledge grows through processes of science or inquiry approach or methodologies of science. These processes of science are from simple to complex. Similarly, inquiry approaches are also from simple i.e., stable inquiry to difficult, that is fluid inquiry.
2. Scientific knowledge is tentative. It is subject to change. In other words, science is uncertain and its knowledge is consistently changing in the light of new evidence. We can say that “if science is knowledge, it is dynamic knowledge”.
3. Scientific knowledge is unique as it differs from other areas of knowledge. It is distinguished from other realms under the nature of knowledge and its procedure in generating new knowledge.
4. Scientific knowledge is humanistic because it is a product of human effort to find out the unknown things of nature. All this knowledge is related to human beings and the scientific concepts are the products of culture.
5. Science has its values of objectivity, rationality, neutrality and humanity. Science is one of the approaches truly based on philosophical, sociological, psychological and moral dimensions. It depends on those values which are common to all human kind-freedom, liberation, happiness, speculation, and imagination

#### **1.2.4 SCOPE OF SCIENCE:**

Science is a body of knowledge obtained by methods based upon observation. Observation is authoritative and that it is only through the senses of man that observations can be made. Thus, anything outside the limits of man's senses is outside the limits of science. In other words, science deals with the natural world, the realm of nature and matter and energy.

Science employs several instruments to extend man's senses to the extremely minute to the very vast, to the short-time duration or long-time duration, to the dilute or the concentrated and so forth which does not alter the conclusion that science is limited to that which is observable. Thus, as in any other discipline contemporary experimental techniques set up some practical limitations but these are not to be confused with the intrinsic limitations inherent in the very nature of science.

The practice of science is a human activity. Therefore such concepts as beauty and love for example, are very real to scientists, as they are to all human beings, even though strictly scientific interpretations and understandings of such concepts are impossible within the limits of science.

Today the discipline of science and social science are drawing into each other. Behavioural zoologists study the sociology and psychology of animals. Archaeologists derive new insights from the rapid advances in chemical and physical analysis. Biology draws on chemistry, physics and geology. Science has brought about a change in such important aspects as health, communication, transportations, etc.

#### **Objectives of the Study**

The objectives of the study are to:

- i. Identify students' problems in learning physical science.



- ii. Use activity and practical/laboratory methods of teaching physical science effectively.
- iii. Use the technological tool, in teaching electro magnetism and carbon compounds.
- iv. Determine whether the facilities available for teaching and learning physical science are adequate and in good condition.

### **Significance of the Study**

The outcome of the study will be very important in the teaching and learning of physical science in the Science secondary school. First of all, it will identify the problems associated with lack of understanding the pre-requisite concepts of students which make it difficult for them to study physical science at secondary school levels. It will also assist teachers and students to take appropriate steps that will enable them teach and learn physical science effectively. The study will also inform the teachers to use the technological, visualizing tool to make teaching and learning of physical science easy.

### **Limitations**

The Science secondary school level were far from each other and this made accessibility difficult. The resources and time frame for the study conducted could not permit the researcher to involve all the science at secondary school.

### **Delimitations**

The researcher, due to insufficient time, could not use other parameters to determine their low grades in physical science but depended solely on results from their examinations. Also, only twenty-five secondary school were involved in the research and the results of the study may not be considered as the findings from all the 25 secondary school.

## **METHODOLOGY**

**Population:** A total of one-hundred and forty-nine (149) student's secondary school level formed the population for the study. Out of this, a total number of one-hundred (100) secondary school students made up of thirty (30) girls and seventy (70) boys students made up of were sampled.

**Sample:** A sample is a small proportion of a population selected for observation and analysis for a particular study. The present study is confined to Bhadrachalam district in Telangana State. Hence some schools and working teachers in secondary schools are to be selected for the study undertaken. The stratified random sampling technique is adopted for the study. Some mandals are randomly selected from each Revenue District. Secondary schools of selected mandals are taken for the study.

### **Standardization of Tools:**

Standardization is a common procedure to avoid chance the chance and other factors. A weak tool cannot evaluate what the researcher expects to evaluate. Hence exposing to systematic statistical procedures and establishing reliability and validity of the present tool has worked out with great cautions.

### **Reliability and Validity of the Tools:**

The value of any psychological and educational measuring instrument depends upon the reliability and validity of that instrument. If the reliability and validity of that instrument. If the

reliability and validity conditions were not satisfactory the device will be misleading and useless. In the construction of an instrument these two measures viz., reliability and validity have to be satisfied. Hence the question of establishing the reliability and validity of the questionnaire constructed in the study was given due importance.

### **3.9.1 Reliability:**

Reliability is the consistency of a test yielding the same results in measuring whatever it does measure. A test is reliable if it measures efficiently what it proposes to measure or what it does measure. A reliable test is a trustworthy test. It is accurate. It is consistent. If the test measures exactly in the manner each time. It is administered, if the factors that affect the test scores affect them to the same extent every time the test is given, the test is said to be high in reliability.

The reliability of a test depends upon the consistency, which it gauges the abilities of those to whom the test has been applied.

According to Garrett [Garrett, (1981), P-337] “A test score is called reliable when we have reasons for believing the score to be stable and trustworthy”.

According to Anastasi (Methods of Teaching physical science , 2005, P-232) “The reliability of a test refers to the consistency of score obtained by the same individuals on different occasions or with different sets of equivalent items”.

According to Guilford (Guilford 1950) “The concept of reliability underlines error of measurement of single score whereby the range of fluctuation likely to occur in a single individual score as a result of irrelevant chance factors can be predicted.

The following are the methods of determining test reliability.

The test-retest method.

The split-half method.

The method of rational equivalence.

The alternate or parallel form method.

For finding reliability of the test scores the investigator adopted the split-half method by using Spearman-Brown prophecy formula for estimating reliability from two comparable halves of the test.

### **Validity:**

A tool used for selecting data must produce information that is not only relevant but also free from systematic errors. That is, it must produce valid information, i.e., the information that is required. It includes-value, truthfulness and worth wholeness. The validity of a test depends upon the efficiency with which it measures what it attempts to measure. Unless a test is valid, it serves no useful function. A tool which is useful in making one decision in a particular research situation, may have no use at all for different situations.

### **Data Collection Procedure**

Research questions were answered through separate questionnaires for students. Each questionnaire had items on the following: Biographic data, learning difficulties faced by physical

science students, chemical representation using technology, students' alternative conceptions in physical science, acquisition of students' practical skills, organization of physical science practical activities, availability of facilities and communication problems arising from language.

The recovery rate was 100% in both cases. This was because the questionnaires were handed over personally by the researcher and collected after students had finished responding to them the same day.

### Data Analysis Technique

A descriptive analysis using simple percentages was used to address the five (4) research questions. Data were analyzed by making use of the research questions. This was done systematically by selecting research questions using the responses from the questionnaires. This continued until all the research questions and responses for both questionnaires were exhaustively dealt with.

Each questionnaire was given a code name or number to facilitate easy identification. For example students' questions were coded from  $S_1 - S_{100}$ . The questionnaires were subjected to quantitative analysis using SPSS. The information obtained from the responses was put into the package for easy analysis.

### DATA PRESENTATION AND ANALYSIS

In this part, responses to students' questionnaire were presented followed by the responses given by their tutors. The responses are dealt with in different sections based on the five research questions.

#### Responses of Students

Responses of the students are presented based on the items in the questionnaire under the five research questions.

#### What problems do students encounter in learning physical science?

The above question was designed to find out problems students encounter in learning physical science and if possible give suggestions to address the problems.

Eight items were grouped to enable the above research question to be answered. Each item had four options to be chosen from.

The first item under this question demanded students to indicate whether physical science is perceived to be difficult. The responses are represented in Table 5 below.

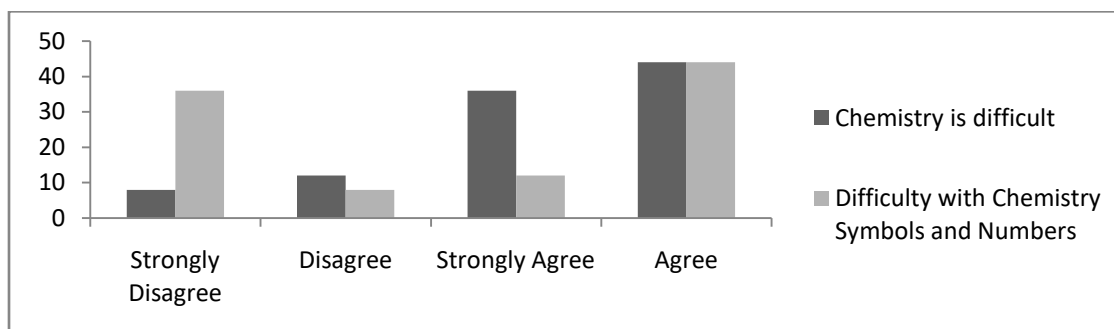
**TABLE 1. STUDENTS' PERCEPTION OF PHYSICAL SCIENCE AS A DIFFICULT SUBJECT**

Option	Frequency	Percentage (%)
Strongly Disagree	8	8.0
Disagree	12	12.0
Strongly Agree	36	36.0
Agree	44	44.0
Total	100	100

**Source: Field Data**

From Table 5, Majority of the students representing 44% agreed physical science to be a difficult subject. Also, 36% of the students strongly agreed to the statement. It is clear from the table that 20% disagreed that student's perceived physical science to be a difficult subject. It shows from the table that majority of the students representing 80% perceived physical science to be difficult. The perception of the majority of the students that physical science is difficult may have negatively affected the way the subject was studied, since their interest may not be there.

**Figure 1. View of Students who see physical science as well as physical science y Symbols and numbers as Difficult**



#### How can students be helped to use practical activities to learn physical science?

The second research question was designed to find out whether the use of practical activities in the laboratory would help students to study and understand physical science .

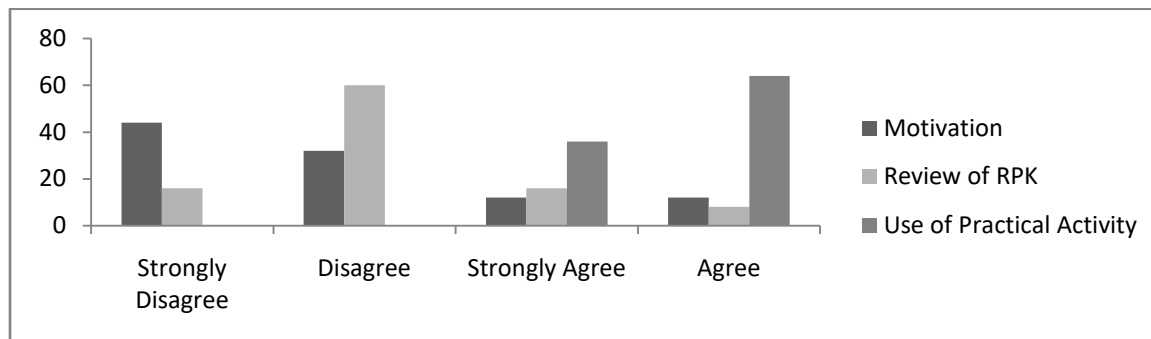
Four different test items were grouped to answer this research question. In item 1, it was demanded from respondents to indicate whether physical science concepts could easily be understood when the activity method is used to teach it. The responses are presented in Table 2.

**TABLE 2. UNDERSTANDING OF PHYSICAL SCIENCE CONCEPT BY THE USE OF PRACTICAL ACTIVITIES**

Option	Frequency	Percentage (%)
Strongly Disagree	0	0.0
Disagree	0	0.0
Strongly Agree	36	36.0
Agree	64	64.0
Total	100	100.0

**Source: Field Data**

From Table 2, 64% of the responses agree that Chemistry concepts can easily be understood when practical activities are used to teach them. Also, 36% of the students strongly agree to the statement. It is clear from the table that all the students (100%) agree that physical science concepts can easily be understood if practical activities are used to teach it.

**Figure 2. Pictorial View of Ways at Improving Students' Interest in physical science**

### **What technological tools can be used to support learning electro magnetism and carbon compound structures of compound?**

This research question was meant to find out what technological tools could be used by the students and how the use of these tools could support them in the study of electro magnetism and carbon compounds. Three test items were grouped to answer this research question.

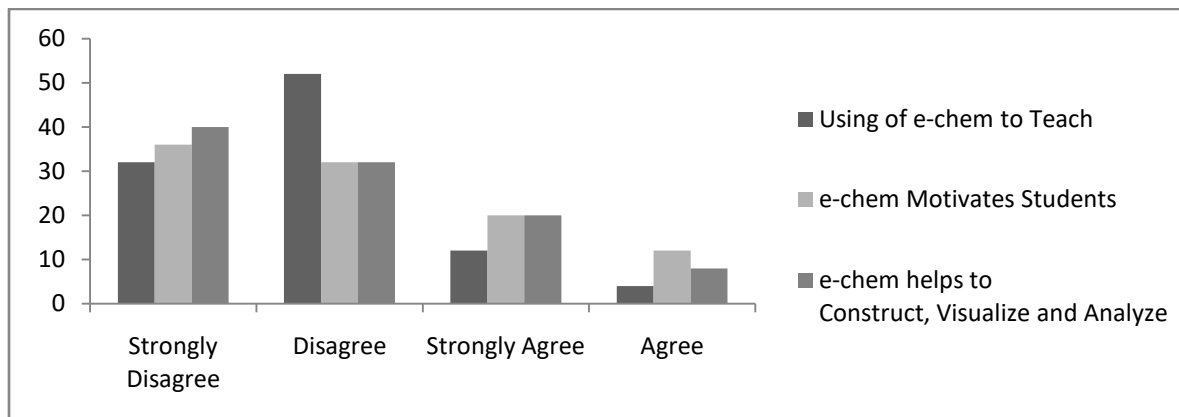
In item 1, students were required to indicate whether their teachers used physical science when teaching electro magnetism and carbon compounds. The responses to this item are presented in Table 3.

**TABLE 3. THE USE OF PHYSICAL SCIENCE BY TUTORS IN TEACHING ELECTRO MAGNETISM AND CARBON COMPOUNDS**

Option	Frequency	Percentage (%)
Strongly Disagree	32	32.0
Disagree	52	52.0
Strongly Agree	12	12.0
Agree	4	4.0
Total	100	100.0

#### **Source: Field Data**

From Table 3, it could be seen that 84% of the students agreed to the fact that teachers did not use physical science when teaching electro magnetism and carbon compounds while 16% agreed that their teachers used physical science when electro magnetism and carbon compounds. It is clear from the table that majority of the tutors did not use the technological tools physical science.



### What facilities are available for the effective teaching and learning of physical science?

The fourth research question was designed to find out the facilities that were available for effective teaching and learning of physical science in the secondary school. This was to enable the researcher to find out whether or not the facilities available had any influence on studying physical science.

Five items were selected to enable the above research question to be answered.

The first item under this research question was to find out how often students had access to physical science laboratory to perform practical's. Responses given are presented in Table 4.

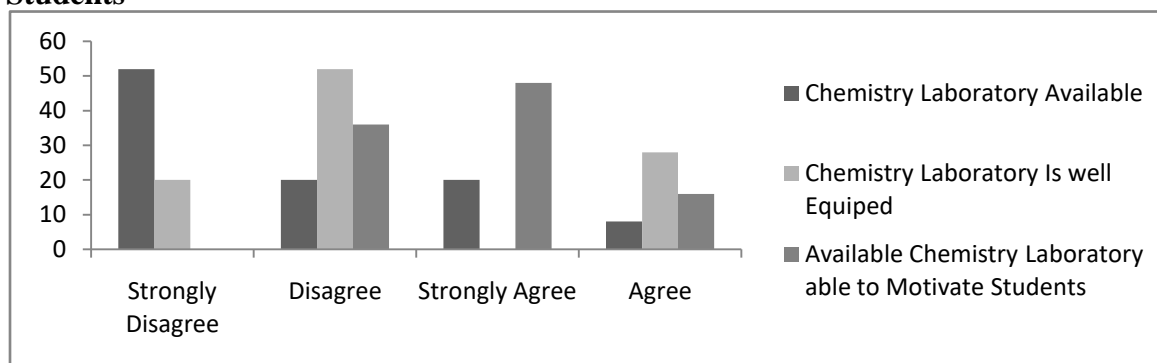
**TABLE 4. STUDENTS OFTEN HAVE ENOUGH ACCESS TO CHEMISTRY LABORATORY**

Option	Frequency	Percentage (%)
Strongly Disagree	52	52.0
Disagree	20	20.0
Strongly Agree	20	20.0
Agree	8	8.0
Total	100	100.0

#### Source: Field Data

From table 4, it could be observed that, 72% of the students disagreed they often had access to their physical science laboratory. However, 28% of the students agreed that they often had access to their physical science laboratory. It became obvious that majority of the students representing 72% did not have access to their physical science laboratory. It implies that majority of the students may not be performing enough practical activities in the laboratory and this can adversely affect their performance in physical science.



**Figure 4. Availability and Condition of physical science Laboratory as well as its Effect on Students**

### Summary of Key Findings

Summary of the findings from the study are presented based on the five research questions.

#### These findings showed that:

Students studying Science in the Colleges of Education really perceived Chemistry to be difficult as a result of the way they studied the subject. Students learnt in abstract and memorized concepts without understanding them.

It was also found out that students did not understand meaning of some Chemistry terms used in teaching. There was only little motivation coming from their tutors.

However, it was found out that students' prior knowledge, when considered during teaching and learning, coupled with lots of practical activities would enhance the way Chemistry is studied.

Students performing practical activities enabled them to develop a lot of process skills like: observation, manipulative and predictive skills that were helpful to them. Moreover, their teachers discussed practical activities with them before they were carried out.

It was found out that majority of the students were not able to translate between symbolic and carbon compounds using physical science terms. This was due to their teachers not being familiar with the use of physical science. However, the use of physical science by the students enabled them electro magnetism and carbon compound.

Lack of adequate facilities like physical science laboratories and equipment in some secondary school made the studying of physical science to be difficult though many practical activities were conducted by their teachers. This implies that students would only acquire some process skills while in secondary school. This will affect their performance in practical lessons with their pupils after completing college.

Students, generally, were not happy about the way some challenging topics like mole concept and chemical bonding were taught. However, tutors were putting lots of teaching strategies in place to enable them overcome those learning difficulties.

### CONCLUSIONS

Based on the findings made in this study, the following general conclusions are made:

1. Physical science must be used by all students to enhance the teaching and learning of electro magnetism and carbon compounds.
2. Both tutors and students were faced with inadequate facilities that often impeded academic work in the secondary school.

Some of the constrains indicated include; lack of laboratories, apparatus and reagents and these put undue pressure on both students and teachers. Hence, it could further be concluded that though the training of physical science teachers for basic schools has started in the designated Secondary school, much needs to be done to improve the quality of training of teachers.

### **Recommendations**

The recommendations to this study are presented based on the findings from the study and research questions used. It is recommended that:

Students selected to offer elective science and for that physical science should be students who offered elective science in the secondary School.

Students with good grades should be selected to undertake the program.

Government should, as a matter of urgency, complete all the building projects of the various science laboratories and stock them well with equipment to enable practical activities be carried out in a friendly environment. This should be done in order to equip the teacher trainees with those skills that would enable them to fully grasp the skills involved to help them practice it after training.

The technological tool, physics and chemistry should be used by chemistry tutors to enable students understand the formation of compounds through chemical bonding and, also, to allow their students to construct, visualize and carbon compounds.

Finally, tutors should not only impart knowledge but rather serve more as facilitators of activities to enable trainees come out with their own findings.

### **Implication for Education**

Since physical science teacher education forms one of the top priorities in the development of human resource base of this nation, the major stake holders in education such as the Government of Ghana, tutors, and students would be awakened to the challenges identified in this study. Physical science would be taught in a more practical way than emphasizing the theoretical aspect. Development of practical skills among students would be intensified in secondary school to make teaching and learning of physical Science at the basic school level more practicable.

The use of physical science should be established in the secondary school using the state of the art science and computer laboratory and other technological tools.

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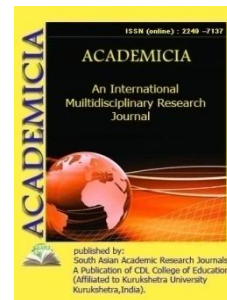
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## THE IMPORTANCE OF USING MODERN INNOVATIVE SOUND RECORDING TECHNOLOGIES

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### ABSTRACT

*The article presents the role of modern innovative technologies in art, as well as their role and significance in the development of industries today. It contains the necessary ideas and comments on the positive impact on the future of our national cinema, which is widely used in world practice. In the article you will gain insight into aspects that can be modeled on the experience of countries around the world in the use of modern innovative recording technologies. Of course, for this, the sound director must first compose the sound score. He also implements the sound score in consultation with the film director. The difference between a movie and a TV is that you can record the sound in the movie and then change it in the studio. Thus, in the field of culture, it is possible to distinguish users of the following modern recording technologies: library archives of state, public, research and non-profit institutions and organizations in the field of culture, art, museums, music, art news (press), encyclopedias, theater, cinema, architecture and others.*

**KEYWORDS:** Digital, Global, Innovative, Quality, High, Man-Made, Technology, Art, Modern, Past, Efficiency, Visual, Multimedia, Sound, Directing, Operator, Skill.

### INTRODUCTION

Nowadays, the growing competition between all industries in the world requires enterprises to organize innovative activities based on a high level of intellectual potential and efficient technologies. Therefore, when addressing issues related to innovation, it is important to focus on the application of scientific achievements in the production process, along with the creativity of innovation. To do this, it is necessary to improve innovative cooperation between enterprises and

research institutions engaged in innovative activities in the country, to further improve their material base, as well as to provide comprehensive support, the formation of an effective mechanism for introducing innovations into the production process. At the present stage of the development of art and culture in Uzbekistan, the use of innovative digital technologies is becoming increasingly important. The importance of the influence of innovation on the functioning of individual industries and the entire culture has been studied and studied by representatives of domestic and foreign industries.

As with all fields of art, the sound engineer has his own requirements and responsibilities. Correct solution of these tasks plays a big role in revealing the content and essence of the work. The sound engineer must decide which sound genre the work belongs to before deciding on the sound solution of the work, and choose the sound solution taking into account the requirements and needs of this genre. Sound recording appeared before cinema, and the attempt to synchronize image and sound appeared at the same time as the creation of the film. Thomas Edison's co-author, William Dixon, said that back in 1889 he invented a device that combines sound and image - the "kinetophonograph." But there is no evidence to support his claim. On top of that, Edison, who until the early twentieth century considered the phonograph to be his most important invention, continued his efforts to synchronize the kinoscope with the phonograph, but when he failed, he lost interest in the work.

In the early days of the development of cinematography in many countries, there were attempts to create a sound film. This was hampered by two main problems: the first was the synchronization of the picture and sound, and the second was that the sound was not loud enough. While the first problem was solved by recording sound and image on one device, the second was not easy to solve. Because a device that amplifies electrical vibrations in the sound range had not yet been invented. This happened in the middle of 1910. But by this time the language of cinema had developed sufficiently, and the lack of sound was not a shortcoming, and interest in it had waned.

Although the patent for the cinema sound system that revolutionized cinema history was patented in 1919, it wasn't until the mid-1920s that film companies, fearing rising production and rental prices, decided to "talk" about cinema. The soundtrack appeared with the live speech of the character on the screen. His birthday is October 6, 1927, the day the film "Jazz Singer" appeared on the screen. The first sound film in the history of Uzbek cinema was "Oath" (directed by Usoltsev), shot in 1937. The film also addresses the issues of sound solutions in the films "Azamat" and "Asal". Masalsky and the young talent Karimjon Buribaev decided as a voice operator. In general, the Uzbek sound cinematography has its own signature, mainly experienced sound operators working in "Uzbekfilm" - G. Senchilo, A. Kudryashov, E. Shatsky, N. Shodiev cannot be imagined without creativity. Their creative research and achievements have made a worthy contribution to the development of this art.

### **The Main Findings and Results**

Let's talk about the history of the introduction of modern innovative recording technologies. In controlling a modern sound director, the sound director will need to be able to consciously use the technical equipment available to him to control this dynamic range. Of course, for this, the sound director must first compose the sound score. He also implements the sound score in consultation with the film director. The difference between a movie and a TV is that you can

record the sound in the movie and then change it in the studio. In TV or theater halls, the sound director must not make a mistake.

In film sound directing, the goal is achieved through the effective use of modern sound recording technologies today. The task of sound directors is to deliver high-quality sound and musical works to the general public, recorded with the help of various district techniques, created as a result of the development of modern technologies. To do this, sound directing professionals must have knowledge of modern technology. The use of modern innovative technologies in sound directing will require knowledge and skills, experience in creating musical interactions for musical works, films.

Today, the task of sound engineers is to convey to the general public high-quality sound and musical works recorded using various regional techniques created as a result of the development of modern technologies. To do this, sound directing professionals must have knowledge of modern technology. As a rule, the microphone has the maximum sensitivity in the direction, in the perpendicular plane of the diaphragm, that is, in the direction of the arrow. Now let's take a look at the capabilities of a microphone, one of the modern voice recording technologies. Microphones differ from each other depending on the change in sensitivity to sound passing from the corner to the microphone axis. The relationship between the relative sensitivity of microphones between the direction of sound from the corner and the direction of the arrow is described by a polar description or a more general term - a directional diagram of the microphone[1. 2018].

The structure of a modern innovative dynamic microphone is the same as that of a dynamic sound amplifier. Therefore, the amplifier is used instead of a microphone in radios, communication devices (because it takes up less space than quality). The diaphragm of a dynamic microphone is connected to a coil located around a magnet. Longitudinal oscillations of incoming air move the diaphragm towards the coil. This creates an alternating voltage at the end of the coil. In terms of the mechano-acoustic method, the microphone receiver is divided into pressure and receiver gradient davlenie. In receiver pressure microphones, sound waves act on the front (frontal) side of a single diaphragm. The gradient pressure of the receiver acts in two directions on the microphones. The difference between these is in their orientation.

One of the following modern innovative recording methods is the remote control of the mixer. Almost all mixers rely on a fundamental channel / bus structure, but the combination of the various components of this structure is done in different ways. The more channels, the more inputs to connect signal sources. Unlike a normal two-tire mixer, the additional tires allow the signals to be grouped in 4, 8 and more lane configurations. Additional tires are needed to generate volume sound and a multi-lane recording signal.

Here we share our views on digitization, one of the important aspects of modern innovative recording technologies. Digitization is the conversion of an analog signal into a digital signal format. Digitizers deal with the conversion of analog audio to digital. Such devices come as separate - separate external devices and in the type of devices that can be installed inside the computer, all computers have their own integrated sound card, these devices are called audio cards or sound cards.

We also provide feedback on the role and importance of the Nuendo program, which was instrumental in the pre-modern era of innovative recording technology. Nuendo is a toolkit for



musicians, recording engineers, post-production editors and sound directors. In this set of tools you will find tools for recording, editing, mixing and publishing audio and MIDI information, as well as tools for converting MIDI to printed notes. In 1984, Steinberg created his first MIDI sequencer, which became as popular in 1989 as the Cubase. This tool is designed to help musicians record their performances on a MIDI-sequencer. Steinberg was one of the first companies to develop an integrated system that could record digital audio as well as MIDI.

The use of modern innovative voice recording technologies increases the attractiveness as a result of the use of audio streams, which are digital sound files, digital sound arrays, sets of music notes, audio data sets and other types of digital sound. The use of sound recording technologies in all educational institutions, whether in cinema or theater, makes it easier for people to receive information, because these tools are invaluable in understanding information through sound from techniques and technologies that have a convenient form of reception.

Modern innovative recording technologies and equipment include various interfaces, both input interface microphone, special processors that convert external data) and output interfaces (displays, sound sources).

Art as an important component of spiritual culture has accompanied it since the emergence of humanity. And today it does not lose its importance, on the contrary, with the development of modern innovative recording technologies, which are an integral element of the XXI century, a step has been taken in this area. Art is one of the forms of social consciousness, the most important component of spiritual culture; a peculiar type of spiritual development, the knowledge of reality, all the riches of its manifestation, are in some way connected with man. At the end of the 20th century, a new artistic form emerged at the intersection of the above fields - the computer, which showed the enormous potential of the computer-assisted sound.

The importance of using modern voice recording technology with a computer device is very high. Computer music using voice recording technology is very popular today. Let's describe computer music here. Computer music is a field of musical and technical activity in which musical works are created using computers on the basis of special programs. Computer music has a number of important advantages: high-quality reproduction of sounds - stereo and surround sound, the ability to record your own music on a computer, and the use of editors to record music. One of the pioneers in the field of computer music creation is Bernard Parmegiani, who won the Golden Nick for his song "Utri temps" ("At the moment") at the 1993 Ars Electronica Festival, linking the present and the future. The interactive operation of a computer is an artistic form that allows the viewer (user) to participate almost equally with the author in creating the work. This is not just an indoor space that can be observed, but an environment that allows for active intervention. Performance is a certain set of images, sounds, words; it is the art world in a computer network where the user can participate in creating, modifying it. Involving the user in contact with the work reduces the role of the artist and removes some of the responsibility from him; the work remains infinitely mobile, the front viewer is able to "create".

Part of network art often doesn't work: such a web page is a work of art, a combination of visual images, animation, text, graphics, a variety of applications and programs designed to reflect the author's intent, i.e. a very different nature - from storytelling to storytelling. Showing a "movie," a "broken" page, and so on before playing with the audience, Animation, text, graphics, a variety of programs and coordinated activities designed to reflect the author's intent, which can vary -

from “movie” to play with the audience, showing a “broken” page, and so on. One of the key features of networking art is that it focuses on communication rather than representation that is the aim of the artist is not to force his views, his personal position, but to engage in communication, communication, creative dialogue with the audience. Each participant’s contribution is not a product, but an element of a common communication area that can be used and modified by anyone who finds themselves in a communication network. Another distinctive feature of it is that it declares freedom from government orders, from command. Other features of the exact art that call for the non-disclosure of the principle of “performance” of a work are its unexpectedness, attractiveness, and absurdity.

The use of modern innovative recording technologies has a number of major resources that cover many areas of art and culture. Each of them is unique, each with its own audience. But it also has its pros and cons. On the one hand, amateur web creations create an information interaction that prevents the user from finding high-quality information and navigating through various network projects. Sites are very different in terms of technology and content. On the other hand, many cultural objects have in-depth knowledge in terms of relevance, importance, novelty and diversity of ideas.

Thus, in the field of culture, it is possible to distinguish users of the following modern recording technologies: library archives of state, public, research and non-profit institutions and organizations in the field of culture, art, museums, music, art news (press), encyclopedias, theater, cinema, architecture and others. Summarizing the above, we conclude that artistic multimedia is a unique type of artistic creation using new tools, a digital aggregation of ideas that exist in different art forms, and a “technological revolution” of activity over thousands of years. In addition, multimedia technologies are giving rise to new forms of artistic creation.

## CONCLUSION

To sum up, today’s innovative innovative recording technologies are firmly entrenched in many areas of activity. Many programmers, screenwriters, designers are working on more and more new projects. We can highlight the possibilities and areas of application of modern recording technologies. The main purposes of using products created in modern innovative recording technologies (CD-ROM) are:

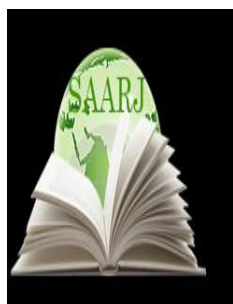
- Popularity and entertainment (CDs are used as a home library for art or literature).
- Scientific and educational or teaching (used as a study guide).
- Scientific research - in museums, archives, etc. (one of the most advanced media and used as a “data warehouse”).

In view of the above, if we in the industry take full advantage of these challenges and opportunities, there is no doubt that the world will recognize the achievement.

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## THE ROLE OF INFORMATION AND COMMUNICATION MEDIA IN THE TEACHING OF SOUND DIRECTING SKILLS

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### ABSTRACT

*This article discusses the role of information and communication technologies in the teaching of sound directing skills and the need to use them in the development of the education system. It contains the necessary views and comments on the current role of information and communication technologies in voice directing, which is widely used in world practice. The article also details the key aspects of information technology in the arts and culture of the world.*

**KEYWORDS:** Skill, Information, Communication, World, Media, Culture, Art, Skill, Future, Visual, Multimedia, Sound, Directing, Operator, Skill.

### INTRODUCTION

At the end of the twentieth century, mankind faced a number of problems that are directly related to significant changes in the field of information telecommunications, in particular, with the rapid development of information technology. New means of information and communication began to penetrate into various spheres of education and production. The development of the global computer network Internet has led to the discovery of new directions for improving the education system around the world. First, a radical change in the technical equipment of educational institutions, wide access to secular information resources have led to the need to use new forms and methods of teaching.

Teaching modern information and communication technologies has led to the creation of a new form of education - distance learning, in addition to methods of teaching sound engineering skills.

In the field of sound directing skills, the learner and the teacher are in constant communication with each other through specially created training courses, forms of control, electronic communication and other technologies of the Internet, separated from each other in space. Teaching the science of sound directing skills based on the use of information and communication technology allows you to go out into the world.

### **The Main Findings and Results**

In the process of teaching sound engineering skills, the student learns independent study materials interactively, undergoes supervision, supervises under the direct supervision of the teacher and interacts with other students of the “vertical learning group” in the group.

Information and communication technologies are used. For example, while traditional print-based teaching aids (textbooks, manuals) are based on introducing students to new material, interactive audio and video conferencing is designed to communicate over a period of time, establishing direct and feedback emails, i.e. sending and receiving messages. While pre-taped video lectures allow students to listen and watch lectures, facsimile communication, messages, and rapid exchange of assignments over the network allow students to learn through feedback.

Based on the above, we comment on some of the media that can help teach the science of sound engineering skills.

Multimedia is the integration of several means of presenting information into one system. Generally, multimedia is a combination of means of presenting information in a computer system, such as text, sound, graphics, animation, video, and spatial modeling. The combination of such means provides a new qualitative level of information reception: a person is not only passively obsessed, but also actively participates. Programs that work with multimedia tools are multimodal, i.e. they attract the interest and attention of the audience because they affect several sensory organs at the same time.

The importance of multimedia technologies in a large network of modern information and communication media in teaching the skills of sound directing is incomparable. They allow you to use multiple ways of presenting information at the same time: text, graphics, animation, video, and audio. The most important feature of multimedia technology is the ability to interact with the user in the operation of the interactive-information environment. Many multimedia software products have been created and are being created in recent years: encyclopedias, tutorials, computer presentations, and more. [6. 189]

The concept of multimedia has a broad meaning, and experts in different fields try to interpret it differently depending on the content of its application. Electronics professionals understand the term to mean hardware that allows you to work with data in a variety of formats, including text, graphics, animation, audio, and video. This includes CD / DVD-ROM, sound card, video card, external storage). Designers, animators, programmers first understand the finished material (text, sound, animation), which allows the user to interact in several ways through this concept. The most generalized form of the concept of multimedia (multimedia tools) - software and hardware tools for the development, creation of text, images, diagrams, tables, diagrams, photographs, video and audio fragments and various other information in digital form.

Today, the use of multimedia technologies in the teaching of sound directing skills can be seen in various areas of human activity, such as business, education, medicine and others. These areas of

activity include a wide range of software products for creating multimedia products. Some of them are designed to work with individual components of multimedia (audio editors, video editors, graphic editors). Some software materials integrate individual components to create multimedia complexes. The most advanced software products are focused on solving the tasks listed above simultaneously.

Multimedia applications are divided into the following:

- presentations;
- animated videos;
- games;
- video attachments;
- multimedia galleries;
- audio attachments;
- Applications for the web.

In the study of the science of sound directing skills, a scenario is developed that describes how to create multimedia applications in the study of technology. From this, we can logically conclude that each multimedia application consists of different components (different themes). The content of multimedia applications can be divided into: selecting a theme for the created multimedia application, defining the workspace (scale and background), using frames, layers, creating symbols of various shapes, entering variables in the programming language and writing scripts, working with audio files, adding text, create effects, use and import images, use ready-made components in the library, create navigation, use text marking languages and scripting languages. [2. 294]

For educational purposes, information and communication tools can be developed on the basis of Microsoft Office programs, and for the preparation of material such as PhotoShop (image processing), Adobe Premier or Windows MovieMaker (video clip processing), Stoik Software (image processing and morphing) additional software is used.

It consists of databases that can often be used to teach the science of sound engineering skills, for example using Access or Works. Displaying images or clips is done using PowerPoint. Hyperlinks are used to create a more detailed comment to create an interactive experience. First of all, you can create a multimedia project on the subjects of teaching voice directing skills, based on which you can develop lessons or thematic encyclopedias on specific topics (music trends, favorite singers, famous artists, movie news, etc.). To do this, you need to have two different software tools:

- preparation of material to be added to the multimedia product;
- creating the product itself.

Materials of sound directing skills can be given in the form of material pictures, audio and video recordings, texts. These are different views of the information available in their own software tools that have the appropriate tools to work with. Below are relatively popular software products for different forms of information.



Working with video recordings in mastering the art of sound directing requires the conversion of an image recorded with a VCR into a digital image in advance. Digitizing an image means converting the material from an analog form to a digital form that can be entered into a computer. To convert an image to digital form, the computer must be equipped with a special video card, TV tuner and accompanying software product. Digital video does not require a TV tuner, it is enough to have the following software products:

- Windows MovieMaker allows you to easily edit videos in a variety of ways.
- Adobe Premier is a more sophisticated software product that digitizes fragments and assembles them with many transitions between them. Adobe Premier can change the frame size and their orientation (rotation, frame movement trajectory).

Text processing.

In teaching the skills of sound directing, it is important to work with buttons, slides, clips and animations that work with MMX-technologies from the media.

In the field of sound directing skills, it is necessary to maintain a certain sequence of stages in the development of a multimedia project.

Phase I. Topic selection and problem statement.

Once the topic is determined, you will need to write specific tasks for creating a multimedia product, which should indicate goals and objectives.

Phase II. Object analysis.

At this stage, it is considered which objects the project will consist of, as well as by what parameters these objects will differ. If you are doing a project on the science of sound directing skills, you can consider a separate software product for the film type as an object. When preparing a multimedia lesson plan, it is necessary to take into account such components as the explanatory part, work with materials, control part. After preparing a multimedia project, it is necessary to consider the individual characteristics of each object. This information can be placed in the form of separate records and tables.

Phase III. Script development and model synthesis, when developing a scenario, it is necessary to take into account the sequence of work with the product, the possibility of changing the work and exiting it (terminating work). It is important to calculate them in order to prevent accidents, as well as to study the degree of variability of work, i.e. the possibility of achieving the same result in different ways. The script must include a soundtrack in the workflow, for example, text must appear on the screen in the form of music or any soundtrack. It should be borne in mind that neither of them interferes with work and does not exhaust. You can also turn off the sound if the program options allow. Using the results of the second phase analysis, a specific model of the future project should be selected. Once the model is selected, it is necessary to draw a diagram of it, showing the connections between the applications or joints.

Phase IV. Form of presentation of information and selection of software products. Once the script has been developed and the model has been created, it will be necessary to identify the software product to implement the project. At this stage, two different software products must be provided:

- project organizer: for graphic objects, audio and video recordings, text preparation and material processing;
- To create a multimedia product, i.e. direct work tools.

President Sh.M. Mirziyoyev is in favor of further improving the use of computer technologies in educational institutions. In accordance with the decree of September 28 this year, a working group was established to develop a program of measures to improve the material and technical base of higher education institutions in 2020-2025. 1. The set of measures for strengthening and developing the material and technical base of higher education institutions for the period 2020-2026, developed by this working group, was approved by the President of the Republic of Uzbekistan on 20 May 2020. 2. As part of the event:

- gradual targeted strengthening of the information resource base of higher education institutions, equipping them with modern computer equipment and communication systems; introduction of elements of distance learning in the educational process; To equip 19 higher education institutions with computer equipment at the expense of 15 computers per 100 students;
- It is planned to create a unified information resource base of universities through the creation of an electronic library, which will be integrated into a single system in each university and be regularly updated with electronic textbooks and teaching aids, multimedia courses, etc.

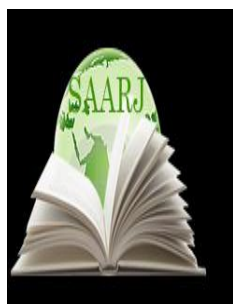
## CONCLUSION

In a word, the role of information and communication tools in the teaching of sound directing in our country is based on the creation of a highly effective virtual environment of the educational process, remote e-learning, advanced training and retraining, joint use of scientific and pedagogical potential, introduction of normative-methodological and information resources. The creation of the necessary software and methodological software for the above-mentioned issues increases the relevance of the above issues.

From the above-mentioned issues, it is clear that the development of this area is certain if we use e-learning tools on site to ensure effective use of information and communication media in teaching sound engineering skills.

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## NEW DATA ON THE STUDY OF THE PECULIARITIES OF THE PRODUCTION OF SILVER COINS IN CENTRAL ASIA IN THE MIDDLE AGES

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### ABSTRACT

*The Samanid state occupies a special place in the history of minting coins in Central Asia and plays an important role in covering the history of its political and economic life, trade relations. This article describes the minting of coins in Movarounnahr during the Samanid period, their role in domestic and foreign trade, as well as the example of a silver treasure found in Tashkent.*

**KEYWORDS:** Central Asia, Movarounnahr, Khorasan, Coin, Dinar, Dirham, Fels, Silver, Kufi, Museum, Abbasids, Abudovudites, Saffarids, Samanids.

### INTRODUCTION

**Relevance:** In the Middle Ages, the Samanid state included not only Movarounnahr, but also Khorasan (Eastern Iran and the central regions of present-day Afghanistan) and several regions of central Iran. It can be said that in the territories under Samanid domination possessed their own coinage system and the existence of separate mints in their production are illustrated by the example of silver coins found in Tashkent.

Coin treasures of the Samanid period were found not only in Central Asia, Baku, but also in European countries, including Scandinavia and Sweden. Most of these treasures were minted in Samarkand, Shosh and Nishapur. Information on several collections of Kufic silver coins found in Central Asia, including Uzbekistan, has been published by experts in this field [1, p. 26-28; 2, p. 13]

However, coin treasures which were found in Tashkent and is now housed in the State Museum of History of Uzbekistan (Statement no. 295). Record Book 488; N-393/125) were not widely discussed and not included in the scientific list. The number of coins is 4854 and the total weight

consists of 2225.67 kg.. Among them, there are 115 whole coins and 4739 broken (in pieces and cut) coins. The treasury belonged to the Umayyads, Abbasids, Saffarids and Samanids, and the coins bear the names of the following rulers.

### The Main Findings and Results

The ruling dynasties on the coins of the treasury:

1. Umayyads: WasitAH 124 / AD 741.
2. The Abbasids: The first coins were minted on behalf of the Caliphs Harun al-Rashid, Madinat as-Salam, AH 189 / AD 804-805. The last minted coin was made by al-Muktafi, Madinat as-Salam, AH 291/ AD 903-904
3. The Abu Daudiys (Abu Daudiys were the absolute vassals of the Samanids in northern Tokharistan at the end of the ninth and the beginning of the tenth centuries): / First coin minted by Abu Daud (mint not preserved) in AH 274/ AD 887-888. The last Abu Daudi coin (mint not preserved) was minted in AH 275/ AD 888-889;
4. Saffarids: Amr ibn Lays, Arridjan, AH 279 / AD 892-893;
5. The Samanids: the first coin minted by Ismail ibn Ahmad ShashAH 281 / AD 894-895: The last minted coin was by Nasr ibn Ahmad ShashAH 309 / AD 920-921;

### Periodical Components of Ruling Dynasties:

Mint	Year	Name of the Ruler	Number
Vasit	Anna Hygera/ Anna Domini 124/741	?	1
Madinat as-Salom	189/804-805	Horun Ar-Rashid	1
Madinat as-Salom	253/867 27?	Al-Mutaaz	2
Samarkand	253/867	?	1
Surmanra	251/865	?	1
? SamarkandMadinat as-Salom	? ? 281/894-895	Al-Mutamid	3
Kufa Shash Arridjan	265/878-879 272/885-886 276/889-890 275/888-889	Al-Muvaffaq	4
Busra Surmanraa	286/899 288/900-901	Al-Mutadid	1 1
Madinat as-Salom	291/93-904	Al-Muktafi	1
Arridjan	279/892-893	Amr ibn Lays	1
?	274/887-888 275/888-889	Abu Dawud	1 1

?	?	Ahmad	4
?	275/88-889		1
Andaraba	283/896-897		1
Andaraba	292/904-905	Ismail ibn Ahmad	1
Shash	281/894-895		2
	284/897-898		1
	286/899		2
	293/905-906		1
	294/906-907		1
Samarkand	286/899		1
	289/901-902		1
	290/902-903		1
	294/906-907		1
Shash	295/907-908	Ismail ibn Ahmad	1
	?		1
	296/908-909		4
	297/909-910		7
	298/910-911		9
	299/911-912		7
	300/912-913		8
	301/913-914		1
	307/919-920		1
Samarkand	294/906-907		1
	296/908-909		1
	297/909-910		2
	298/910-911		1
	299/911-912		4
Andaraba	299/911-912		1
	?		1
Samarkand	299/911-912	Nasr ibn Ahmad	1
	303/915-916		1
	304/916-917		1
	305/917-918		1
	307/919-920		1
	308/920-921		1
Shash	301/913-914		1
	303/915-916		4
	304/916-917		2
	305/917-918		4
	307/919-920		2
	308/920-921		3
Andaraba	309/921-922 303/915-916		3
			1

### Geographic (Terretorial) components of Tashkent treasure :

[illegible]

## CONCLUSION

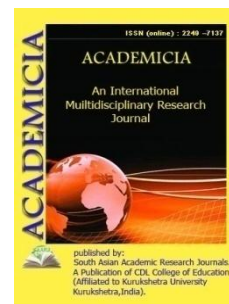
In conclusion, Kufic dirham coins newly found in Tashkent belonged to the rulers of the Umayyads, Abbasids, Abu Dauds, Saffarids and Samanids, which minted in Samarkand, Shosh, Kufa, Basra, Wasit, Madinat as-Salam, Badakhshan, Surmanraa and Arridjan. Among these Kufic dirhams, the main part of coins is broken (fragmented, cut). In Iran: 1 gold kirat = 0.212 g, 1 silver kirat = 0.247g, 1 gold kibba = 0.0706g, 1 silver khabba = 0.062g. In Arabia, Egypt, Syria 1 kirat always = 1/24, misqal 1/16 dirham, [3, p. 12]. In particular, the most of the coins in the Tashkent treasury is 0.25 gr = 137, 0.062 \* 10 = 0.62 gr 22, one silver coin 0.062 \* 5 = 0.31 gr - 90; 0.32 gr-110.

Silver dirham coins were not simply broken, they were broken on purpose to make a certain weight. During the Samanid period, broken coins in Movarounnahr were actively circulated in the system of monetary relations in a market economy.

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## THE DEVELOPMENT OF STORY OF THE XVI XVII CENTURY AND THE SPECIFIC STYLE OF PU SUNGLING'S WORK

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### ABSTRACT

*The development of the works, the fact that the public loves to read them, is a sign of the rise of cultural life. Pu Songling, a medieval novelist and novelist, has preserved the traditional features of the period in which he lived and worked, with a special place in history. The origins of the novel go back to folklore. The novella by Pu Songling has a complex history of development.*

**KEYWORDS:** Lyao Jay, 屈原 Qūyuán<sup>1</sup> Tsyuy Yuan, 蘇軾 Sūshì<sup>2</sup> Su Shi, Character, Artistic Image, Liao Jay's Extraordinary Stories, Poetry, 古文 Guwen.

### INTRODUCTION

The development of the works, the fact that the public loves to read them, is a sign of the rise of cultural life. Pu Songling, a medieval novelist and novelist, has preserved the traditional features of the period in which he lived and worked, with a special place in history. The origins of the novel go back to folklore. The novella by Pu Songling has a complex history of development. The emergence of works is a sign of the rise of cultural life. The first literary sources were written during the Zhou Empire.

### Main part

According to sources, the first source is "Biography of the Son of Heaven Mu "<sup>3</sup>, which dates back to the V-IV century BC. From this period to the XVI-XVII centuries, many works were created, many sources were lost without a trace, destroyed as a result of revolts. Nevertheless, there are many works that have survived to the present day.

According to J. Ziyamammedov in his monograph "Pu Songling and medieval Chinese short stories": - "... published books were checked. Most of them have been recycled. Some books were banned, and from 1774 to 1782, 24 bonfires were set up in China, burning the ashes of more than thirty books"<sup>4</sup>. Indeed, many sources have been lost, and the rest are adapted to the spirituality and ideology of the present period. The essence of the work has changed considerably. It was during this period that the novelist Pu Songling (1640-1715) became famous for his short stories, which reflected the peculiarities of the small genre form in his works.

Pu Songling is known to the people under the pseudonym Lyao Jay and created in 古文 gǔwén<sup>5</sup>. The content of many of his works stated his judgments about laws, the judiciary, and students.

We have more information about this work through the translations of academician V.M. Alekseev, who lived and worked in the XIX century. V.M. Alekseev translates Pu Songling's short stories into four parts. He later published a collection of short stories, The Trick of the Fox, The Magical monksMonks, Extraordinary Stories, and Stories of Wonderful People, entitled Liao Jay's Extraordinary Stories<sup>6</sup>.

Pu Songling is a statesman who has been on a constant journey throughout his life. He reflected in his short stories all the unusual things in his destinations, the names of geographical places. In some cases, the names of historical places have come down to us through literary figures. V.M. Alekseev comments on this: "These" geographical "place names are not reflected in some historical sources, such information is needed in the creation of historical sources"<sup>7</sup>.

Some writers believe that V.M. Alekseev's translations have not lost their significance even today. They even mentioned it in their sources. L.Z. Eidlin states in his article: "The alternative translation that conveys the spirit of Liao Jay's short stories is the translations of V.M. Alekseev."<sup>8</sup>

It is known from history that the interest in China dates back to the 1950s, and this work has been translated not only into Russian but also into many world languages. It has also been translated into Uzbek. In 2012, J. Ziyamammedov and Z. Shamsieva published a Christian novel "Liao Jay (Pu Songling) short stories"<sup>9</sup>, and in 2016 J. Ziyamammedov published a monograph "Pu Songling and medieval Chinese short stories". This monograph contains translations of a number of short stories, which clearly describe the psyche and medieval lifestyle of Pu Songling's works, and even if he reads the original text in tongues, he will not be able to understand its essence. J. Ziyamammedov presented these translations to the reader in an understandable way.

## RESULTS AND DISCUSSIONS

Pu Songling completed his work in 1679. The author was interested in the works of poets and writers who lived in ancient and medieval times. The bees written by the author are mostly strange stories, and the characters are made up of animals, insects and plants. According to some sources, Pu Songling was interested in the works of well-known representatives of Chinese poetry, 屈原 Qū YuánYu Yuan and 蘇軾 SūshìSu Shi, and wrote lyrical works like them.

It is known from history that in the XVII century China was conquered by the Manchus and created their own 大清国 Tàì qīngguó<sup>10</sup>, Qing dynasties. The Manchus executed many writers, poets and scholars and burned historical monuments. It is no coincidence that Pu Sungling's

short stories have not been published for more than sixty years. In his works, he focuses on topics such as injustice, the judiciary, the student and his examination, the ideas of perfection. He had to pass an exam to work in senior positions. From his childhood, Pu Sungling "studied the ancient texts of Confucius about the perfect man, the actions performed by the perfect man."<sup>11</sup> " However, this did not lead to success. Pu Sungling was one of the unsuccessful students until old age. "Pu Sungling only got a degree of love at the age of 71 (meaning a real student)."<sup>12</sup> " He submitted many times and each time he described his failures in different ways in the novel. We can understand from the short stories he wrote how each failure affected the writer.

"In all of these novels, the worries and hopes of students taking state exams are so vividly portrayed that examiners who cannot distinguish genius from ignorance do so easily that even when reading the original and translation of the novel, the author feels that some students have failed."<sup>13</sup> " and will not be indifferent to their fate. This mood is especially vividly reflected in the novel "贾芬芝 *Jiǎfēnzhī* TszyaFinChji became immortal." In this novella, the student *Jiǎ* cannot pass the exam at all, even though he is not a peer in terms of knowledge throughout the Celestial Empire. This went on for a long time until a monk named Lyan came. The priest reminded him of words that would be embarrassing to show that he was so long in content. However, it was 贾 *Jiǎ* who passed the exam, and his name was one of the first on the list.

In Pu Songling's stories, writing an introduction is a unique style. In this introduction, the author's main idea is to describe the course of events and help the reader to further expand his impression of the work. "司马迁 *Sima Qian*<sup>14</sup> the tradition of epilogues dates back to BC. The great Chinese historian of the second century"<sup>15</sup>. Fishman O.L. In his work, he mentions: "Liao Jai, imitating the historian 司马迁 *Sima Qian*, speaks with clear and firm words in his concluding remarks, as Confucius did. It describes the behavior of humanity."<sup>16</sup>

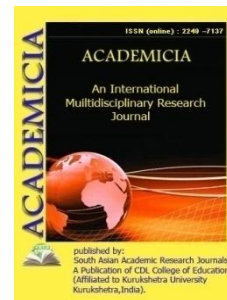
## CONCLUSION

In summary, one of the three most famous Chinese novelists of the Middle Ages, Pu Sungling, witnessed the lifestyles, customs, and characters of the works, depicting most of them as animals. He created in a unique style. His works have not lost their relevance today, even though centuries have passed. The creation of unique style images shows that it is manifested not only in Chinese literature but also in the literature of the whole world in the form of a peculiarly unusual direction.

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## RESEARCH OF BACKGROUND RADIATION AND ITS POSSIBILITIES LIMITATIONS IN A SEMICONDUCTOR IONIZATION SYSTEM

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### ABSTRACT

*Results of experimental exploration phenomenon in plane gas discharge cell with semiconductor electrode reduces in the article. Possibility of limitation of background, which appears the hindrance for raising of contrast gratuity representation was shown.*

**KEYWORDS:** *Image Converter, Semiconductor Electrode, Ionization Chamber, Gas Discharge Gap, Semi-Insulating Gallium Arsenide, Photo Detector, Current-Voltage Characteristic, Photocurrent, Pulse Duration, Pulse Voltage*

### 1. INTRODUCTION.

A semiconductor photographic system of the ionization type, in which one of the electrodes is a plate made of a high-resistance and photosensitive semiconductor, has found practical application in recent years. On its basis, the so-called photo ionization systems have been created, which are used for high-speed IR photography [1-2], silver-free photography, as IR image converters [3-4], as a device for visualizing electrical and structural defects in high-resistance semiconductors, as a source uniform over a large area of UV radiation, as a system where dissipative structures are formed in gas plasma.

The semiconductor ionization system operates in two modes: waiting and strobing. In standby mode, high-resistance semiconductors with  $\rho \geq 10^7 \text{ Ohm} \cdot \text{cm}$  at constant current are mainly used. In the strobing mode, relatively low-resistance photo detectors are used in the pulsed mode. In the second case, the dark current and thus the background radiation on the output screen of the semiconductor ionization chamber is much higher.

Investigation of the dependences of the average current on various quantities (photocurrent, pulse duration, pulse voltage, gas pressure, etc.) in the system is of considerable interest not only for understanding the physical mechanism of the phenomena, but also has practical value.

Recent investigations give hope that a new approach to a flat gas-discharge cell with a semiconductor photosensitive electrode will lead to a new class of devices. In our next works, we will show that a change in the configuration and arrangement of cell elements, as well as the use of new photo detectors, makes it possible to create a unique photographic system, or rather a modern type of night vision devices.

In this work, we present the results of experimental studies of the phenomenon in a flat gas-discharge cell with a semiconductor electrode. Within the framework of this work, the possibilities of limiting the background are shown, which is an obstacle to increasing the contrast of the output image, and in general to improving the characteristics of the system.

## 2. RESULTS AND THEIR DISCUSSION

When a rectangular voltage pulse is applied to a cell consisting of a gas-discharge gap that is in contact with a semiconductor electrode on one side and a counter-electrode on the other, gas breakdown occurs. The appearance of current pulses is the presence of an easily detectable delay time  $\theta$  relative to the moment when the voltage is turned on. Another feature of current pulses is the presence of a statistical spread in the breakdown delay  $\chi$  relative to a certain value.

The calculation of the time dependence of the voltage across the gas discharge gap  $U(t)$  before breakdown can be performed similarly to the problem of charging a two-layer capacitor, one of the layers of which (semiconductor) has a dielectric constant, thickness and conductivity  $\sigma_1$  a, the second layer (gas gap)–  $\varepsilon_2 = 1$ ,  $\sigma_2 = 0$  и  $d_2$ :

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

$$\tau_1 = \frac{R \frac{\varepsilon_1}{16\pi^2 d_1 d_2}}{\frac{\varepsilon_1}{4\pi d_1} + \frac{1}{4\pi d_2}}; \quad \tau_2 = \frac{d_1}{\sigma_1} \left( \frac{\varepsilon_1}{4\pi d_1} + \frac{1}{4\pi d_2} \right);$$

$U_0$  – applied voltage;  $R$  - internal resistance of the voltage source.

With a negligibly small value of the internal resistance of the generator, the applied voltage at the initial moment of time is redistributed inversely proportional to the capacitances

$$\frac{U}{U_0 - U} = \frac{d_1}{\varepsilon_1 d_2} \quad (2)$$

Then, with a constant time  $\tau_2$ , all voltages  $U$  pass to the discharge gap. Thus, the breakdown of the gap occurs under conditions of increasing voltage across it. Since  $\sigma_1$  depends on lighting, the breakdown delay is determined by the time  $\tau_2 = f(\sigma_1)$ .



Another factor determining the breakdown delay is the natural static spread of breakdown time, which is the only reason for the breakdown delay in a cell with equipotential electrodes.

Thus, the total delay time is determined by two components: the delay time of the discharge gap capacitance through the illuminated semiconductor and the statistical breakdown delay time at a given voltage in the gap.

Figures 1a and 1b show the dependences of the average current in the pulse on the light intensity at different values of the voltage pulse duration. A characteristic feature of the curves is the “threshold” form of these dependences, which is a consequence of the breakdown delay effect. With an increase in the voltage pulse duration, the threshold value of the illumination intensity decreases, below which the conduction current in the system, and therefore the discharge glow, is absent. Note also that starting from the threshold value, the current, as well as the passed charge, sharply increase with increasing light intensity. The obtained “threshold” dependences of the average passed amount of electricity and the value of the average current with regulation of the threshold value are of considerable interest, being, in principle, a new method of background discrimination. Such a possibility of dynamic background discrimination is undoubtedly realizable in independent gas-discharge cells with a distributed resistance of a semiconductor electrode in a semiconductor photographic system of the ionization type.

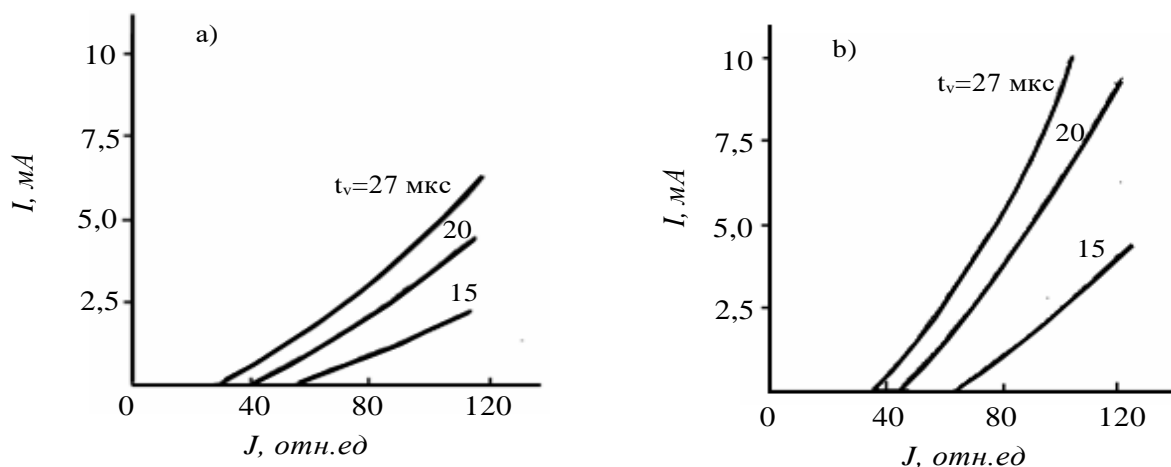


Рис. 1. а). Luxampere characteristics of the system at different values of the voltage pulse duration at the thickness of the gap  $d = 40 \mu\text{m}$ . б). The same with a gap thickness  $d = 100 \mu\text{m}$ .

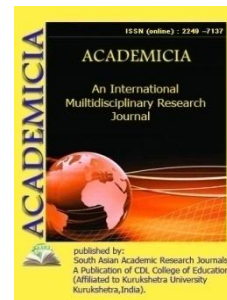
The study of the dynamic background discrimination mode with photographic recording of the image at different values of the breakdown delay and different illumination of individual sections of the area of the semiconductor photosensitive electrode.

## CONCLUSION

Thus, the shown breakdown delay in a gas-discharge cell with a semiconductor electrode during electrical and photoelectric measurements in general confirms the possibility of realizing dynamic background limitation at a given level.

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## IR-IMAGE CONVERTER BASED ON GaAs AND ITS POSSIBLE MODIFICATIONS

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### ABSTRACT

*In this work, we consider the reason for the decrease in the discharge ignition voltage and its uniform distribution over the cross section when one of the metal electrodes is replaced by a semiconductor one. The light distribution of multichannel micro-discharges forms the output image, converts and amplifies the reproduced incident IR image. In a system with an MRS, the local intensity of the SR exceeds the intensity of the SR in the PSPII as many times as the active area of the photo detector exceeds the total active area of the MRS.*

**KEYWORDS:** Photo Converter, Optoelectronic Converter, Semiconducting Electrode, Ionization Chamber, Luminescent Screen, Semi-Insulating Gallium Arsenide.

### INTRODUCTION

In connection with the development of IR lasers, the problem of measuring the spatial energy distribution over the beam cross section is currently an acute problem. In the near-IR region ( $\lambda < 1.3 \mu\text{m}$ ), registration issues are mainly solved on the basis of the use of IR photographic films or electro-optical converters (EOC). These methods give good results in both integral and frame-by-frame registration modes. In the latter case, the information is naturally more complete, since it becomes possible to trace the kinetics of changes in the laser parameters during the radiation pulse.

A flat gas-discharge cell with a high-resistance photosensitive semiconductor electrode is used as a working element of an IR image converter. [1-2]. Replacing the GaAs: Cr metal electrode with a photo detector allows avoiding discharge pinching and obtaining uniform glow over the entire electrode area in a narrow (tens of microns) gas discharge gap. The image acquisition is based on

the principle of local controllability of the gas discharge current. The image is formed in the violet glow of the plasma and then amplified by an image intensifier with micro channel amplification. The output IR image can be observed on an image intensifier. The spectral range of the device sensitivity ( $1.1 \div 11 \mu\text{m}$ ) is set by the sensitivity of the photo detector. [3]. Such an IR converter is implemented on a GaAs: Cr photo detector ( $\rho = 10^7\text{-}10^8 \text{ Ohm-cm}$ , the long-wavelength photosensitivity limit is  $1.7 \mu\text{m}$  at 300 K). The speed of such a converter is  $2 \cdot 10^{-8} \text{ s}$ , the resolution is  $16 \text{ ln / mm}$ . Modifications of inexpensive devices, manufactured and tested by us, are as follows: 1 - non-destructive express-control of resistance in homogeneities of high-resistance semiconductor wafers of large diameter used in electronic engineering; 2 - non-silver photographic images; 3 - uniform plasma etching of the surface; 4 - a source of spatially uniform UV-visible radiation of large diameter; 5 - observation of dissipative structures in gas plasma.

In this work, we consider the reason for the decrease in the discharge ignition voltage and its uniform distribution over the cross section when one of the metal electrodes is replaced by a semiconductor one. It has been found that the contact of an S-shaped (gas gap) and linear (semiconductor) objects, in addition to the usual instability with respect to fluctuations of the total current, also exhibit instability with respect to potential fluctuations at the semiconductor-gas gap boundary at a fixed voltage across the entire structure. [4] If the first type of instability is realized with negative impedance, then the second type of instability occurs with negative admittance, which is achieved at much lower voltages. In the case of two metal electrodes, there is no potential fluctuation at the boundary and only the first type is realized - instability with pinching of the current. If one of the electrodes is semiconducting, then fluctuations at the interface (at low voltages) transfer the system to a state of instability with respect to fluctuations of the first type and a discharge occurs.

Semiconductor gas-discharge converters for IR images (PGPII) with a GaAs: Cr photo detector have found wide application in recording IR images. Direct conversion of an IR image to a visible image using a planar PGPII is an attractive method for creating ultrafast IR systems. Increasing the sensitivity of such systems remains one of the most pressing and complex problems that hinder their widespread use. In this work, we investigated the glow of the discharge (SD) emitted in the UV and visible regions (330–440 nm), as well as the possibility of its local increase in PSPII at a given photosensitivity of the photo detector. The use of a gas discharge gap with a micro capillary raster spacer (MRP) and IR light for illumination of the photo detector leads to an increase in the intensity of the SL. The gas discharge gap with the MRP acts as an amplifier of the electronic image obtained in the gap. The light distribution of multichannel micro-discharges forms the output image, converts and amplifies the reproduced incident IR image. In a system with an MRS, the local intensity of the SR exceeds the intensity of the SR in the PSPII as many times as the active area of the photo detector exceeds the total active area of the MRS. The pinching occurs during the formation of the space charge of positive ions, which changes during the transition from a Townsend discharge to a glow discharge.

## CONCLUSION

The test results confirmed the possibility of using semiconductor photographic systems of the ionization type for recording laser radiation. The camera has significantly better technical characteristics in terms of dynamic range and sensitivity relative to magnetic films and heat-sensitive screens.

It should be emphasized that the possibility of using ionization systems is not limited to the spectral range of sensitivity of the photo detectors considered in this work. The long-wavelength limit of sensitivity can be expanded by using cooled photo detectors with lower photoionization energies of impurity centers.

An attractive feature of the devices is the ability to electrically control the sensitivity (the presence of an “electric” shutter).

High sensitivity, large dynamic range, low inertia of processes in the gas gap open up prospects for the implementation of time-lapse photography of the investigated section of the laser beam.

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## **SPECIFIC FEATURES OF THE IONIZATION SYSTEM OPERATION WITH A PLATINUM-DOPED SILICON RECEIVER**

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### **ABSTRACT**

*The work is devoted to the study of the performance of a semiconductor photographic ionization chamber (PFIC) with an ultrathin gas-discharge cell using photo detector plates made of silicon doped with platinum. The current-voltage characteristics, temperature dependences, watt-ampere characteristics, and also the spectral characteristics of the photocurrent in the PFIC gas-discharge cell have been studied experimentally.*

**KEYWORDS:** *Photographic Registration, Semiconductor Ionization Chamber, Infrared Radiation, Image Intensifier, Dark Current Density, Temperature Dependence, Spectral Characteristics.*

### **1. INTRODUCTION**

Gas-discharge systems with a semiconductor electrode have found practical application in high-speed converters of infrared (IR) images [1-4]. The passage of direct current in such a system is accompanied by a number of peculiar phenomena leading to the stabilization of the gas-discharge current and the possibility of controlling its magnitude and spatial distribution over the discharge cross section by modulating the conductivity of the semiconductor electrode [5]. An essential role in the current passage is played by the surface electric charge, which is localized at the semiconductor-plasma interface of the gas discharge, is self-consistent in magnitude with the current density and largely determines the stationary current-voltage characteristic of the system.

In this work, we present the results of studies of the photoelectric properties of semiconductor PCs used in ionization systems.



## 2. Experimental technique and results obtained

The main part of the PIK is a gas-discharge cell, which is enclosed between the photo detector and the counter-electrode. The counter electrode is made from a glass plate with a transparent conductive coating SnO<sub>2</sub> or from a fiber-optic washer, the same with SnO<sub>2</sub>. When an infrared (IR) image of an object is projected onto the surface of a photo detector, a photoconductivity distribution appears in it, repeating the intensity of the incident IR radiation. When a sufficient voltage is applied between the photo detector and the transparent counter-electrode, a breakdown of the gas-discharge gap occurs, due to field emission from the inner surface of the photo detector in relation to the latter [12]. The distribution of the current density and the brightness of the glow of the gas-discharge plasma will be determined by the distribution of the photoconductivity of the semiconductor photo detector.

### Current-voltage characteristics

Typical current-voltage characteristics (CVC) of a gas-discharge cell with a silicon photo detector doped with p-type platinum (p-Si <Pt>) are shown in Fig. 1. Part of the I – V characteristic covers the range of current density  $10^{-9} \div 10^{-7}$  A / cm<sup>2</sup>, which was practically never studied earlier in the study of gas-discharge cells with semiconductor electrodes, since it was irrelevant with the existing methods of recording images in the used photo detectors. Thus, the performed measurements were carried out for the first time in the region of low levels of current densities in a gas-discharge cell.

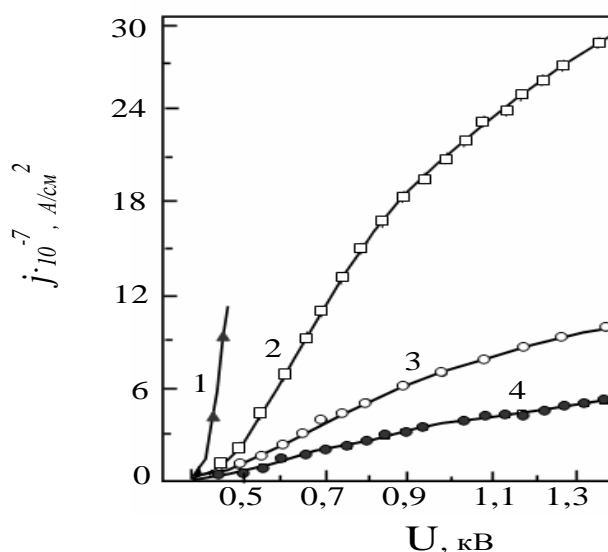


Рис.1. Volt-ampere characteristics of the PFIK gas-discharge cell at different IR radiation powers  $J$ .  $J$  equally: 1 –  $1,6 \cdot 10^{-4}$  Вт/см<sup>2</sup>, 2 –  $5,3 \cdot 10^{-6}$  Вт/см<sup>2</sup>, 3 –  $1,8 \cdot 10^{-6}$  Вт/см<sup>2</sup>

It follows from the  $I - V$  characteristic that in the voltage range immediately following the breakdown voltage of the gas gap, there is a segment of superlinear current rise with a slope, which increases with increasing conductivity of the semiconductor electrode. With a further increase in the voltage, the superlinear section becomes linear. The reason for the observed behavior of the  $I - V$  characteristic is, apparently, the fact that at the initial stage of the development of a Townsend discharge, the differential resistance of the discharge gap is large and comparable with the resistance of a semiconductor electrode. The linear section of the  $I - V$  characteristic does not tend to super linearity, i.e. at operating voltages of the PFIK, up to  $1.6 \times 10^3$  V, monopolar injection from contacts and other nonlinear processes does not occur. Note that the decrease in the threshold of the recorded minimum current density in the PFIK is directly related to the possibility of stabilizing and controlling the gas discharge current at low current densities of a non-self-sustaining discharge in the gas gap. Since in the experiments described above, the uniformity of the screen glow and the formation of the image were controlled, and for current densities up to  $10^{-9}$  A / cm<sup>2</sup> they were quite satisfactory, it can be expected that the natural limit of the decrease in the value of the threshold recorded minimum current density under stationary illumination lies much lower than this is recorded in this work.

### 3. CONCLUSION

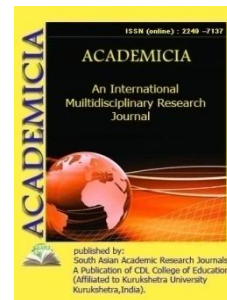
Thus, it is possible to create night vision devices and a space-time diagnostic device for studying infrared radiation of objects in the near wavelength region at the temperature of a thermoelectric cooler and in the far wavelength region at the temperature of liquid nitrogen. The use of PIR for detecting defects and inhomogeneities of solid and liquid substances makes it even more modern, that is, this method is not cheap and simple compared to that. It should be noted that the results obtained at PIK are always reliable and simple.

New photodetector elements for the spectral range of 1-4  $\mu\text{m}$  based on doped silicon with a working emitter impurity of platinum have been proposed, calculated, developed, manufactured and comprehensively tested. The technology of precision alloying with precise preset compensation has been postponed. A technology has been developed for manufacturing a transparent conductive contact by boron diffusion at a concentration of about  $10^{19}$  cm<sup>-3</sup> with a contact layer thickness of 2-3 microns

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## REACTIVE POWER COMPENSATION IN THE CHEMICAL INDUSTRY

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### ABSTRACT

*The article analyzes the modes of reactive power compensation of industrial enterprises using static blocks of capacitors and synchronous motors.*

**KEYWORDS:** *Compensator, Reactive, Active, Power, Compensation, Transformers, Voltage, Supply Network, Active Resistance, Specific, Source, High Efficiency.*

### INTRODUCTION

Despite the great urgency of the problem of reactive power compensation in industrial enterprises, the chemical industry is being solved very slowly, due to the appearance of a large number of specific electric receivers (with sharply variable operating modes and nonlinear volt-ampere characteristics), outdated regulatory framework (it was developed in 1986 and has not been revised), the appearance of a large number of new reactive power sources and the lack of clear recommendations on their choice and scope. This article is devoted to solving these issues.

An effective technical means of increasing  $\cos \varphi$  in the chemical industry is reactive power compensation, which consists in connecting a reactive power source to the load.

As a result of measures to reduce reactive power, the load on the main equipment decreases and the capacity of the company's electrical networks increases, and a reserve is created for connecting additional capacities.

The introduction of reactive power compensators allows not only to ensure a balance of capacities, but also gives a significant economic effect, which consists in reducing electricity losses in networks due to their heating, reducing voltage drop, and rational use of equipment for

in-plant substations.

When designing power supply systems for enterprises with the addition of reactive power compensation tools at the development stage, it allows reducing the rated power of transformers and converter units, reducing the cross-section of wires and cables, as well as reducing the rated power of other equipment for transmitting and distributing electric energy [1, 2].

Changes in the supply voltage may lead to defects, incorrect operation of equipment, software failure and product discontinuation. Reducing voltage drawdowns leads to more stable operation of the consumer.

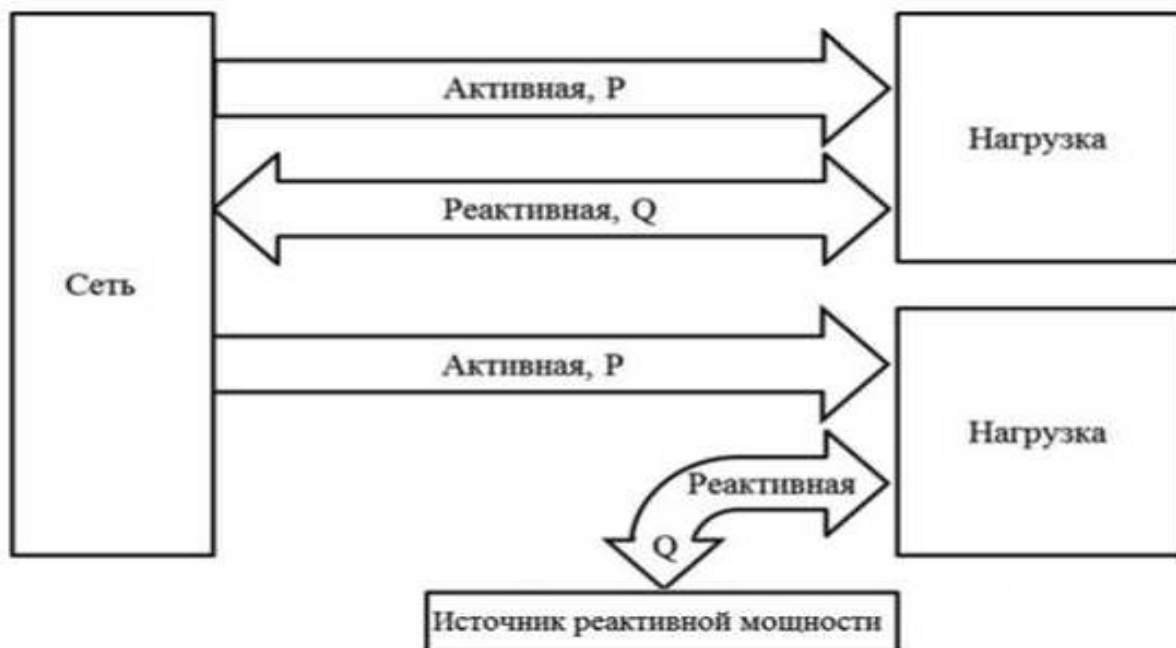


Figure 1. Structure of reactive power compensation

The most appropriate place to connect reactive power compensators is a point in the network that is physically close to the consumer. In this case, the reactive energy circulation circuit between the compensator and the load is reduced.

Energy losses in the active resistance of the load  $R$  and reactive  $X$  components of the electrical resistance of the network through the active  $P$  and reactive power  $Q$  can be determined according to the expressions:

$$\Delta P = \frac{P^2 + Q^2}{U^2} \cdot (R_{\text{сети}} + R_{\text{наг}}) \quad (1)$$

$$\Delta Q = \frac{P^2 + Q^2}{U^2} \cdot (X_{\text{сети}} + X_{\text{наг}}) \quad (2)$$

The voltage losses that appear in the network when transmitting reactive power can be represented as:

$$\Delta U = \frac{PR + QX}{U} \quad (3)$$

The current in the line before the installation of compensating devices is determined by the expression:

$$\dot{I}_1 = I_R - jI_{Q1}(4)$$

The load capacity is equal to:

$$\bar{S}_1 = P - jQ_1(5)$$

After the installation of compensating devices, the reactive current and reactive power in the network are reduced, the line is unloaded by reactive power, and these factors lead to a decrease in power loss:

$$\Delta P = \frac{P_H^2 + (Q_H - Q_K)^2}{U^2} * R_{JI}; \quad \Delta Q = \frac{P_H^2 + (Q_H - Q_K)^2}{U^2} * X_{JI}$$

And voltage drawdown's:

$$\Delta P = \frac{P_H^2 + (Q_H - Q_K) * X_{JI}}{U}$$

The choice of the type and calculation of the power of the compensating device is determined based on the following conditions:

- The value of the network voltage must be within the specified limits;
- The current and heating load of the main switching and protective elements must not exceed the rated values.

One of the most well-known methods of reactive power compensation is the use of synchronous machines in overexcitation mode.

Synchronous motors can be used as reactive energy sources and have a number of advantages over asynchronous motors:

- High CUW;
- can be used as reactive power sources to maintain the voltage in the load node;
- have a large overload capacity, which can be increased by automatically regulating the excitation;
- less sensitive to network voltage fluctuations;
- the speed of rotation of the motor shaft is almost independent of the applied torque;
- have high controllability the ability to use this type of machine as a source of reactive power in the over excitation mode.

The operating mode of a synchronous machine determines whether the machine is a source or consumer of reactive energy. The operating modes of the synchronous machine are set by the value of the excitation current in the rotor /3/.

When under excited, the machine is an actively inductive load for the network. in overexcitation mode, the load has an active-capacitive character, which means that reactive energy is generated.



Figure 2 shows a U-shaped characteristic of a synchronous motor with a rated power of  $P_H=1000$  kW and a rated voltage of  $U_H=6000$  V.

In operation mode at  $\varphi = 0$ ,  $\cos\varphi = 1.0$ , no reactive energy is consumed or released from the network. In this mode, the machine consumes only active energy. To operate the synchronous motor in the compensator mode, the excitation current must be regulated. For long-term operation in reactive power compensation mode, you can reduce the active load, and leave the excitation current equal to the nominal. In this case, the engine does not develop the maximum reactive power.

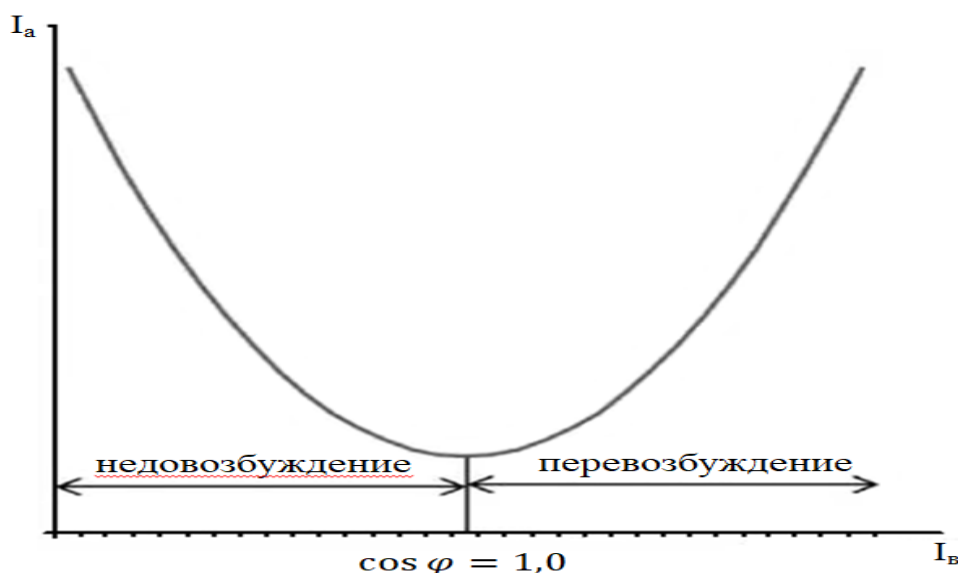


Figure 2-u-shaped characteristic of a synchronous motor

The article shows the use of synchronous motors in the reactive power compensator mode in each specific case should be economically justified, since this method of compensation can be considered as the consumption of active energy for reactive power compensation.

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## ABOUT AUTOMATED MEASURING SYSTEMS IN THE PRODUCTION OF BULK PRODUCTS

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### ABSTRACT

*This paper presents the results of the development of measurement systems for determining the current flow rate of clinkers produced in a continuous production cycle. Installation and connection diagrams are described.*

**KEYWORDS:** Automation, Continuous Production, Converter, Sensor, Load Cell, Current Flow, Measurement System, Dispenser.

### INTRODUCTION

As you know, various automated measurement systems are widely used in modern bulk production facilities for evaluating, organizing and managing technological processes. Basically, measuring systems are used in areas where the percentage of raw material supply for further processing is determined [1,2].

Automated measurement systems are developed and produced by many large companies working in these areas. Standard systems for measuring and controlling product feeds have been produced for a long time. The following widely used systems can be listed:

- Belt dispensers;
- Hopper dispensers;
- Screw feed systems for products;
- Clinker wagon meters and others.

These systems have an almost unified system for measuring and managing processes. They mainly consist of the following blocks[3,4 ]:

- Measurement sensors;
- Secondary measuring and calibration device;
- Executive control mechanisms.
- The upper system of registration and accounting data.

Manufactured systems have sufficient measurement and control accuracy depending on the manufacturer's choice. But they have significant costs, and so many small manufacturing enterprises are in no condition to purchase data measurement systems. But to obtain products with the established technological parameters, it is necessary to install automated systems that reduce the human factor in the process.

With the above mentioned, we can conclude that the development and implementation of non-expensive measurement and control systems for specific sections of technological lines are relevant.

We have developed various automated control systems for cement production on the basis of the elements of computer automation. In this paper, we present one of our developments.

Development. Block diagram of the “Clinker measuring system”.

Based on the technical specification, we have developed a system for measuring clinker produced in a small cement production. Technical characteristics of the technological unit: Clinker

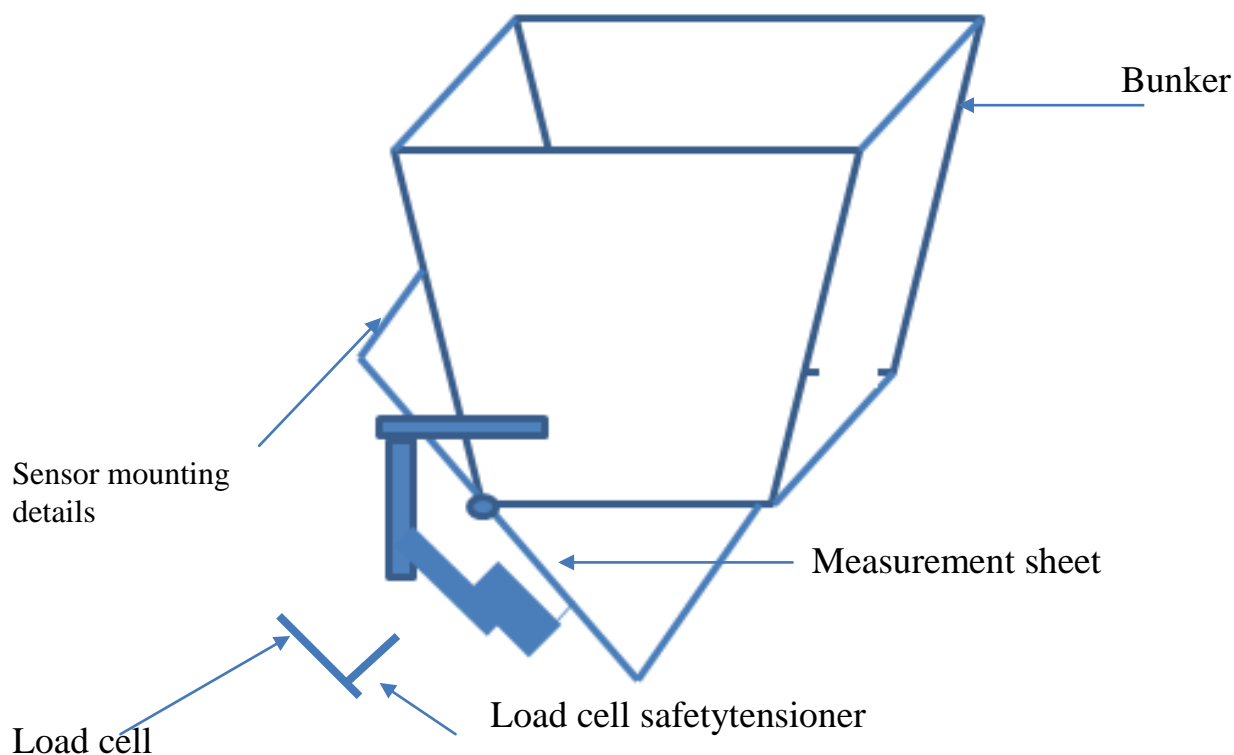
Capacity of the clinker - 12 t / h;

The clinker temperature at the outlet -600<sup>0</sup>C;

The size of the output hopper-1200 x 300 mm;

There are technological points for air and water extraction.

a) Block diagram of the sensor installation.



Pic.1 Block diagram of the sensor installation.

All parts of the system are installed according to the drawing(Fig. 1). In it, the measurement sheet is set taking into account the balance of the weights on the sensor. It takes into account the measurement conditions that when the clinker falls on the sheet, the total weight does not affect the load cell. The load cell safety tensioner protects the sensor from bending. Usually the gap is set to 3 mm(Fig.2).

b) Detailed drawing of the load cell attachment

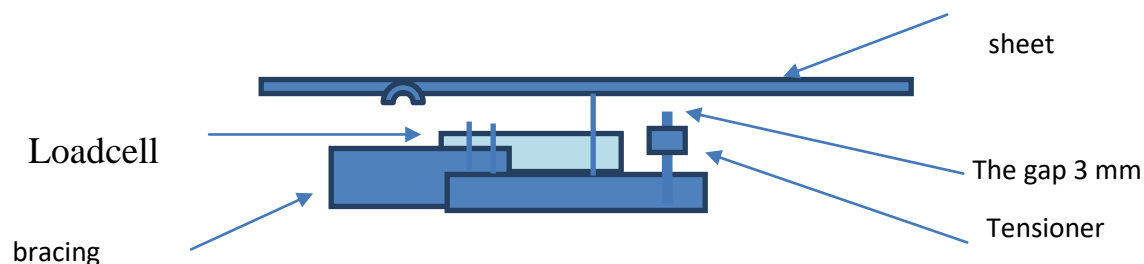


Fig. 2. Sensor couplings

C) load cell cooling system.

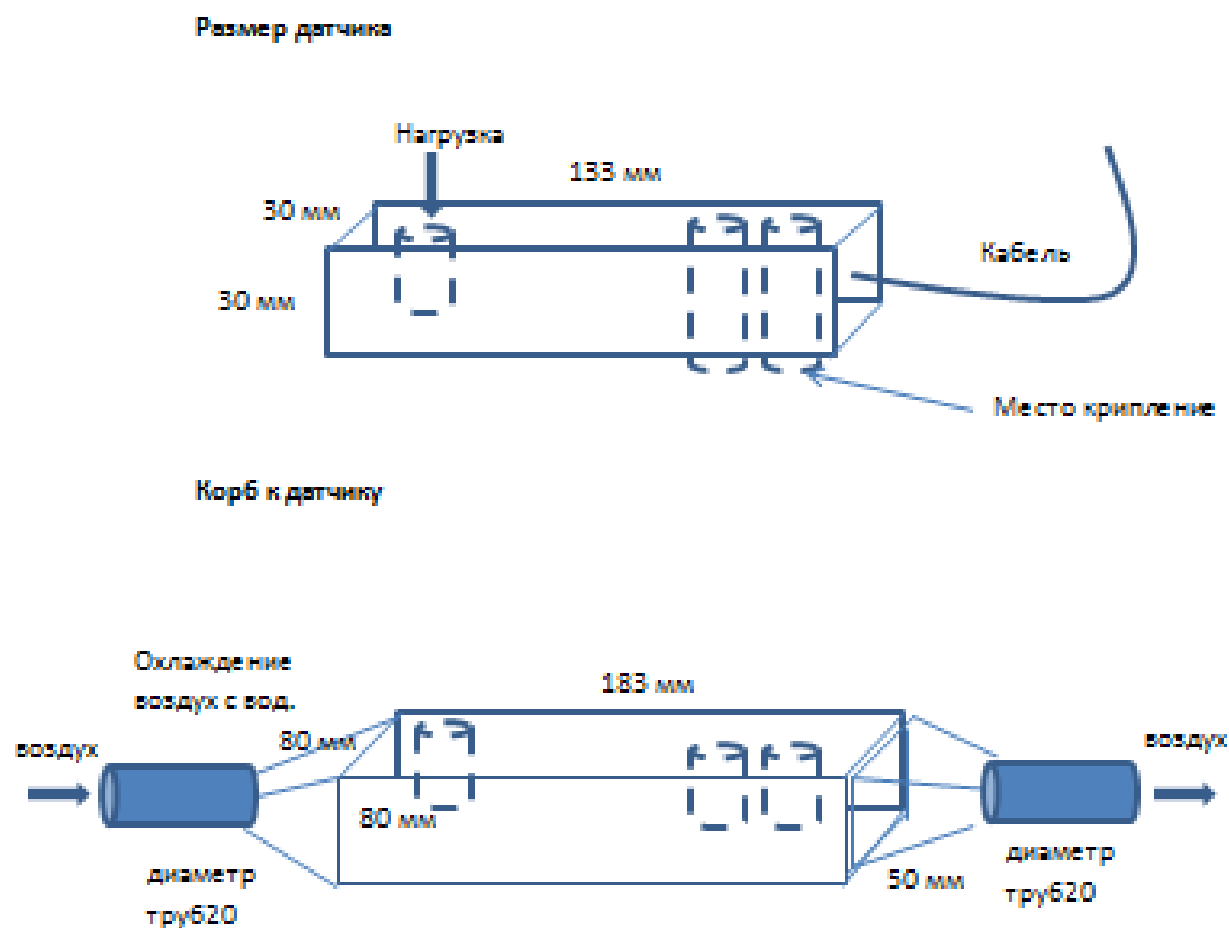
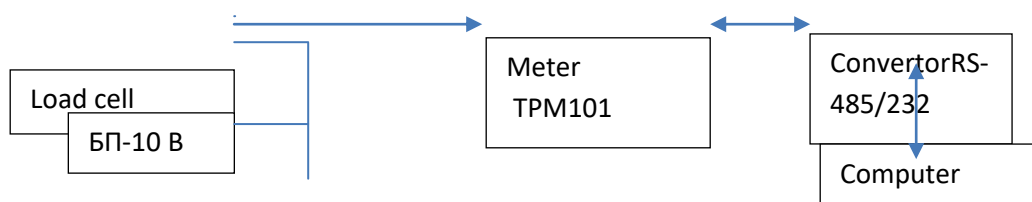


Fig.3. The dimensions and the cooling system sensor

For continuous cooling of the load cell is carried out with air cooled by running water (Fig. 3). the water supply Pipe has a water apron through which water flows. Experiments have shown that the temperature in the sensor space varies in the range of 40-50<sup>0</sup> C, acceptable for the operation of the load cell.

g) Connection Diagram



e) Necessary equipment

- Computer
- Tool package of the program «Trace Mode»
- Converter AC-3, RS-485/232



- Meter regulator TPM 101

- Load cell 20 кг

### CONCLUSION

The developed system works well in the stand version. Analysis of the measurement error showed that the error is about 2-4 %. The system error is within the acceptable range for technological accounting.

The advantages of the developed system are as follows:

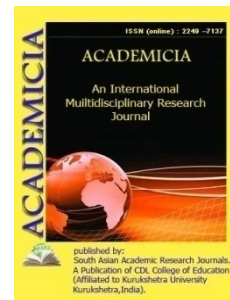
- The system is built on technological nodes, without requiring complex engineering changes;
- the cost of the measuring system is significantly lower than the finished clinker scales supplied at the expense of foreign exchange costs.
- Setup and calibration does not require special training.
- The system is universal, since the installation of a process unit with different capacities only requires replacing the load cell with another kilogram of measurement.
- The system can be additionally connected to the alarm system for exceeding the temperature of the sensor.

At the top level, the system has developed an algorithm and programs for continuous data processing. The system displays the current flow rate and period flow rate in online mode in the set formats. According to technological maps of the process. Registration is performed and reports are generated in the specified forms.

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## INFORMATION ON THE HISTORY OF THE SEPARATION OF THE KOKAND KHANATE FROM THE BUKHARA KHANATE

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### ABSTRACT

*In the article, the separation of the Kokand Khanate in 1709 from the structure of the Bukhara Khanate, a large state with its place in the Central Asian region, and political contradictions were highlighted on the basis of sources. The Kulab, Uratapa, Khujand remained one of the areas where there was a constant robbery between the two states, while at some times these territories were under the jurisdiction of the Kokand Khanate, at some time it was annexed to the territory of the emirate of Bukhara by way of war.*

**KEYWORDS:** *Bukhara Khanate, Kokand Khanate, Chodak Khojas, Turkistan, Politics, Independent, State.*

### INTRODUCTION

As a result of the political contradictions in the Bukhara Khanate, in 1708 year, the influential propaganda team of Targova, Pillakhon, Tokaytepa, Parnok, Tepakurgon and Kaynar, who were the masters of their subjects, declared themselves independent. At the same time, minglar of tribes, whose prestige had increased in the country, went to Ubaydullah's and intended to build an independent state. At the Tribal Council of Elders, the plan to build an independent state was fully approved. In 1709 year the khodzhas were overthrown, the ming dynasty founded an independent state in Ferghana, one of the tribal elders was proclaimed the Shakhruhbiy Khan. As Mullah scientist's work "History Turkistan" States, Uzbeks decide to elect Ashurbek Ogli Shahrubhiy in Targova as a Khan in order to get rid of the complication of the rule of Chodak khojas. The Shohruhbiy issues a decree on the choice of a comfortable place for the horde and the fort.

The sent people believe that the area between the two beans, where the "Blue bunnies" live, is a convenient place. They build an Ark here and begin to build palaces and buildings around it. After that, they pass the Shahrukhbiy to the throne. In this way, the Fergana Valley refused to obey the emirate of Bukhara and declared itself independent. In the Valley separated from the Bukhara Khanate, the Kokand Khanate was formed.[1.158.] In the Valley until 1876, a new Uzbek state was formed, which had absorbed for 167 years.

Historian H.Bobobekov, like many other Muslim and Russian historians, connects the dynasty of Kokand Khans with the Golden Cradle through it with the Babur.[2.] Let's focus all our attention on the legend of the Golden Cradle: the newly formed rulers of the Kokand state – Uzbek genealogies-tried to connect their ancestors with Babur Mirzo, who, without Luck, took a head from the motherland, but left his name because of his pen and courage, and invented strange legends. Here is one of such stories is the legend of the Golden Cradle, recorded in a number of historical inscriptions. We narrate this legend on the basis of the work "The history of Fergana" by the son of our famous historian Isakhan Junaydullokhuj'a ugli Ibrat.[3.]

The city of Khoqand was not in the Ferghana climate. It turned out that in his place in there were villages called Targova, Chonkat and Saray. Here is one of these villages, more precisely a man in propaganda, as long as he used an event to find out that the people of these villages do not obey, unless they are khanzas. Since he knew that Babur ibn Umarshayh had escaped from the Andijan Khans near these villages, he had dressed his nursing son in very expensive clothes, made a gold cradle, surrounded the cradle with unique atlases and hid on the roadside where Babur Mirzo passed. A few of his servants were also put on guard, so that strangers would not take away. A few days later, the people who came out of the three villages to open the water came across the cradle, where this deliberately abandoned child lay. Three villagers got robbed on the boy. In the end, a man came out of them and offered to solve this robbery by throwing a check. Everyone agrees, depending on the fall of the check, the Golden Cradle – the palace, its closets – the concubines, and the child-the propagandists. Propagandists, who brought up the child, called him a Golden Cradle. The lesson explains the following again in this work. "It is obvious that the Golden Cradle (') is the Khan of the people, it is said that the cloud at the beginning of the child(') was overshadowed by the addition of several additional words that made it clear that the cradle of gold was a shadow and that the Targova was overshadowed by the shadow, that is, until then the young man, when he came to the seventh generation, a rich man was Khan Khoqand...incredibly developed on the name of Khan as the influential of the Shahrukhon composed that enthusiasm...

This is not a strange trifle created. Years later, the desolate gazels of Babur Mirzo from the distant Indian soil will conquer the hearts of all the people of Movarounnahr if the mountain deserts rise and Fergana. The rulers, who are aware of this indelible mercy in the people's hearts, associate their descendants with the name of the kosmopolit King and, thanks to this mercy, the people themselves invent strange legends. Other events taking place in the Bukhara Khanate contributed to the strengthening and development of the factories Kokand Khanate as a whole: the movement of non-subordination of owners with a large status and land, such as the Juybor sheikhs; the large proprietors also refused to pay taxes; the rise of a tireless uprising due to the difficult situation of the poor population; the negative consequences of the 1708-year monetary reform of Ubaydullah II; [4.] After ubaydullah, the ashtarakhani khukmrunkism is further weakened.

Political conflicts between the khanates existed from the very first time when the relations between the two states were formed by the Kokand Khanate. The main reason for this was the separation of the Kokand Khanate from the Bukhara Khanate. Although the Shahruhbiy Kokand Khanate was separated from the emirate of Bukhara, its authority was not yet fully or completely independent of the ashtarakhans. Because in the sources it is mentioned that the name of Shahrukhbiy was mentioned after ashtarkhani Abulfayzhan and Shahrukhbiy was given the title of fatherhood by the Khan of Bukhara. The opinion of the researchers about this is also controversial. For some reason, the Shahruhbiy began lands under the millennial dynasty, trying to conduct politics independently (albeit relatively) from the Bukhara Khanate. During the reign of Shahrukh Kokand, Namangan, Margilan, Konibodom, Isfara and the villages around them were in the hands of the minglar dynasty.[5.]

The relationship between the Kokand Khanate and the emirate of Bukhara consisted mainly of conflicts on the territory, mutual Wars. The Kulab, Uratapa, Khujand remained one of the areas where there was a constant robbery between the two states, while at some times these territories were under the jurisdiction of the Kokand Khanate, at some time it was annexed to the territory of the emirate of Bukhara by way of war. Conflict situations between the states we are the son and heir of the Shahrukhbiy Muhammad Abdurahimbi (1721-1733 yy.) we can also see in the period. Abdurahimbi after the conquest of Andijan in 1724 year, in 1725 year conquered Khujand, in 1726 year conquered Uratapa and annexed to the Khanate territories. Although it was a short period of time, it occupied Samarkand and Kattakurghun, which belonged to Bukhara, and also threatened Shahrissabz.[6.]

In 1729-1730 (in some sources, 1145 hijri, 1732 BC) Abdurahimbi marched to Samarkand and besieged the city. But the chiefs and elders of the city will open the gates of the city a few days later. At this time, in many parts of Turkestan, tribes and seeds were engaged in mutual wars and battles. Therefore, Abdurahimbi established an alliance with the tribes and clan leaders and established state borders. Ibrahim, the governor of Shahrissabz, is a relative with paternity kenagas and marries his daughter. This union, formed by thousands of kenagas seeds, will last until the 60 - ies of the XIX century. But six months later, Abulfazhon Khan of Bukhara will re-enter Samarkand at his disposal. When Abdurahimkhan became aware of this, he was killed when he came to Khujand from Kokand and became Khan instead of Abdulkarimbiy ibn Shahrukhbiy (1734 - 1750).[7.]] Three of these data in sources about this, "after the death of Shakhrukh, his eldest son Abdurahimkhan was replaced. This Abdurahimkhan, wise, and owner event. In the age of on, Bukhari's reign works are endlessly weak and incomparable and snakes, unless the government has fallen far from the wisest of events and advices. Abdurahimkhan uzbakiya and sartiya grew old, twenty, thirty thousand soldiers became regulars, to the side of the Khujand. Day and night intensively, arriving in Khujand city, musakhkhir Khujand city, Khujand governor Akbutabi, City Council and ashrofi regions, making prayers and blessings, giving each village a career status, bozgasht made the city of Khokand.[8.] In the second year new went to Uratapa as a soldier and the order of the army, conquered both him and conquered the governor of Uratapa named Kulika, conquered and returned to the city of Khokand. And after a few years [1145/1732 years], many religious troops became fluent on the Samarkand side, after arrived in Samarkand at the opportunity, landed near the city and besieged the city. A few days later was sent to the city, a gift to the printer and in Samarkand-he made a donation, and a few days later sent an ambassador to the governor of Shahrissabz, Olimbek demanding the daughter of

on. Bath has also fulfilled several hospitality positions, showing honors and refreshments to the ambassadors, having disposed of the wedding instrument, having sent his daughter several specific weaknesses ilan tajammul. And the good news is that Abdurahimkhan heard the news in Samarkand, and sent many weak men from there to the prospect of this, and brought them to Samarkand, and declared the wedding, and then stayed in Samarkand for a few days, and then returned to Khujand. After arriving in the Baltics, Abdurahimkhan Khokand, the Emir of Bukhara arrived and took Samarkand back. He heard the message and went to Abdurahimxon many troops Khujand city with the intention to confront his emir Bukhari. But, knowing that the emir Bukhara did not walk towards Samarkand, Khujand became a concubine for a few days in the city of "vamo in dari nafs bavayarz namud" [attraction stepmother did not fulfill him], Abdurahimkhan died in Khujand."[9.]

**In conclusion,** it can be said that as a result of a mutually contradictory strike, the Kokand Khanate was separated from the Bukhara Khanate and further events continued with. After Abdurahimbi, Erdonabi also marches to Khujand and Uratepa, but these marches do not end successfully. Continue his work with the scientists. After seven years of action in 1805 year, Olimkhon conquered Khujand, and in 1806 year Uratepa and entered his obedience. The sources write that during the attack on Uratepa, the scientist sees only a small furious at the inhabitants of the city and commands his commanders and lords to plunder the city of Uratepa. It is reported that the emir of Bukhara, Amir Haydar, decides to attack Uratepa.

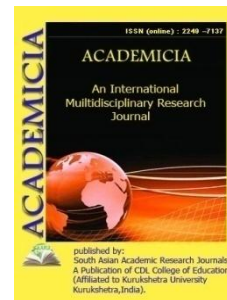
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## STRUGGLE FOR SURVIVAL: A STUDY OF IMPACTS OF LOCKDOWN ON CHILDREN FROM DISADVANTAGED BACKGROUNDS

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### ABSTRACT

*Emphasis of corona virus coverage has been on “corona warriors”- doctors, paramedical staff, police and the lot; Indian children from disadvantaged backgrounds are vulnerable to risks of different order. Though according to the figures they are not affected much from the health effects of novel corona virus, the lockdown and its aftermath will definitely have deep ill effects on their well being. India is a young nation with 39% population below the age of 18 years. Children are the future human capital; the profound effect of lockdown on disadvantaged children will be catastrophic and long lasting to society, economy and business. This desk research is an attempt to shed light on the plights of the disadvantaged categories of children due to lockdown in India.*

**KEYWORDS:** *Children, Corona, Covid-19, India, Lockdown.*

### INTRODUCTION

According to UNICEF (2020), across the world 99% (2.34 billion) of children and young people under the age of 18 years live in one of the 186 countries which have imposed some form of restrictions on movement due to COVID-19 and 60% of all children live in one of the 82 countries with a full (7%) or partial (53%) lockdown which accounts for 1.4 billion young lives. To curb the infection of COVID-19, nationwide lockdown in India was first imposed on 25<sup>th</sup> March when there were around 530 corona infected cases across the nation. Later on it was extended three times with some relaxations to specific sectors. A United Nations report stated that- “*Though children are not the face of Corona pandemic but they risk being among its biggest victims*”. India is the home to approximately 472 million children which is the largest child population in the world. Studies reveal that lockdown has impacted around 40 million children of poor Indian families. These include child beggars, street children, child labourers,

children of migrant labourers, homeless children, children of homeless, ragpickers, children in institutional care and children in vulnerable circumstances. Though the struggle of disadvantaged children for survival is never ending; during lockdown they are fighting more than they can at their age. The mitigating measures for fighting COVID-19 are inadvertently doing more harm than good through their harsh socio-economic impacts on above categories of disadvantaged children. According to UNICEF (2020), this health crisis may result in child-rights crisis in absence of urgent global coordination to prevent it.

### **Objectives**

Objectives of this study are to-

- ❖ Explore the sufferings of disadvantaged children during the lockdown period in India.
- ❖ Study the aftermath of lockdown on disadvantaged categories of children.

### **Research Methodology**

This study is a result of desk research and primarily relies on secondary sources of information.

### **Findings and Discussion**

A report of Housing and Land Rights Network India stated that-

*“After 40 days of India’s lockdown, life for the urban and rural poor is overridden with loss of income, hunger, ill health, desperation, destitution, and a rise in malnutrition. Other fateful consequences of the lockdown have been a significant increase in domestic violence against women and child sexual abuse, adverse mental health impacts and psychological stress, disruption in children’s education, and loss of life for reasons other than the coronavirus, including inter alia starvation, denial of medical aid/inability to access medical assistance, exhaustion, and suicide.*

Lockdown has brought fresh challenges to the already vulnerable disadvantaged children and also severed the existing troubles they face in their day to day life. Following sections underscore such challenges being faced by disadvantaged children during lockdown and the future impact of lockdown on them.

### **Threat to survival**

Majority of the economic activities stopped during lockdown in India. IMF estimates that global income will contract by 3% in the year 2020, in case corona pandemic recedes in the next half of 2020. Income shocks at the level of poor households will leave them with no choice but to cut back their expenditure on food and health which can have overwhelming effects on their children. Secondly, in 143 countries poor children depend on school meals and India has the world’s largest school feeding scheme known as ‘mid day meal scheme’, which guarantees one nutritional meal for at least 200 days in a year to 12 crores children. Shutting down schools during lockdown will force these poor children to look to other sources of daily nutrition. Disruptions in food supply chains and local food markets may pose another problem of food security to poor households. Due to long closure of schools during lockdown, drop-out rate will also increase particularly in case of female child. With only 24% families having the facility of internet in India, and 50,000 students from economically weaker sections in Delhi itself from whom laptop, android phones and high speed internet connectivity are luxury; the ICT option of

accessing school education will further widen the learning divide between children from privileged backgrounds and children from underprivileged backgrounds. Children living with chronic diseases are at higher risk of less or no access to healthcare and medicines, disruption of immunization services and non-availability of certain medicines during lockdown also have serious health impacts.

### **Vulnerability to abandonment**

Regardless of child abandonment being punishable under IPC section 317, India has 12 million abandoned and orphaned children. In 2011 there were 11 million abandoned children and 90% of them were girls. Post lockdown, there is the high probability of increase in the cases where poor parents will either abandon or will try to seek to give away their children due to economic and financial hardships resulting from lockdown. During lockdown there is a ban on child adoption so there would be a surge in the cases of children who will be given up by their families for adoption after the lockdown is lifted. During lockdown instances have been reported from Ahmednagar district of Maharashtra where the children including babies as old as two months were abandoned by their parents and families also trying to hand over their children to NGOs.

### **Vulnerability to trafficking**

In the year 2016, 61% persons trafficked were children below 18 years. 40,000 children in India are abducted every year, and everyday 3,00,000 children in India are forced to beg in a multi million rupees industry which is controlled by human trafficking cartels. Studies reveal that the trafficked children are generally from poor and marginalized communities. There are the chances of increase in child trafficking post lockdown because poor families would find themselves in the situation where it will be difficult for them to fend for their children and children will either be renounced or sold to make some money. At the time of writing this article, Government of India has been directed by the Supreme Court to enquire into the issue of child trafficking post lockdown, within 14 days.

### **Vulnerability to abuse and violence**

For disadvantaged children, homes do not provide safety and security; UNICEF 2020 stated that “*2 in 3 children are subjected to violent discipline by caregivers*”, other studies also reveal that children experience violence mostly from the caregivers. During lockdown, children can not to go out and at home they are at risk of witnessing abuse due to parents’ frustration resulting from poverty and other hardships, domestic violence, or an alcoholic or drug-addict family member mostly the fathers. In lockdown-1 which lasted for 21 days, Childline India received 4.6 lakhs complaints and intervened in 9385 cases where 20% were related to protection of child from abuse. In just 11 days from 20<sup>th</sup> March to 31<sup>st</sup> March 2020, 92105 sos calls related to protection against abuse and violence on children were received. There is a possibility of these numbers being on lower side because during lockdown children are isolated from teachers, members of child welfare committees, volunteers of NGOs or other concerned adults.

### **Vulnerability to hunger**

In Global hunger Index of 2019 India was ranked at 102<sup>nd</sup> position out of 117 countries. In spite of producing 291.95 million tonnes of food grains in 2019-20; a UNICEF report stated that 69% of the deaths of children below 5 years were of age were attributed to malnutrition. There are approximately 2 million street children in India and one in four of them go to sleep empty

stomach; lockdown has pushed them in more severe situation. Street children are usually found engaged in begging, vending on streets or rag-picking at the hotspots such as traffic signals, railway stations, religious places, near bus and auto stands. They depend on random sympathy of strangers but during lockdown street children just disappeared, their whereabouts and the conditions in which they are living during lockdown are not known to anyone. If they cannot work on the streets, they cannot make their living. Instances have been reported in media where street children are not getting food during lockdown; street children from Lucknow, Ghaziabad and Delhi sending video messages to authorities to provide them food; children of wage earners starving, poor families dependent on alms received by their children through begging.

### **Psychosocial problems**

UNICEF (2020) stated that in addition to profound economic and health impact, the current pandemic will also have serious effects on psychosocial well being also and children will face additional challenges in the COVID-19 world. Restrictions on movement during lockdown; and physical distancing which does not seem to coming to a halt soon, are the areas of concerns on the mental well-being of children. According to few news articles published during lockdown period, there are 200,000 street children in New Delhi and during lockdown majority of them got sequestered in small impermanent huts without basic amenities, they also experienced difficulties of muck gathering around their slums , unbearable stench, their eatables and wearables soaking wet. Confinement in such conditions may have serious physical and mental health issues. Few street children addicted to drugs, pelted stones on vehicles in Delhi during lockdown, it is a sign of withdrawal symptom.

### **Vulnerability to infection**

“Stay home, stay safe” is the recommended preventive measure for controlling the corona virus infection. But what about those who do not have home? Census 2011 figures reveal that 4.5 lakhs families with total population of 17.73 lakhs in India do not have any roof cover. Infectious diseases, asthma, malnutrition, poor health, prevalence of substance and drug abuse and other pre-existing health conditions among street connected children and homeless children make them more prone to risk of COVID-19 infection. In addition to social distancing, hand-washing is also one of the preventive measure to control the spread of COVID-19 but according to UNICEF (2020) 40% population of the world lacks basic hand-washing facility with soap and water which will also put disadvantaged children at higher risk of infection. Mapping of the advisories and circulars for the homeless issued between 9<sup>th</sup> March 2020 to 3<sup>rd</sup> May, 2020 by state governments reveal that except Andhra Pradesh, Delhi, Karnataka and Maharashtra no other state has mentioned either the general relief measures related to sanitation and health facilities or the homeless population is not linked to them at all. Similarly, only Arunachal Pradesh, Bihar, Delhi and Kerala have general relief measures related to new shelter for homeless. On the other hand, children in institutional care are vulnerable due to substandard hygiene practices and difficulties in maintaining physical distancing due to disproportionate numbers.

### **Difficulty in assisting help to marginalized children and rescuing and rehabilitating children in difficult circumstances**

During lockdown volunteers of different NGOs and other concerned members from civil society are finding it difficult to reach out to children due to restriction on public movement. Childline

service is an emergency service and it remains active and functional under any circumstances and situations, however its volunteers without Personal Protection Equipments (PPEs) are at higher risk of direct exposure to the virus in their efforts to rescue and rehabilitate children in difficult circumstances.

## CONCLUSION

Studies reveal that children from marginalized and vulnerable groups such as street children have not got assistance from most relief measures announced during lockdown. For protecting the children of poor families working in informal economy, there is an immediate need of food, shelter and financial assistance for few months after the lockdown ends. Free water supply and increase in community toilets across the nation are also required. Database of disadvantaged children, street children, vulnerable children and children in difficult circumstances need to be created by NCPCR and SCPCRs so that these categories of children could be linked to various social schemes of central and state governments.

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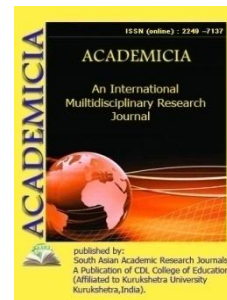
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## **PATTERNS AND MIRACLES OF NATIONAL ABR FABRICS (ON THE EXAMPLE OF THE FERGANA VALLEY)**

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### **ABSTRACT**

*Uzbekistan is a unique historical and ethnographic place. The huge processes of globalization taking place in the world today and the improvement of various historical ethnographic, interregional communication systems are influencing ethno-national traditions. In addition, the role of this article is invaluable in reviving the invaluable heritage, national values and traditions created by our ancestors over the years, as well as bringing their most exemplary, value-related aspects into the life of society.*

**KEYWORDS:** Craftsman, Fergana Valley, Abr Fabric, Abr, Master, Pattern, Bekasam, Turquoise, Purple, Strange Flower.

### **INTRODUCTION**

Uzbek folk arts and crafts have ancient history and rich traditions dating back thousands of years. Many forms of this priceless heritage-traditional art have been preserved to this day. This scientific article is one of the main goals of the promotion of folk applied art and its unique heritage. Special attention is paid to the implementation of scientific and creative information to support the activities of modern craftsmen in the Fergana Valley. The unique applied art of the Uzbek people, in particular, the masterpieces of silk weaving, abrband<sup>1</sup> colorful silk products, which are vividly reflected in the art of silk weaving, still bring joy to the delicate taste buds and acquaint them with the world of sophistication. Nationally prestigious fabrics are gaining more

and more attention in our country and internationally. In the Middle Ages, not everyone was able to afford this national fabric. It was only in the twentieth century that these fabrics became popular, but did not lose their value and charm. In today's fabrics woven from natural raw materials, the centuries-old world cultural heritage has found its value. Hundreds of very talented but forgotten Uzbek abrband masters have made a significant contribution to the development of this unique type of folk art - silk weaving. Parents and children of the Fergana Valley - Turgunboy and Rasul Mirzaakhmedov - are among the craftsmen who have the honor of preserving and creatively enriching traditions.

### The Main Findings and Results

Silkworm breeding in China appeared at the end of the third millennium BC. Previously, silk fabric was produced only in the Khagan palace.<sup>1</sup> However, as noted in historical and archeological sources in the I-II centuries AD, the experience of processing silk began to be applied in the territory of the ancient Bactrian and Sogdian states - today's Uzbekistan. In the V-VI centuries in the cities of Sogd the production of silk and semi-silk fabrics was established.<sup>1</sup>

Later, silk production in these countries developed rapidly. In many cities of Central Asia, skilled craftsmen were engaged in the production of silk and semi-silk fabrics. Patterns typical of Muslim aesthetics have also undergone certain changes to the decorations according to the requirements of art. There is no definite information about the emergence of Central Asian abr fabrics. But in this article we will try to cite the data of older masters. According to the famous master of Margilan A. Akhmedov, "There is a saying about the non-cocoon period, but there is no mention of a time that is not abrband". According to another source, the oldest documents proving the existence of fine fabrics date back to the XVI-XVII centuries. The term "abr" appears as a pattern name in 16th century literature. For example, Qazi Ahmad's treatise on calligraphy and artists mentions the "abr" pattern.<sup>1</sup> In the Fergana Valley, mainly abr fabrics are made not only from silk fiber, but also by mixing silk and cotton fiber. In this case, the body of the product is silk, and the back is made of cotton fiber. Figure 1.

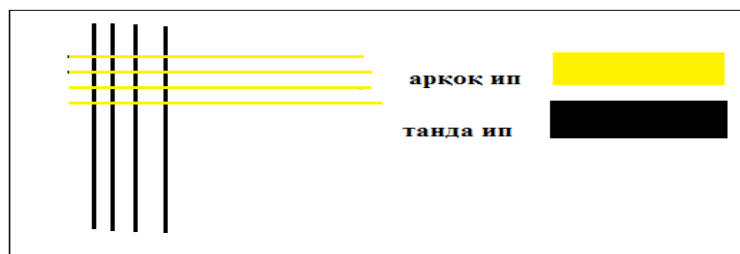


Figure 1

Known as Adras<sup>2</sup>, such prestigious abr fabrics were used to sew women's shirts, men's and women's coats, and other household purposes. Road-embroidered embroideries are mainly sewn from men's coats. Since the embroidery of road fabrics was created during the selection process, the weavers were the embroiderers. The weaver knew the compositional methods and the laws of his region. The bekasams of the Fergana Valley are thin and delicate. This is because the thinner flower on the back strip is mostly cold turquoise purple. It stands out from the rest with its more bluish tones and a smooth transition to a variety of greens. Figure 2



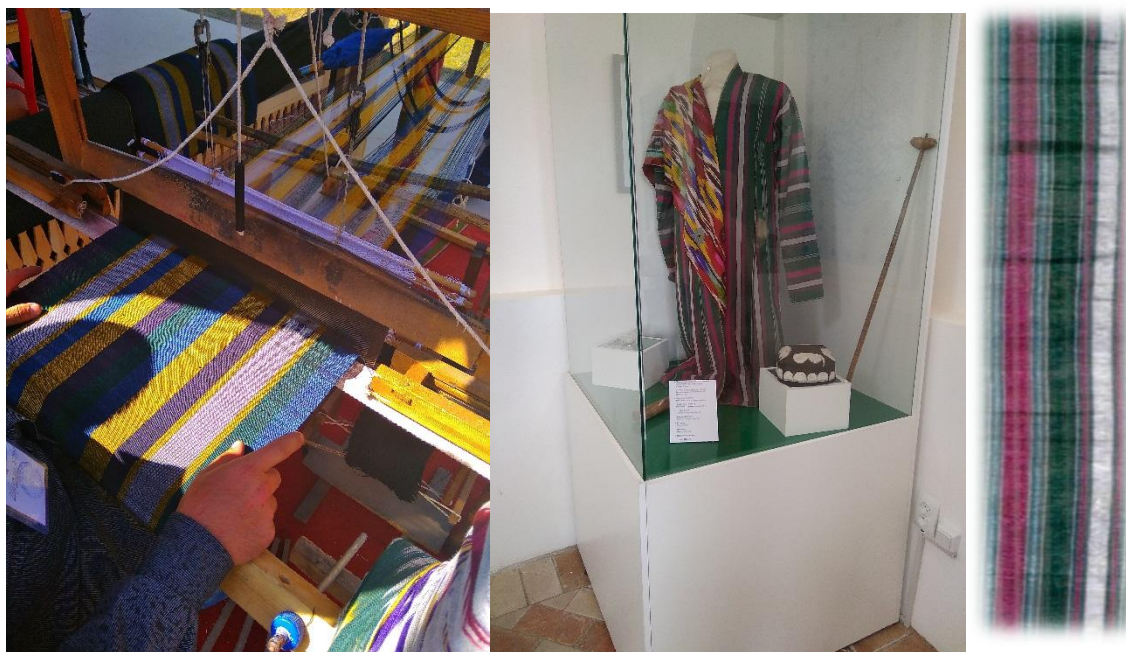


Figure 2

Fabrics such as banoras, parpasha, duroya, yakroya are also examples of abr-blended silk fabrics. In the XVIII-XIX centuries, the Fergana Valley became famous as a center for the production of silk products. The city of Margilan, which has many silk workshops, is especially famous<sup>2</sup>. According to the legend spread in Margilan, the combination of strange floral arrangements and colorful patterns is the watery glow of the celestial rainbow. One of the weavers, who was amazed to see the glitter of those colors, wrapped it in silk. The appearance of serjilo colors is explained by such a noble narration. Through this article, we will try to restore the best traditions of national craftsmen of the Fergana Valley, to study them scientifically<sup>2</sup>. As a result of the study, Fergana valley craftsmen restored the methods of dyeing from natural plants in the 90s of the twentieth century, the technology of production of many ancient types of fabrics, traditional patterns of silk weaving were further enriched and involved in production. Currently, 27 workshops in Margilan are engaged only in silk processing. More than a hundred masters give them shine and color. About two hundred are engaged in the preparation of silk yarn for weaving, and more than a thousand masters are directly engaged in silk weaving. In the Fergana Valley, the dynasty of abrband-masters is treated with special respect. The Mirzaakhmedov family is one of them. Turgunboy Mirzaakhmedov is a native of Margilan. His family archive contains an album of photographs. Looking at those pictures, one can imagine the unique creative thinking of the master, what symbols and images fascinated him, how the colors and compositions that gave life to the fabric were born. As the master draws, it is important to take into account that the scale expands when the sketches are transferred to the fabric. The variety of fabrics created by T. Mirzaakhmedov is highly reflected in the pattern, decoration and design. Master Turgunboy often wrote various comments on the borders of his paintings, from which it is possible to find out who or what inspired the appearance of the ornaments, where and under what conditions they were created.

In T. Mirzaakhmedov's ornaments, the themes of traditional Uzbek applied art - textile - carpet weaving, embroidery - play a special role. He was a always inquisitive, deep-minded artist who expressed his knowledge and impressions in real life. Some of the decorations are created under the influence of nature and cityscapes, a movie or a TV show that amazed him. But traditional abré ornaments have always served as the basis of all new copies. Especially noteworthy is the decoration "Dilbar" created by Turgunboy Mirzaakhmedov in 1968 after the performance of the famous singer Klara Jalilova's song "You are a beautiful girl" on TV.. There is a sketch frame with the signature of the master T.Mirzo<sup>2</sup>. Figure 3

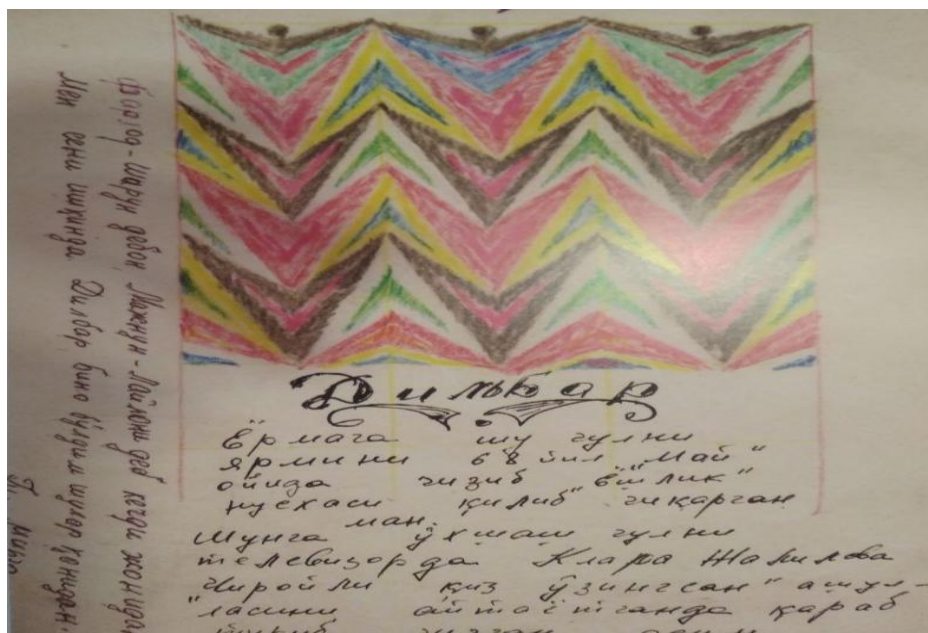


Figure 3. Copy of T. Mirzaakhmedov "Dilbar" 1968.

Turgunboy Mirzaakhmedov's dreams came true. Today, the traditional national fabrics of the Fergana Valley have been recognized abroad as the national brand of Uzbekistan. Clothes made of it are presented at world fashion festivals.

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## FORMATION OF PROFESSIONAL SKILLS FOR STUDENTS OF A TECHNICAL UNIVERSITY

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### ABSTRACT

*This article is about the process of internships in the production enterprises of students studying in higher education institutions. The goals and objectives of the formation of practical skills and skills to strengthen the theoretical knowledge of students in the practical process are described. The role of production practice in the development of future professionals to become competitive in the labor market in future employment was emphasized.*

**KEYWORDS:** *Student, Internship, Enterprise, Skill, Goal, Factory.*

### INTRODUCTION

Bringing up a person at the level of a well-rounded person is a very complex process, and since ancient times, the leaders of society have been involved in this activity. This situation means that the upbringing of the younger generation, its organization, content is important in determining not only the maturity of the individual, but also the development of society. These experiments play an important role in the creative application of the laws and principles of teaching used in the forms of teaching, in the application of ideas, theories and laws of scientific knowledge in practice. Especially in Uzbekistan, which has long been home to great scientists, the upbringing of the younger generation will inevitably have a completely different meaning. Today, the main task of the higher education system is the formation of knowledge and practical skills in young people in their chosen specialty. The role of production in the formation of students' practical skills is invaluable.

The Resolution of the President of the Republic of Uzbekistan dated July 11, 2019 No PP-4391 "On measures to introduce new management principles in the system of higher and secondary special education" defines the main tasks of the Ministry of Higher and Secondary Special

Education of the Republic of Uzbekistan. Among the main tasks are: optimization of educational areas and specialties, the organization of student internships in production and other enterprises, taking into account the needs of economic sectors, science and social development; marked.

In order to implement the tasks set out in a number of decisions and regulations related to the industry, industrial enterprises and technical higher education institutions must work together.

## REVIEW OF LITERATURE

The changes taking place in modern Uzbekistan, associated with the democratization of society, the building of a rule of law, the recognition of fundamental human rights and freedoms, the expansion of opportunities for the development of the spiritual and material needs of the individual, actualize the problem of the readiness of future specialists for independent responsible action in political, economic and cultural life. These trends in the development of society require a rethinking of the goals of vocational education. The main ones are: the readiness of students to solve urgent and promising professional problems; awareness of social significance and personal responsibility for the results of their own activities; the need for continuous improvement and focus on professional success, which, in their totality, determine the saturation of the concept of "professional competence". Thus, the modern situation of social development has actualized the need to study such a phenomenon as "professional competence".

The study of the concept of "professional competence" is impossible without identifying essential characteristics, such related concepts as "professional", "professionalism", "professional activity", "professional knowledge, abilities, skills".

Works in which "expansion of the subject's space of personality" is considered as the development of the subject to the level of a professional, as professional and moral enrichment with a mandatory increase in responsibility (Abdullaeva K.M., Boboqulov S.) became important for our research. Note that most researchers concretize separately for each type of activity the process of the development of a subject to the level of a professional. Professionalism is understood by them as a constantly expanding system of specific knowledge with high productivity in this area.

Knowledge is directly related to professional activity. The structure and content of professional activity are determined by their specific specifics (G.I.Ibragimov, K.N.Xatamov).

The main indicators of professionalism are professional skills. The skills of a professional are assessed not only in the aspect of applying the knowledge gained for practical purposes, but also in mastering and in developing new algorithms for solving professional problems. The range of these skills includes the use of new technical means of activity and communication, forecasting risk situations and designing ways to get out of it. In the form of a system of generalizing knowledge and skills in combination with a creative attitude to professional activity, they are defined (Juraev R.Kh., Ismailova Z.K., Mirsaidov K.) as professionalism.

Professionalism, in the opinion of most authors (M.V. Bordovskaya, N.G. Babilurov), is not a frozen state, but presupposes a constant search, replenishment and expansion of the range of professional tasks to be solved. Professionalism is the result of the development of the intellectual and emotional abilities of the individual, the acquisition by the subject of the skills of the scientific organization of labor. In the constantly changing conditions of the modern labor market, only professionalism guarantees stability of success.

In the last decade, much attention has been paid to finding ways to transfer to specialists a large amount of knowledge accumulated by mankind (Muslimov N.A., Nishanaliev U.N., Olimov Q.T.). In solving this problem, scientists see reserves for improving the quality of professional activity, as well as the basis for the formation of the ability to self-regulate actions and the development of intelligence.

Recognizing the importance of the cognitive component in the structure of professional competence, scientists argue that professional activity itself is not an organized and complete system of knowledge. Graduates of professional educational institutions (universities), being carriers of a certain baggage of knowledge, for a long time master practical skills under the guidance of mentors, as a result of which professional knowledge is transformed and improved. In this regard, education is currently focused on the formation of specialists' need for constant replenishment and updating of knowledge, improvement of skills and abilities, their consolidation and transformation into competences (Nuridinov B.S., Urinov U.A.).

The main characteristic of the Uzbek education of the last decade is its instability. Nevertheless, it was at this time that intensive creative work began, aimed not only at the exit of education from this state, but also at its further sustainable development.

Innovative processes in the educational space of Uzbekistan were the factor that contributed to the formation of a "paradigmatic plurality of modern production and pedagogical reality" (Rashidov Kh.F.). This multiplicity is primarily due to the multidimensionality of human interaction with the world, other people, and oneself, unique in comparison with the previous historical development of mankind. Hence, in modern education, a unique opportunity has appeared in different ways to build production and pedagogical processes.

The scientific basis for the design of innovative production and pedagogical processes is innovative pedagogical theories: the theory of overcoming psychological barriers; theory of educational management and marketing; theory of lifelong education. Remain in the category of innovative educational approaches in organizing the process of training a competitive specialist, personal and activity approaches, the implementation of the ideas of humanization, democratization, as well as the idea of the advanced nature of theoretical training in the organization of industrial practice.

## **OBJECTIVES AND HYPOTHESES**

Modern professional training requires a transition to the formation of stable creative and research skills in students, the ability to solve problems; their learning process should combine theoretical knowledge and practical experience. Currently, an important condition for professional education is the ability of a specialist to integrate into an unstable professional environment. Employers' requirements for professional skills are constantly changing, and adaptation to these changes is ensured by the information and analytical competence of a specialist of any profile.

A modern specialist of any level (worker, technician, engineer) today has to continuously complete his studies, in contrast to a specialist at the beginning of the century. Therefore, no matter what field a specialist works in, he must be dynamic, mobile, able to continuously improve his skills, be able to think creatively and independently solve fundamentally new problems, and adapt to rapidly changing conditions of activity. Thus, the decisive importance for a university graduate of any level is acquired not only by mastering the sum of specific

knowledge and skills, but as the main goal - the ability to independently obtain, acquire, and systematize them.

The practice of university students is an integral part of the main educational program of higher professional education. The goals and scope of practice are determined by the relevant state educational standards in the areas of training (specialties) of higher professional education.

Practicing is one of the forms of independent work of students and plays a special role in fostering individual independence. During the internship, creative activity is performed to acquire and consolidate theoretical knowledge. As a result of intensive and fruitful independent work, new cognitive skills are mastered, that is, the professional skills of a future specialist are formed. This teaching method puts students in conditions of independence, makes them think, look for answers, and solve practical problems.

Only at the enterprise, during practice, students support theoretical knowledge with the skills of their practical application. The more practical skills are formed in the learning process, the higher the qualifications of a specialist. All types of practice are intended to master these skills: educational, industrial, pre-diploma.

The organization of educational, industrial and pre-diploma practice at all stages should be aimed at ensuring the continuity and consistency of students' mastering of professional activities in accordance with the requirements for the level of training of the graduate.

### **RESEARCH METHODOLOGY**

Educational practice is compulsory and is a type of training sessions directly focused on the professional and practical training of students, during which the formation of the basic primary professional skills of students is carried out, preparation for a conscious and in-depth study of general professional and special disciplines.

The purpose of the training practice is:

- expanding students' knowledge about the features of their chosen profession;
- Consolidation and deepening of the knowledge gained by students during theoretical training, and preparation for the study of subsequent disciplines;
- Familiarization with the applied technique and technologies in accordance with the peculiarities of the direction (specialty) of training;
- Training in methods, techniques and techniques of laboratory research;
- Development of primary professional skills corresponding to the qualification characteristics of graduates.

After completing the practice, a report is completed and submitted. The quality of the report is assessed taking into account the theoretical and practical content, compliance with its methodological guidelines.

Industrial practice is carried out to consolidate, expand, deepen and systematize the theoretical knowledge of students in the field of special disciplines studied, to check professional readiness for independent work, as well as to study all aspects of the work of individual industries, the

main technological equipment, to acquire practical skills in production, experience in organizational work in labor collectives.

Professional activity consists of performing labor functions that require complex skills from a specialist. Complex skills are cross-subject skills that require knowledge of different academic disciplines; therefore, they cannot be formed in the process of studying individual subjects in isolation. Industrial practice is one of the inter-subject forms.

Undergraduate practice, as part of the main educational program, is the final stage of training at the institute. It provides an opportunity for the student to apply the knowledge and practical skills acquired during the industrial practice.

The main goal of the pre-diploma practice is to obtain theoretical and practical results that are sufficient for the successful implementation and defense of the final qualifying work, the topic of which predetermines the goals and objectives of the pre-graduation practice.

Passage of undergraduate practice should provide a solid foundation for the subsequent successful implementation and defense of the final qualifying work, the diploma project.

To achieve the main goal of undergraduate practice, the student must solve the following set of research and practical tasks:

- Acquaintance with the object of future research;
- study of scientific, educational, methodological and periodical literature, regulatory and reference and legal information on the theory and practice of the problem under study from various sources (literature, periodicals, conferences, the Internet) about the subject area, about existing methods and approaches, about analogues and prototypes;
- Familiarization with the organization (enterprise, institution), its structure, the main functions of production and management departments;
- a detailed study of existing information processing technologies, as well as instructions and regulations governing the activities of the organization;
- Analysis of the existing state of affairs in the organization (enterprise, institution), evolution over time, assessment and diagnosis of the state of the problem;
- Identification of problems (shortcomings) in management and the choice of directions for independent development to be carried out by the student;
- instilling the initial skills of conducting the experiment and processing the results of the experiment;
- Familiarization with the achievements in this field of science and technology;
- A comprehensive analysis of the collected information in order to further select the optimal and justified design solutions;
- Development of proposals for the effective development of individual types of activities of the organization (institution) as a whole;
- Substantiation of the effectiveness of the proposed solutions and development directions.

Methodological guidelines have been developed to help students.

The practice is carried out at the leading enterprises of the city: OJSC "Bukhara Mechanical Plant", equipped with modern technologies, with which there is a close relationship, which allows for new forms of education, and close cooperation has been established in almost all areas of joint activity: educational, industrial, research and etc.

This enterprise is the base for organizing and conducting educational, industrial and pre-diploma student practices. Students very successfully implement the acquired knowledge in practical professional activities both during their stay at the university and after completing their studies. At the same enterprises, in the main, employment of graduates of the institute is carried out. Our graduates are among the main and leading specialists of these associations.

The real material obtained in practice, with the inclusion of elements for solving problematic issues of enterprises, students use in course and diploma design. A number of projects end with implementation in production.

As the organizer, head of the Department of Mechanical Engineering, organizing, conducting and managing practices for many years, I can say with confidence that practices are an effective form of organizing the educational process and coordinating the efforts of the university and the enterprise to enhance the cognitive activity of full-time students.

The heads of industrial enterprises of the city highly appreciate the professional training of graduates of the Department of Mechanical Engineering. This is evidenced by the results of the defense of final qualifying works and reviews of the chairmen of the state certification and examination commissions.

Thus, the role of practitioners in the learning process leads to the achievement of such goals as consolidating the theoretical knowledge gained by students within the walls of the university by studying the work experience of enterprises, institutions, organizations, mastering production skills and advanced labor methods in the specialty, acquiring social and political skills, organizational and educational work in the team, thus forming the professional skills of the future specialist, which will become the basis for professional growth, will make it possible to make a brilliant career, and will give the opportunity to personally succeed.

## CONCLUSIONS

Industrial practice is a system-forming factor in the formation of students' professional competence. Industrial practice is characterized by a certain content (a set of pedagogical and industrial conditions that ensure the implementation of developmental differentiation in organizing the experience of successful independent industrial activity of students) and structural (cognitive, motivational-value, activity blocks in a holistic unity and interconnection) organization. Industrial practice determines the procedural aspect of achieving the level of professional competence of specialists demanded by an individual, society and industry.

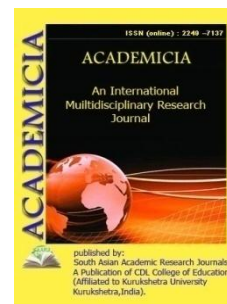
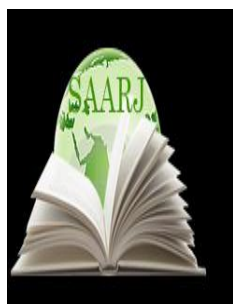
The criteria for the professional competence of students are: professional knowledge, motivational and value relationships, professional skills.

In the process of industrial practice, the levels of professional competence are formed: intuitive, situational, active-search, constructive-creative.



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## HISTORICAL EXPERIENCE OF UZBEKISTAN IN ENSURING INTERNATIONAL AND RELIGIOUS HARMONY

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### ABSTRACT

*Ensuring religious tolerance and interethnic harmony in Uzbekistan is recognized by the world community. For a long time, Uzbekistan has been a place where people of different nationalities and religions live in peace. Religious tolerance has become an integral part of Uzbek culture and mentality. The policy of religious tolerance pursued in Uzbekistan has accelerated democratic change and socio-economic development, maintained inter-ethnic and inter-religious harmony in society, and laid the foundation for peace and stability in the Central Asian region.*

**KEYWORDS:** Mowarounnahr, Buzan, Akhbar, Orthodox, Dialect, Christian.

### INTRODUCTION

The territory of Central Asia has been inhabited since ancient times by peoples of different cultures, languages, customs, lifestyles, and beliefs in different religions. The establishment of relations with different countries had a significant impact on the religious and spiritual life of the local population, as well as the development of the culture of other countries, as well as the traditions of Mowarounnahr. This has served as one of the key factors in shaping religious tolerance [1: Alimova].

The roots of Uzbek tolerance, ethnic, cultural and religious tolerance of our people, which serve as a source of our spiritual awakening today, go back a long way. Along with many other nations, Jews have lived in Central Asia for many years. In the works of medieval scholars such as Abu Rayhan Beruni, Abu Ishaq Isthakhri, Abu Said Gardizi, Abu Ja'far Muhammad ibn Jarir Tabari, Ibn Khordadbeh, as well as through the diaries of famous travelers such as Benjamin Tudelsky, Ibn Batuta, Seymour Mendville, Mamon Maghribi and Lansdell, It is possible to get

historical information about. In particular, the inscription on a pottery found in Erk-Qala confirms that Jews lived in Merv as early as the 4th century BC, while Tabari noted that some of Khorezmshah's advisers were "Akhbar".

## THE MAIN FINDINGS AND RESULTS

While Beruni studied Jews, Syrians, and Christians, including the Jewish calendar, holidays, customs, and rituals, Abu IshaqIstakhri gave information about the "Jewish Gate" and shopping malls in Balkh in his "Kitab al-Masalik al-Mamalik". For centuries, tolerance for members of other religions has led to the influx of Jews from Iran, Afghanistan, and even Palestine.

Ibn Khordadbeh writes that there were local Jewish merchants who lived in the Central Asian region and knew the Slavic language. Abu Sa'idGardizi, in his historical and didactic work Zayn al-Akhbar, studies the Jews separately, devoting Chapter X to "Jewish Holidays" and Chapter XI to "Reasons for Jewish Holidays". Ibn Battuta writes in his Travelogue: "When Buzan became king; he allowed the Christians and the Jews to build their temples". Other historical sources also say that Mowarounnahr was rich in Jewish merchants from Bukhara, Khorezm, Samarkand, and in the early middle Ages there was a city called "Judaism" in the Fergana Valley (now Jalal-Abad). This historical evidence shows that Jews have been living in Central Asia for many years.

During the reign of Amir Temur and the Temurids, many Jewish communities from Iran were relocated to the Mowarounnahr region, and some of them lived in Bukhara. During this period, the Christian communities in the region also survived and held their positions in the region for a long time, despite their separation from their religious centers.

The Jews and Christian communities of Central Asia became so integrated with the people of the region that their speech (dialect), dress, food, customs, musical culture, and way of life gave rise to elements specific to the people of the region [2. Alimova, M. F., Qalandarova, D. U., &Alimjonova, L.]. As our people go through complex historical processes together with representatives of other religions, they have accumulated vast experience in inter-religious tolerance.

There is also historical evidence that the Muslim population provided comprehensive assistance to members of other religions and nationalities who were forcibly relocated from the central regions of Russia in the 19th century. These data say that if the locals had not shown compassion and kindness to the poor nomads, many of them would have died of starvation and need. There are many more examples in our country of history of tolerance, understanding and humanitarian assistance to other religions. In this regard, Abu Nasr al-Farabi's statement that "the basis that unites people is humanity, and therefore people should live in mutual peace because they are united into a group of human beings" suggests that the great philosopher considered social cooperation as one of the factors of social development [3. Dono, K.].

All the religions in the world are based on the ideas of goodness and are based on qualities such as goodness, peace, friendship. Religion encourages people to be honest and pure, compassionate, fraternal and tolerant. All the major religions of the world consider this world to be mortal, transitory. They promote the idea that the real purpose of human existence is to do good deeds in this world and prepare for the trials of the eternal world [4. Alidjanova, L. A.]. All religions reflect the essence and content of human life, the establishment of political, legal and moral relations between people on the basis of equality and justice. Religious sources promote

ideas that encourage humanity and tolerance, such as not killing, not stealing, not giving false testimony, and not corrupting people [5. Nizametdinov].

Religious tolerance is of great importance for freedom of conscience and spirituality; it means respect for another person or religion. It requires that people of different religions and denominations live side by side and in peace, despite the fact that they have different beliefs. In any multi-ethnic, multi-religious state, inter-ethnic harmony and inter-religious cooperation are the factors that create a solid foundation for stability and development in society and determine its prospects. The work carried out in Uzbekistan on religious tolerance and interreligious reconciliation is an example not only for the CIS countries, but also for the whole world. Of course, this characteristic of our people did not appear immediately, it has a long history [6. Isakdjanov].

“Christian denominations, especially the Orthodox, have been organizing spiritual and enlightenment events to strengthen tolerance in the country and to promote a culture of religious tolerance among the population. They are actively involved in preventing missionary movements that can lead to inter-religious conflict and complexity in society. Their speeches at international conferences inform the world community about the reforms being carried out in our country to ensure freedom of religion and interethnic and interreligious harmony”.

The majority of conflicts in the world are civil wars of national and religious or racial origin [7. Abdullayeva]. The origin of such conflicts and their persistence to this day is the result of the mismanagement of inter-ethnic and inter-religious relations and its theory. The national image of the population of our republic reflects the spiritual principles of universal principles, traditions and customs, beliefs in different religions, colorful lifestyles, which correspond not only to Eastern but also Western civilization. This positive situation can serve as a model for countries where ethnic and religious conflicts in the Middle East, Iraq, Syria and other regions, where the uncompromising struggle between different nationalities and religions has not stopped for many years, serve as a source of escalation of regional conflicts [8. Alimova, Mahfuza and Nigmatullayev, Ibrahim].

## CONCLUSION

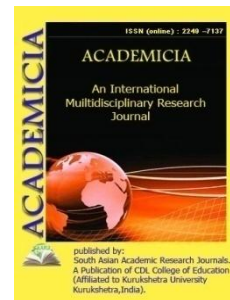
In conclusion, many historical sources indicate that Uzbekistan is one of the most ancient countries where the first religious views and ideas emerged. Religions with complex ideological systems such as Zoroastrianism, Buddhism, Judaism, and Christianity have been active in this region since ancient times.

The process of studying the historical, scientific and cultural heritage of our country, the restoration of national and religious values is being carried out systematically. Importantly, the unique experience gained in the years of independence in harmonizing interethnic and interreligious relations in our country is recognized by the world community [9. Abdullaeva].

Religious tolerance has become an integral part of Uzbek culture and mentality. The policy of religious tolerance pursued in Uzbekistan has accelerated democratic change and socio-economic development, preserving inter-ethnic and inter-religious harmony in society. A comprehensive study of these experiences and the promotion of Uzbekistan's achievements in the eyes of the world community is of great importance for our country.

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## CONTENT OF COMPONENTS OF THE SCIENCE “BALĀĠAT”

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### ABSTRACT

*This article gives a brief overview of the components of puberty, such as ma'oni, bayon and badi'. It covers the structure of the ethical sciences, the study of issues related to the semantics of the ma'oni sciences, and the emphasis on the arts in the arts. It is shown that the art in which the phonetic aspect of the word is taken into account is called “verbal”, while the semantic aspect is called “spiritual” arts.*

**Keywords:** *Speech, Sound, Literary Sciences, Philological Sciences, Situation, Artistic Means, Meaning.*

### INTRODUCTION

Since man is distinguished from other beings by the ability to think, in turn, he is endowed with the ability to express an opinion, that is, the ability to speak (نُطِقَ - to speak).

It is known that the basis of speech is the sounds produced by the vibration of the air from the special movement of the internal organs of a person from the lips to the throat, and they are called “speech sounds” [1, pp. 120-146]. In order for speech to be formed, this sequence of sounds must have an order in which it can make sense. Through speech, the word is formed, and man presents his thought in the form of a word expressed in a language. In the formation of the intended purpose of the word, it is important to establish a correlation between the thought and its expression in the word. In order to create such harmony, the speaker is required to have sufficient word-formation skills. This, in turn, requires a careful mastery of the vocabulary and rules of language, which are the means of expressing thought [2]. That is why scientists have long paid great attention to the study of the nature of language and ways of expressing ideas through language, and created a system of special sciences related to it. Such a system was called “ethical sciences” [3, pp. 41-43] in the east and “philological sciences” in the west.



## THE MAIN FINDINGS AND RESULTS

The concept of “*ethical sciences*” is defined as “protects a person from making mistakes in speaking and writing” [4], “teaches knowledge that serves to ensure mutual understanding by expressing ideas through sound and writing symbols” [5]. The inclusion of such sciences as *dictionary, expenditure, passion, grammar, ma’oni, bayon, aruz, rhyme, essay, fard of poetry, muhajara (lecture), rasmu-l-hat* in the structure of literary sciences can be sufficient evidence to prove these ideas [6, p. 42].

So far, *rasmu-l-hat* (calligraphy), *lugat* (lexicon), *sarf*(morphology), *ishtiqoq*(derivation), *nahv*(syntax) problems of this system have been studied in the grammar department of linguistics, *calligraphy, aruz, rhyme, essay, poetry, muhozara (lecture)* issues are the structure of literary science. Although issues *ma’oni* and *bayon* are partially included in the syntax, oriental scholars study them separately [7].

The study of language on the basis of the system of ethical sciences plays an important role in the field of philology, as it serves to fully reveal its material and spiritual properties.

It is known that works on the theory of Arabic language and literature began to appear in the early Middle Ages [8, p. 7]. The history of the science of **balāğat** has been studied to some extent by Arab scholars [9].

Mahmud Zamakhshari **balāğat** emphasizes the place of science in philological sciences and says: “In order to express the idea that embodies the goal in beautiful phrases and words, to use the vocabulary skillfully, one must be well versed in the sciences of eloquence, **balāğat**” [10. P. 122].

Scientists of *balāğat* science have divided it into three components. These are: *ilmu-l-bayan, ilmu-l-ma’ani and ilmu-l-badi’*.

### “MA’ONI” - the science of adapting the word to the situation

Language, which is a natural product of the human mind, is one of the phenomena that have not yet been fully explored. Factors that motivate language and speech, aspects of language related to logic and thinking, its features that reflect the human psyche are the most complex and demanding issues of linguistics. All thoughts, judgments, opinions and issues are expressed through natural language. Information expressed through speech, whether universal or philosophical or related to ordinary everyday life, must be clearly and distinctly expressed. Otherwise, language will not be able to fulfill its function of communication.

The solution of semantic problems plays an important role in the study of the relationship between language and being, the role and multifaceted functions of language in the process of human thinking, ways to reflect the psyche of the individual in speech. The methodological, theoretical, and practical significance of semantic issues related to the clarification of complex aspects of thinking and speech demonstrates the relevance of semantic research in language. In the semantic and descriptive sections of the science of *puberty*, topical issues related to this meaning are reflected.

In particular, “*ma’onicalls* his subject *qaziyya* because it is related to foreign, that is, unconscious events. In *sarfunahv*, the equivalent is a sentence. But the sentence has nothing to do with reality. That is why *sarfunahv* special sciences have been created for it” [11, p. 39].

The issue of the word “*Qaziyya*”; work, claim, process; theorem; situation, main idea; thesis; there are meanings of judgment (in logic) [12, p. 645] that can be the basis. In semantic science, it is used in the sense of “judgment”, which is the last of them.

Arabic scholars in **balāḡat** science include *qasr*, *fasl*, *vasl*, *iyjoz*, *itnob*, *musovot* types of news and essay types of the word.

The science of *ma’oni* is defined as follows: the science of meaning studies the methods and rules of adapting the word to the situation required by the situation [13].

In *ma’oni* science, the word is classified according to the purpose of the speaker and the condition of the listener. Hence, medieval philologists have shown the importance of taking into account the purpose of the transmitter and the condition of the recipient in order for the process of transmitting and receiving information through speech to be successful. In this science, the expression of meaning is based on the state of these two sides.

According to *ma’oni* science, in composing a speech, the speaker must take into account not only whether the listener is aware or unaware of what is being said, but also other qualities of the listener, such as intelligence or inability to comprehend quickly. He then chooses one of the types of concise, moderate, and detailed expression based on the listener's position in interpreting the meaning to convey the information. This expression appears in speech in the form of a word. The size of the word is required according to the type of expression chosen - a short word for a concise expression, a long word for a detailed expression, an average word for a normal expression. The size of the word will be less, average, more depending on the number of speech characters in it. From this it is clear that in the science of meaning it has been shown that meaning and the size of the word that expresses it have three different ratios. Through this ratio the so-called *iyjoz*, *itnob*, *musovot* arts in art are created.

In the science of *ma’oni*, the word is studied by dividing it into types of messages and essays according to the purpose of the speaker. Essay sentences are divided into command, prohibition, interrogation, denial, and exhortation types, and the function, place, participation, omission, semantic effect, and other grammatical features of the parts of speech are also covered. The study of the word on the basis of such a classification shows that one of the prerequisites for the clear expression of meaning in semantic science is the correct placement of the components of the word, and therefore the rules for its grammatically correct formation. It should be noted that these issues, covered in the semantic section of puberty, are studied in modern linguistics in the syntax section of grammar on the basis of the classification of the sentence into types of pronouns, questions, commands and pronouns according to their content [14, p. 99].

*Ma’oni* sciences include the division of the word into message and essay, essay and its parts, cases of *musnadilahi*, cases of *musnad*, *itlaq* and *taqid* (non-recording and recording), cases of verbs, *qasr* (attribute), *fasl* (link) and *vasl* (separation) and *iyjoz*, *itnob*, *musovot* theoretical views. From this it is clear that the science of meaning studies issues related to the semantics of the word.

### The terminology of “Science of Bayon”

In the works of medieval Islamic scholars, it was concluded that “bayon” as an integral part of this puberty was an open, clear expression of thought. According to some experts, the words “bayon” and “balāḡat” can be used in the same sense [15, pp. 981-982]. In other words, both

terms are considered in the classification of Muslim Eastern sciences as the highest level of speech etiquette and art, the state of ascension to the peak of eloquence and perfection. Nevertheless, G.I. Greenbaum, in evaluating these two terms, argues that “bayon” is a broader concept than the term “balāḡat” in terms of meaning [16, pp. 114-116].

According to researchers, the Arabic language also served as a means of expressing narrative aphorisms in the early days when it became the language of the state and science in the lands of the Arab Caliphate. For example, Sahl ibn Harun al-Shu'ubi (d. 215 / 830-831) described bayon as a “translator of knowledge”.

The lexical meaning of the word “bayon” is “to discover, create, illuminate, and interpret”. In the term: to illuminate a desired meaning in different ways that are different from each other, the methods and rules needed to determine the sign of that meaning itself are understood. For example, Hotam's generosity can be expressed in a variety of words that openly or covertly indicate the meaning of generosity, such as “generous”, “ashy”, “thin”, “cowardly dog”, “never-drying sea”, and “rainy cloud” [17].

The “one meaning” given in the definitions is that this meaning is expressed through the whole word as the case may be. In narrative science, for example, if the meaning of a lion is expressed through synonyms such as “asad”, “ays”, “sab”, “zirgom”, it should not be at the level of narration, because synonyms are studied in lexicon, not in narration [18].

Bayon includes *tashbih*, *majoz*, *istiora*, *allusion*. The science of narration has been described by many scholars as *tashbih*, *majoz* (*al-majozu-l-manavi*, *almajozu-l-lug'avi*, including allegory) and satire [19, pp. 200-157]; *tashbih*, *istiora*, *majozmursal* and *allusion* [20, pp. 357-333].

### Types of art in the science of Badi'

The initial aesthetic function of language is manifested as soon as the speaker begins to focus on how to put his word into a clear and attractive form. Because the word, along with a number of its functions, can also perform an aesthetic function that affects the mental state of the listener in a particular situation, awakening in him specific emotions and serving to leave different impressions [21]. The role of the arts in the formation of effective speech is great.

The arts, which are one of the means of expressing the maturity of language as much as possible, are studied in Chapter badi' of the science of puberty.

The word “badi'” means “wonderful; skillful; creator.”

In terminology: the science that teaches ways to prefer the beauty and recitation of a word when its intended meaning (character, sign) is defined and conforms to the requirements of the situation [22, pp. 386-385].

Scholars of balāḡat divide them into two groups according to their nature in the creation of art. The first are the arts that are created by considering the phonetic aspect of the word, which are called “verbal beauties” (*al-muhassanotu-l-lafziyya*). The second is the spiritual arts, which are formed according to the semantic aspect of the word, and they are called the “beauties of meaning” (*al-muhassanotu-l-manaviyya*).

Regarding the arts, Yusuf Sakkoki says, “We have come to the conclusion that there are two bases of balāḡat, two types of eloquence, because of which the word is clothed in a garment of

dress and rises to the highest level of beauty. There are many special ways to ensure the beauty of the Word, and we will show you the most popular of them. These are divided into two parts: those related to meaning and those related to words" [23, p. 200].

AtoullahHusseini explains that the first meaning of the word "word" is "to take out of the mouth" and "to say a word", and that when it is applied to a word, the phonetic side of the word is meant [24, p. 39]. Hence, verbal beauties are formed by sounds, and the Arabic balāḡat is also based on the same rule.

## CONCLUSION

Science of maoniy explores issues related to word semantics.

In the science of badi', the term "spiritual" is used when referring to the meaning of the word "art", which refers to the sound aspect. But in the creation of the verbal arts, as Yusuf Sakkoki points out, the word must be subject to meaning.

Yusuf Sakkoki in his book "Miftohu-l-ulum" gives a brief account of the verbal arts and describes it as *tajnis* (*tommtajnis*, *noqistajnis*, *muzayyaltajnis*, *muzori'tajnis*, *lohiqtajnis*), passion, *raddu-l-ajzila-s-sadr*, *qalb*, *saj'*, *tarsi'*, etc.

"Miftohu-l-ulum" gives information about spiritual arts such as *tavriya*, *tiboq*, *muqobala*, *husnu-t-ta'lil*, *tiboq* (*mutobaqa*, *ittidod*), *muqobala*, *mushokala*, *muro'otu-n-Nazir*, *muzovaja*, *laff* and *nashr*, *jam'*, *tafriq*, *taqsim*, *jam'ma'atafriq*, *jam'ma'ataqsim*, *jam'ma'atafriq* and *taqsim*, *iyhom*, *tavjih*, *suqu-l-ma'lummasoqag'ayrih* (in others – *tajohulu-l-Orif*), *i'tirod*, *istitbo'*, *iltifot*, *taqlilu-l-lafz*.

Section badi' of science balāḡat includes the artistic means now known as the "arts".

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## ON THE ISSUES OF CREATION OF EXISTENCE IN AVESTA

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### ABSTRACT

*This article is based on Zoroastrian traditions and Avesta materials to show the dynamics of the transition from primitive mythological notions of the being that surrounds man to the religious system, from abstract, supernatural notions to divine images, and finally to the deification of the forces of nature. At the same time, their relationship to existence is analyzed on the basis of a functional analysis of primitive mythological images that served as objects of worship before Zoroastrianism. The distribution of the duties of the gods is analyzed, and it is shown that the field belonging to each of them does not always covers the whole being. As a result, it is revealed that Mazda Yasna (Zoroastrianism), which was established as a result of the Zarathustra reform, solved the model of the creation of the universe in an absolutely revolutionary way. That is, the essence of the advanced cosmogonic solution for its time is shown, that the whole being was originally created on a noble basis by the will of the one and only Ahura Mazda. Through these, Zoroastrianism is based on the optimal interpretation of the problem of man and the universe from the standpoint of goodness and creativity.*

**KEYWORDS:** Avesta, Zoroastrianism, Gohs, Ahura Mazda, Behdin, Kavi, Xaoma, Geushurvan, Granodmani, Cosmogony, Videvdot, Ardivisura, Ashi, Spentaarmaiti, Haurvatat, Ameretot, Vahumana.

### INTRODUCTION

During the years of independence, our country has created ample opportunities for the development of social sciences and humanities. In particular, special attention is paid to the radical reform of the religious and enlightenment environment, ensuring freedom of religion, the study of our rich cultural heritage [1, pp. 265-272]. The history of Zoroastrianism (Mazda



Yasna) has been studied by historians, philosophers, philologists and theologians around the world for 350 years. However, the last word that fully reveals the meanings of the three-thousand-year-old Avesta's reference tag and explains in detail the true nature of this religion has not yet been uttered [2, pp. 61-73].

The period in which Zoroastrianism emerged is the end of the second millennium BC and the beginning of the first millennium, which is about three thousand years older. It was between the Bronze and Iron Ages, the period of the first territorial oasis state associations. According to the requirements of its time, Zoroastrianism embodied the spiritual, legal, moral and philosophical foundations of certain social relations.

Zoroastrianism was originally called Mazdaism and was the religion of the ancient Turanian and Iranian peoples, the cradle of divinity for them. But it would be wrong to regard this doctrine as a complete set of philosophical views. Yet, just like other religions, Zoroastrianism has some metaphysical, primitive philosophical views.

### THE MAIN FINDINGS AND RESULTS

Myths appear at a certain stage in the development of people's ideas and beliefs about nature and society. Myths, in turn, reflect people's perceptions of the world-being, especially how they perceive the nature and society that surrounds them. The mythical creativity of mankind is unique, first of all, by its collective nature. Even if there is an example of an individual mythical creation, it is impossible not to use the product of a collective and many thousands of years of mythical creative process. For example, Firdavsi's "Shahnoma" was created in this way [3, p. 736]. Therefore, from the very first steps of the mythological process, due to human weakness in the face of nature, fearful, supernatural characters took the lead in the mythical system for the defenseless in the face of various natural phenomena, and vice versa [4, pp. 58, 81]. Man's mental, spiritual, and physical abilities gradually began to pave the way for him to become acquainted with the mysteries of nature, to understand him [5, p. 147]. As a result, the ancient mythical worldview system has evolved into divine views. Now in the human imagination begins to appear a system of noble divine emblems that are able to dominate the phenomena of nature, and even create and regulate them, in short, responsible for ensuring the protection of man. From time immemorial, man has tended to think of this system only as the beginning of noble forces. This feature is characteristic of the spiritual and philosophical foundations of Zoroastrianism, cosmogony, the religious system [6, p. 47]. This can be clearly seen in the example of the creation model of being in the Avesta. After all, the Avesta originally described the world only as a set of virtues and proportions. There is no evil, no death, no sickness. The world is made up of eternal and everlasting brilliance - there is no darkness, there is summer, there is no winter, there is good intentions, there is no evil thought, no thought of evil. Because evil has not yet been born. There is truth, truth, but the main source of all evil is no Lie. There is a believer, and there is no unbelief itself. In Zoroastrianism, a believer, a person whose faith is whole and firm, is called an *artaban*, that is, a person who believes in the existence of a creator, the guardian of the Truth. So, the Avesta first describes the universe in such a heavenly way and urges man to be worthy of it [7, pp. 13-18].

It is no coincidence that the world is described with such perfect positive qualities. For the supreme dream of man was the pursuit of an eternally beautiful and prosperous life, free from the fearful, supernatural forces of ancient myths. In this way, the human mind was also able to create

a wonderful divine system. After all, the real scenes of life are different from the dream, and there are many facets: positive and negative, beneficial and useless, viable and destructive. That is, life is a conflict of positive and negative poles with the whole being. Realizing this from the very beginning, Gohs created the forces capable of overcoming the evils that threaten the imaginary mystical world, the only factor in gaining their protection is man's steadfastness in the path of Truth (Arta), the essence of Ahura Mazda, active and steadfast in good deeds, uncompromising struggle against evil, to believe in the angels, the gods, created by the Creator, to give them alms.

The roots of the Zoroastrian worldview system go back to primitive antiquity and are interpreted at the level of "revelation" revealed to the "prophet" during the Zoroastrian reforms [8, pp. 3-4].

It is in this sense that the existence of real historical foundations of Zoroastrianism has long been the subject of debate and discussion in Avesta studies. In the middle of the twentieth century, the Italian scholar Paggiaro, thinking about the reform of Zoroaster, removed doubts about the historicity of the religious worldview system he had created [9, p. 110]. Shortly before this article, J. Dumezil came out with an article on Zoroastrian reforms, aimed at substantiating their historical significance [10, p. 61-65]. Another article by the Indian author K. Chattopodkhyaya entitled "Reforms of Zoroastrianism" was a serious call to resolve the issue on the basis of history [11, pp. 197-201].

Indeed, if the religion he cites is evaluated in terms of the period in which Zoroaster lived, the concept of involuntary reform seems to be close to the point. In fact, Zoroaster systematized the various beliefs and customs that had been practiced among different peoples according to their social status, at the expense of rational purification. It is not so accurate to call this movement a reform. Because the reform is a way to replace the whole system with a new one, to improve it. Therefore, Zoroaster's activity can be equated with a spiritual revolution. However, in science, the attempt to equate Zoroastrian activity with reform has apparently survived because of its ease of analysis. In particular, according to V.I.Abaev, Zoroastrianism is a religion based on reform. At the heart of this reform is the idea of abandoning the deification of natural phenomena typical of primitive times [12].

Realizing that primitive beliefs could not be truly religious because they were beliefs in certain natural, animal, and human factors in their time, Zoroaster introduced into practice pure spiritual, spiritual factors, and through them the idea of being "governed" by abstract forces [13, p. 245]. This can be seen in the occasional curse by Zoroaster on the practice of the ancient Indo-Iranian faith [14, pp. 4-6]. The difficulties associated with understanding the Avesta, which is the embodiment of Zoroastrian ideas, are well known in science. Because the Avesta has nothing to do with time and space [15]. The statement in it is not aimed at a specific person. If we apply this situation to the mythological world of Greek literature, or rather, the issue becomes even clearer. Truly mythical thinking enlivens the essence of being through imagination, creating various symbolic images. He tries to understand their relationship through the pattern of everyday real landscapes on earth. The principle of a similar approach is no stranger to the Avesta. In particular, in the Avesta, cosmogonic representations form a category. For example, the sky is the "skirt of the dress on Ahura Mazda, the roundness of the kurrai ground" [16, p. 128], and the "front" and "back" sides of the being are the symbols of the south and the north. It is important and noteworthy that these concepts are based on the concepts of good and evil, light and darkness on

a moral and philosophical basis - all of which were the fruit of mythical thinking before the emergence of the religious system. It can be said that the introduction of this same mythological layer into the religious system was an important historical solution in understanding the Avesta.

We can see that Zoroastrianism solved the optimal interpretation of the problem of man and the universe from the standpoint of goodness and creativity, showing the essence of the advanced cosmogonic solution for its time that the whole being was created on the basis of the will of the one and only Ahura Mazda.

First of all, Zoroaster claimed that the only Creator created the universe. At times, phrases such as "I stretch out my hand to you in prayer" sound like an appeal to the image of Gohs in his mind, to his heavenly place. However, GeushUrvan in the Gohs is like a "bull, the spirit of a bull" (soul), his cry to the god, the verse about the "twin spirits" and so on, like a retreat from the original unity due to the division of faith.

In the early stages of Zoroastrianism in Central Asia before its spread to Iran, the Ahura Mazda and the surrounding pantheon (system of divine images) were luminous, abstract figures. In particular, Ahura Mazda himself and the first place of the gods he created were considered to be the shining GranoDmani ("House of Praise, Glory") behind the Sun. Given that Zoroaster's first revelation was in Khorezm, there is no doubt that the first homeland of Zoroastrianism was Central Asia [17, p. 352].

The layers of Avesta mythology [18, p. 147] are concerned with how to interpret the groups of the Zoroastrian theological system consisting of Ahuras (celestial beings worthy of worship) and Yazads (those worthy of worship) and to determine their place in religious practice and in social-moral relations [19, p. 8].

## CONCLUSION

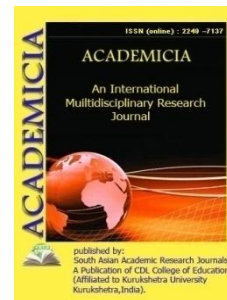
1. Zoroastrianism originated primarily with the idea of unity. However, in the time of Zoroaster, people had not yet escaped the influence of primitive religious views. It was difficult to assimilate a new religious worldview, and it was natural to preserve various images from the world of old imaginations as relics. At the same time, the divine concepts introduced to Zoroastrianism from antiquity began to re-emerge in comparison with the structure of human society.

2. The mythological layers of the Book of Avesta are imbued with an optimistic spirit, as the confrontation between the forces of good and evil inevitably ends in the victory of good. It is this situation that has divided not only the Zoroastrian religious system, but also the moral and philosophical world, which has become symbolic generalizations through mythological layers, into opposite poles, that is, symbols of good and evil [20, p. 64].

3. The book of the Avesta serves to show the dynamics of development from the primitive mythological notions of the being that surrounds man to the religious system, from abstract, supernatural notions to divine images, and finally to the deification of the forces of nature.

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## INFLUENCE OF SOWING DATES AND NORMS ON HARVEST OF LENTILS VARIETIES

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### ABSTRACT

*In this article, it is given about data on influences of sowing dates and norms on harvest of lentils varieties. When sowing of lentils varieties in norm of 2 million per hectare in the autumn, the grain yield of "Oltin don" was found that at the time of sowing of seeds 15,6- 17,3 c / ha, and "Darmon" variety - 24,1-26,1 / ha. When the highest grain yield in both varieties is 3 million pieces per hectare was taken, and increase of sowing rate from 2 million / ha to 3 million / ha, it is found that productivity was increased to 2.7-3.1 c / ha. However, an increase in the planting rate by 4 million units per hectare resulted in a decrease in yield by 1.1 c / ha. An analysis of the yield of sorts of lentils in the spring period revealed that, if with the increase in planting rates, the grain yield of the "Oltin don" increased from 15.1 cent to 17.8 cent. Vice versa, in variant of increasing planting norms to 4 million pieces, it was found an decrease of harvest.*

**KEYWORDS:** "Oltin Don", "Darmon", Weight Of 1000 Pieces Of Grain, Protein, Vitamins, Productivity, Sowing Dates And Norms, Center /Ha, Legume, Control Variant, Million Pieces/Ha, C/Ha, Nitrogen-Free Extracts, Cellulose.

### INTRODUCTION

Demand for food products is also growing sharply due to the steady growth of the population in the country. This, in turn, requires increasing grain production and increasing the efficiency of irrigated land use. In order to increase the efficiency of irrigated land use, it is important to choose the right types of cereals. In recent years, much attention has been paid to increasing the production of legumes in the country. Nevertheless, the increase in grain production remains relevant.



Along with cereals, legumes play an important role in improving the supply of nutritious, high-quality food required for the needs of the population. Cereals are richer in protein, essential amino acids and vitamins than cereals, and contain 25-50% protein. Lentils play an important role among legumes. Lentils are one of the oldest food crops. Lentils contain 23-32% protein, 0.6-2.1% oil, 47-70% nitrogen-free extractives, 2.3-4.4% ash, 2.4-4.9% fiber and B vitamins available. Lentils are used whole grains, cereals or flour. The stem contains 6-14% protein. Lentils increase soil fertility and accumulate 30-50 kg of nitrogen per hectare. Lentils are widespread in the Pamirs, Greece, India: grain yield is 1-3 t / ha.

**The object of research** is the typical sierozem soils of Tashkent region, lentil varieties "Oltindon", "Darmon".

## RESEARCH METHODS

The research was conducted in the fields of the experimental plot of the Tashkent State Agrarian University, and field experiments were conducted to determine the sowing dates and norms of planting lentils and their impact on grain yield. Field experience soils are typical sierozem, the mechanical composition is moderately sandy, unsalted. In the experiment, the norms of sowing lentil varieties "Oltin don" and "Darmon" in two periods, i.e. in autumn and spring, were studied at 2.0, 3.0 and 4.0 million units per hectare.

## EXPERIMENTAL RESULTS AND THEIR DISCUSSION

According to P.Vavilov, G. Posipanov (1983), lentils are widespread in Europe, Asia and Africa, with an area of 4.4 million hectares. The average grain yield in the world is 11.4 c / ha, with a gross yield is 4.9 millionntons.

In a study by D.N. Stupnitsky (2009) in the Krasnoyarsk Territory, lentils yielded 1.0 per hectare; 1.5; 2.0; 2.5; 3.0; 3.5 million planting norms were studied. The correlation coefficients are the dependence of the yield on the number of grains per plant +844, with the weight of 1000 grains +0.641; an inverse correlation was observed with number of bushes - 0.773. The yield is 229 g / m<sup>2</sup> when planted 3 million piece of grain; 190 g / m<sup>2</sup> when planted 3.5 million, and 167 g / m<sup>2</sup> when planted 2.5 million.

In the variant of planting lentils in rows of 3 million, the yield is 5.9 c / ha, 3.5 million - 6.8 c / ha, 4.0 million - 4.9 c / ha, 4.5 millon-4.6 c / ha of grain was harvested.

In our study, it was found that planting norms influenced the developmental stages of lentils. According to our data, the period of mowing after sowing lentil seeds coincided with the same period in all experimental variants (19.03.2011). There were differences between the variants during the period of branching, budding, flowering, legume formation and ripening, and the branching period was March 26-28 in the "Oltin don" variety and March 27-29 in the "Darmon" variety. The increase in sowing norms from 2.0 million to 4.0 million per hectare has led to a prolongation of the transition to the budding period by 1-2 days. In the variant where 2.0 million lentils were planted per hectare, budding period in planted on March 26, in the variant where 2.0 million lentils were planted per hectare, the budding period in planted March 27 4.0 million. It was observed that in the variant planted on March 28, the branching period passed where 4.0 mln lentil grains are planted. It was observed that the transition of lentils to the period of branching of the variety "Darmon" was a little later than to the variety "Oltin don", it was observed that, when



lentil grain was planted 2 million piece, budding period passed on March 27, in the variants where planted 3 and 4 million piece of lintel grains the period passed on March 28.

The transition of the plant to the budding period took place on April 20-23 in the "Oltin don" variety and on April 21-24 in the "Darmon" variety. In the option of "Oltin don", which sowed 2 million / ha, budding period observed on March 20, in the option of sowed 3 million piece of grain, the period passed on April 21, and in the option of 4 million piece, the period observed on April 23. In the variant of lentils of the variety "Darmon" planted in norms of 2 million / ha, the period passed on April 21, in sowed 3.0 million / ha the period was on March 22. In the variant planted on March 24, it was observed that the budding period passed on March 24 (Table 1).

It was found that planting norms also affected the duration of development periods of lentil varieties. In all variants, the grasses appeared in 7 days, while the branching period was 8-11 days. It was found that the budding season lasted 24-26 days in the "Oltin don" variety and 25-27 days in the "Darmon" variety. Since this period, the effect of planting norms has been significantly observed. The flowering period began 3-7 days after the flowering period. It was found that this period started in 3-7 days in all experimental options. It was found that the period of legume formation began 13-18 days after flowering. According to the variants, the "Oltin don" variety was observed for 13-15 days, and the "Darmon" variety for 14-18 days.

The ripening period was observed after 20-25 days. According to the options, this period was 20-23 days in the "Golden Grain" variety and 22-25 days in the "Darmon" variety.

The vegetation period of lentils was 75-87 days in the Oltin don variety and 81-95 days in the Darmon variety. Due to the increase in the sowing rate, the duration of the validity period will be extended to 12-14 days.

The below patterns were also observed in the 2012 and 2013 studies.

Based on the above data, it can be concluded that the planting norms of lentils are increasing the number of units from 2.0 million per hectare to 4.0 million will extend the validity period to 11-14 days.

**TABLE 1 DATES OF DEVELOPMENTAL PERIODS OF LINTEL VARIETIES  
PLANTED IN SPRING**

№	Options		Lawn	Branching	Budding	Flowering	Podded	Repining
	Variety	Sowing rate million piece/ha						
2011								
1	Oltin don	2	19.03	26.03	20.04	23.04	06.05	26.05
2	Oltin don	3	19.03	27.03	21.04	25.04	09.05	30.05
3	Oltin don	4	19.03	28.03	23.04	29.04	14.05	06.06
4	Darmon	2	19.03	27.03	21.04	25.04	09.05	31.05
5	Darmon	3	19.03	28.03	22.04	28.04	13.05	05.06
6	Darmon	4	19.03	29.03	24.04	01.05	18.05	12.06
2012								
1	Oltin don	2	30.03	07.04	02.05	05.05	18.05	07.06
2	Oltin don	3	30.03	08.04	03.05	07.05	20.05	10.06
3	Oltin don	4	30.03	09.04	05.05	11.05	26.05	18.06

4	Darmon	2	30.03	08.04	03.05	07.05	21.05	12.06
5	Darmon	3	30.03	09.04	04.05	10.05	25.05	17.06
6	Darmon	4	30.03	10.04	06.05	13.05	30.05	24.06
2013								
1	Oltin don	2	28.03	06.04	01.05	04.05	17.05	06.06
2	Oltin don	3	28.03	07.04	02.05	06.05	20.05	10.06
3	Oltin don	4	28.03	08.04	04.05	10.05	25.05	17.06
4	Darmon	2	28.03	07.04	02.05	06.05	20.05	11.06
5	Darmon	3	28.03	08.04	04.05	10.05	26.05	18.06
6	Darmon	4	28.03	09.04	06.05	13.05	31.05	25.06

In experiments, the process of stem growth of a plant and its indicators are considered as a process of crop formation. It is expected that if the stem grows well, a high yield can be formed. The lentil varieties studied in our research study were conducted by measuring the height of the main stem every 15 days using a ruler. When determining the main stem height of lentil varieties planted in the fall, it was observed that there were significant differences both in the studied varieties and in the sowing rate. When initially analyzing the effect of the sowing rate on each variety, 20.04. 14.4 - 16.5 - 18.0 cm in the following sequence in all variants of the variety "Oltin don" per day; 15 days later, on 05.05, the variants were 27.5 - 32.1 - 36.2 cm in sequence. During this development, it was observed that close data were obtained when determining the effect of planting norms on the height of the main stem of the variety "Oltin don" ". However, when the main stem height was determined on 20.05, the effect of the planting rate was observed to be significant. For example: in option 1, the sowing rate is 2 million. In the 2<sup>nd</sup> variant, where the number of plant bushes is higher, the sowing rate is 3 million. when the stem height was 40.2 cm, this figure was 40.0 cm in our 1<sup>st</sup> variant by 05.06; 2 - variant 43.1 cm; In variant 3, 48.3 cm was observed. In 2012, this figure was 25.04. In the 2<sup>nd</sup> variant, where the number of plant bushes is higher, the sowing rate is 3 million, stem height 17.4 cm, in the 3<sup>rd</sup> variant 19.2 cm high stems were formed when the sowing norm was 4 million, and this figure was 28.3 cm in the 1<sup>st</sup> variant by 10.05 days; 2 - variant 33.2 cm; In variant 3, it was observed that it was 37.8 cm.

At 25.05 the sowing rate in the 1<sup>st</sup> variant was 2 million, it was 35 cm. In the 2<sup>nd</sup> variant, where the number of plant bushes is higher, the sowing rate is 3 million, the stem height 38.0 cm, in the 3<sup>rd</sup> variant 44.0 cm height of stems were formed when the sowing norm was 4 million, and this figure was 41.2 cm in the 1<sup>st</sup> variant by 10.06 days; 2 - variant 44.5 cm; In variant 3, it was found to be 49.2 cm. In 2013, at 22.04, 14.8 cm in the 1<sup>st</sup> variant; 2 - variant 17.0 cm; in the 3<sup>rd</sup> variant, it was 18.6 cm, while at the end of the measurements, i.e. at 07.06, it was 40.8 - 43.8 - 48.8 cm in the sequence of variants.

April 20, 2011 in all variants of the variety "Darmon" on the day in the following sequence - 16.5 - 19.7 - 23.9 cm; On 05.05, the sequence of options was 32.0 - 36.1 - 41.5 cm. On 20.05, the effect of the planting rate was found to be significant when determining the height of the main stem. For example: in option 4, the sowing rate was 2 million the height of stem was 41.6 cm. In Option 5, where the number of plant bushes is higher, the planting rate is 3 million, the stem height was 45.9 cm, the figure was 43.1 cm in our 4<sup>th</sup> variant by 05.06; 47.2 cm in variant 5; In variant 6, 51.8 cm was observed.

In 2012, this figure was 17.3 cm in option 4 at 25.04. The planting rate in option 5, where the number of plant bushes is higher, stem height 21.2 cm, in the 6<sup>th</sup> variant 25.1 cm high stems were formed when the sowing norm was 4 million, and this figure was 33.4 cm in the 4<sup>th</sup> variant; 37.9 cm in 5 variants; In variant 6, it was observed that it was 43.1 cm.

At 25.05 the sowing rate was 2 million, the number of plant bushes is more than the norm of 3 million, stem height was 44.0 cm, in variant 6 the planting rate was 48.0 cm, and by 10.06 days the figure was found to be 44.3 cm; 48.4 cm, 52.6 cm.

In 2013, the same pattern was observed, at 22.04 in the 1<sup>st</sup> variant 16.9 cm; 2 - variant 20.5 cm; At the end of the measurements, i.e. at 07.06, the sequence of variants was 43.7 - 47.8 - 52.2 cm, while in the 3<sup>rd</sup> variant it was 25.5 cm. Lentils grow intensively after the start of the flowering period. The growth process will not be the same. In the first ten days of May, the daily growth was 1.02 cm in the "Oltin don" variety, 0.82 cm in the second ten days and 0.72 cm in the last ten days. When the sowing rate was 3 million/ha, the figures were 1.56, 0.82 and 0.78 cm respectively. Stem growth dynamics was 1.82, 0.84 and 0.82 cm respectively when the sowing rate was 4 million / g.

Studies have shown that the dates and norms of sowing affect the yield of lentil varieties. When lentil varieties were planted in the fall, the grain yield of the "Oltin don" variety in 2011 was 2 million tons for sowing of seeds per hectare, the yield was 15.6-17.3 c / ha, 24.1-26.1 c / ha for "Darmon" variety, in 2012 these figures were 15.7-17.4 c / ha, and 24.4- 26.3 c / ha respectively.

The highest grain yield in both varieties was taken from when it was sowed 3 million per hectare. The increase in the sowing rate from 2 million to 3 million units, the yield was obtained from the sown variants of seeds, 2,7-3,1 c/ha at 2011, in 2012-2013, the point was determined to increase to 2,8-3,2 c/ha. However, the increase in the sowing rate by 4 million units / ha resulted in a decrease in yield by 1.1 c / ha (Table 1). Experimental results show that an increase in the number of seedlings of lentil varieties leads to a decrease in its stem height, number of branches and yield.

**TABLE 2 INFLUENCE OF SOWING DATES AND NORMS ON YIELD OF LENTIL VARIETIES, C / HA**

№	Options		Productivity, c/ha					
	Varieties	Экишмеъери	Autumn period			Spring period		
			2011	2012	2013	2011	2012	2013
1	Oltin don	2 mln.unit/ha	15,6	15,7	15,7	15,1	15,2	15,2
2	Oltin don	3 mln.unit/ha	18,4	18,5	18,5	17,8	18,1	18,0
3	Oltin don	4 mln.unit/ha	17,3	17,4	17,4	16,9	17,3	17,1
4	Darmon	2 mln.unit/ha	24,1	24,4	24,3	17,0	17,1	17,1
5	Darmon	3 mln.unit/ha	27,2	27,6	27,4	20,1	20,4	20,3
6	Darmon	4 million.unit/ha	26,1	26,3	26,2	19,4	19,5	19,5

When analyzing the yield of lentils planted in the spring, it was found that as the sowing norms increased, the grain yield of the "Oltin don" variety increased from 15.1 to 17.8 c/ha, while the sowing rate decreased by 4 million units. A similar pattern was observed in the Darmon variety of lentils. The yield of Darmon variety ranged from 17.0 c / ha to 20.1 c / ha.

**CONCLUSION**

The thickness of seedlings of lentils “Oltin don” and “Darmon” planted in autumn and spring has a significant impact on its growth, development and yield, reaching 3 million seedlings per hectare, and sowing at the expense of germinated seeds provides an increase in yield.

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## SCIENTIFIC RESOURCES ON THE STUDY OF THE THEOLOGY OF IBN SINA

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### ABSTRACT

*In ancient Greek philosophy, he studied the supernatural in the field of metaphysics. Basically, this theme, founded by Aristotle, was reworked by Abu Ali ibn Sina. Researchers have noted that the philosopher's field of theology is adapted to the principles of monotheism.*

**KEYWORDS:** *Ma Ba'da At-Tabi'a, Al-Mabdaval-Ma'ad, Metaphysics, Wajib Al-Wujud, May Al-Wujud, Ash-Shifa, Al-Isharat Wat-Tanbihat, An-Najat, Encyclopedia, Emanation.*

### INTRODUCTION

At present, the study of religious philosophy, in particular Islamic philosophy, is of great importance in the field of religious studies. A clear example of this idea is modern research in the field of religion. [9,10,11: Alidjanova, Alimova, Kalandarova]. The emergence of Muslim philosophy served as an important step in linking Western civilization with Greek philosophy. According to the scientist A.V. Koyre (1892 - 1964), the Arabs became teachers and educators of the Latin West. The books of Greek thinkers were taken from Latin, not from Greek, but from commentaries and translations in Arabic. This was not because there were no ancient Greek speakers in the West, but because such complex works as Aristotle's Physics or Metaphysics or Ptolemy's Almagest could not be understood without the help of Al-Farabi, IbnSina, or Ibn Rushd.

### THE MAIN FINDINGS AND RESULTS

Described by the German scientist F. Iberverg as “one of the first minds of mankind”, the well-known encyclopedic scientist and brilliant thinker Abu Ali Hussein ibn Abdullah ibn Sina, who has gone all over the world, is a great personality among the Muslim peoples of Eastern who has

achieved such rank titles as “Sharafulmulk - *The honor of the country*” and “Shaykhurrais - *Leader of the Wise*”.

According to Karimov's estimates, 242 works of the scientist have reached us. Of these, 80 are philosophy, theology and mysticism, 40 are medicine, 19 are logic, 26 are psychology, 23 are natural sciences, 7 are astronomy, 1 is mathematics, 2 are alchemy, 9 are ethics, 4 are literature and 8 correspond to correspondence with scientists of that time on various problems of science [1, p.199]. Well-known orientalist A. Irisov, citing a number of sources, cites the number of works of Ibn Sina on philosophy from 68 to 198 [2, pp.172-173.].

The works created by the scientist have become the spiritual and cultural property of the peoples of the world. Ibn Sina's “The Canon of Medicine”, the eighteen-volume “Kitab ash-Shifa”, the “Kitab an-Najat”, the “Book on the soul”, “Al-Isharat wat-tanbihot”, “Quraza-ye tabiat” (“The Pearl of Nature”), “Risolaitadbirimanzil”(“A pamphlet on the event of achieving family happiness”) and a number of others have been attracting the attention of experts in various fields for centuries [3, p.69.].

In addition, the study of manuscripts in the fund of the Institute of Oriental Studies named after Abu RayhanBeruni of the Academy of Sciences of the USSR played an important role in the study of the heritage and works of Ibn Sina. In this regard, another step was taken in the study of Ibn Sina's manuscripts preserved in the fund of the institute, their description and publication of these descriptions in the catalog of manuscripts... One of such works is the bibliography “Available works of Ibn Sina at the Institute of Oriental Studies” published by the Institute of Oriental Studies of the Academy of Sciences of the USSR. The bibliography was compiled by a well-known scientist SodiqMirzaev. S.Mirzaev briefly summarized the purpose of the author's observation from each work of Ibn Sina. The bibliography also contains information about all the manuscripts and printed books belonging to Ibn Sina in the fund of the institute... [2, p. 19.].

In this regard, it is necessary to recognize the research of scientists of the Institute of Oriental Studies, such as S. Mirzaev, on the legacy of Ibn Sina. These scholars not only preserved many rare sources, but also conducted research on them, despite the period of the dictatorial regime.

In recent years, M. Boltaev participated in the book “Essays on the history of socio-philosophical thought in Uzbekistan” published by the Institute of Philosophy of the Academy of Sciences of the USSR as the author of chapters “Theory and logic of knowledge in Ibn Sina” and “Socio-political views of Ibn Sina”. In Moscow, BE Bihovsky published an article entitled “The Philosophical Legacy of ibn Sina”. S.N. Grigoryan defended his doctoral dissertation, completing his research on medieval Eastern philosophy. Shortly afterwards, his pamphlet “The Great Thinkers of Central Asia” and his book “Medieval Philosophy of the Peoples of the Near and Middle East” were published [2, p. 29].

After the years of independence, a number of dissertations devoted to the study of Ibn Sina's theology were published in the Commonwealth of Independent States. In 2000, at St. Petersburg State University, Sadikov Rauf Gaysinovich wrote his PhD dissertation on “Man and the world in the philosophy of Ibn Sina” [8, p. 5.]. In it, the researcher Ibn Sina studied the method of studying existence and said that the scholar used the method of “extrapolation” [4, p. 8.]. In the dissertation, the researcher Ibn Sina states that the doctrine of the universe consists of contradictory ideas, and on the one hand, it is said that the universe was created at that time by emanation, so it is not created at the same time, but through time. On the other hand, Ibn Sina



states that the universe is eternal, which raises doubts about the creation of the universe, that is, he concludes that the universe has always existed as it is today. Sadikov R.G. points out a number of Ibn Sina's views on monotheism. The first is the doctrine of Wajib al-Wujud, the second is the question of the eternity of matter, the third is the doctrine of Sufi understanding of God - pantheism, and the fourth is the doctrine of Ibn Sina, along with the philosophical understanding of God, the religious understanding of Allah. According to the researcher, in Ibn Sina's theological view, along with the philosophical understanding of God, there is a religious understanding.

In 2010, the Institute of Philosophy named after Academician A.M. Bogoutdinov of the Academy of Sciences of the Republic of Tajikistan approved a dissertation for the degree of Candidate of Philosophical Sciences on the subject "Philosophy of Ibn Sina in the assessment of modern Arab scholars" by Niyozov Yormahmad Boboevich. In this dissertation, the researcher quotes Jamil Salib, an Arab scholar, as saying that Ibn Sina was closer to Plato than Aristotle in solving problems. However, Niyazov refuted these claims, stating that Ibn Sina did not recognize the ontological concept of Plato, and issued a number of rebuttals against him. The researcher also quotes the thoughts of the Crusaders, possibly al-wujud rises to the level of wajib due to Wajib al-Wujud [5, p. 10].

In 2005, Rakhimov Mukhsin Huseinovich defended his dissertation for the degree of Doctor of Philosophy on "Anthropology Abu Ali ibn Sina" at the Department of History of Philosophy of the Institute of Philosophy and Law of the Academy of Sciences of the Republic of Tajikistan. In it, the researcher argues that in the philosophical system of Ibn Sina, theology is inseparable from the first philosophy - metaphysics. He then distinguishes theology from philosophy in the scholar's classification of sciences. The researcher argues that many of Ibn Sina's treatises were written on the basis of Islamic teachings [6, p. 18.].

Such works as "Al-Mabda' walMa'ad", "Murshid-ul-Kifaya", "Takhsil-us-Saodat", and "Fayzillahi" can be cited. According to the researcher Rakhimov M.H., Islam and its holy book, the Qur'an, served as an ideological source for Ibn Sina's worldview. In studying the religious foundations of the teachings of Ibn Sina, it is necessary to emphasize the influence of the teachings of Sufism in the works of the scholar. Using the language of metaphor and allegory, Ibn Sina was able to explain in a clear way the issues of Sufism and philosophy, such as the meaning of life, ideas about human destiny and happiness.

In 2012, Sultanov Soqiboy Aslonboyevich defended his dissertation for the degree of Candidate of Philosophical Sciences on "Ibn Sina in the philosophical tradition of France" at the Department of Philosophy and Culture of the Tajik State Pedagogical University named after Sadridin Aini. The researcher notes in the dissertation that the reason why Ibn Sina gained great prestige among Western philosophers and theologians is that his teachings were identical to those of Augustine, one of the founders of Christian theology. Another reason why Ibn Sina gained respect in Europe was that the scholar tried to reconcile religion with philosophy.

Ibn Sina's work was also written by many foreign authors, who often approached the scholar as a philosopher, as Abu Ali was one of the leading rulers in the field. Because his works were written in Arabic, foreign scholars call Ibn Sina an Arab philosopher, citing the scholar's books in Arabic as an example. Because in the time of Ibn Sina, Arabic was the scientific language in the Muslim East, it was customary to write in this language. Even most of the poems attributed

to Ibn Sina now were written in Arabic. Due to historical necessity, he lived in some cities of present-day Iran and died there, so they call Abu Ali their scholar [2, p. 8].

According to Carra de Vaux, Ibn Sina's metaphysics consists of two tendencies: the stages of existence and causality. The obligatory al-wujud is the cause, and the possible al-wujud is the consequence. According to Korben, in order to understand Ibn Sina's philosophy of existence, it is necessary to fully understand his work, Hikmat al-Mashriqiyyin. God is the first emanation or the First Mind. From it comes the Second Mind. The origin of another Mind from the Mind continues until the Tenth Mind. According to Korben, the tenth Mind is the "active mind" in the words of philosophers or "Rukh ul-Quds" in the words of the scholars [7, p. 15].

## CONCLUSION

To conclude, we can consider the sources for the study of Ibn Sina's theological teachings as primary, theoretical, and methodological.

The primary sources are Ibn Sina's "Ash-Shifa", Abu Hamid al-Ghazali's "Takhafut al-Falasifa", Ibn Rushd's "Takhafut-at-Takhafut", and Ibn Sina's Tafsir.

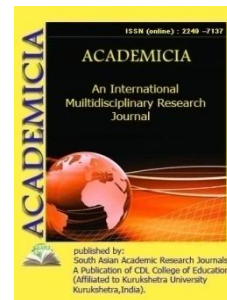
Theoretical sources are A. Irisov's "Life and creative legacy of Abu Ali ibn Sino", D. Fayzihojaeva's "Abu Nasr al-Farabi and Abu Ali ibn Sino's logical proof", Sayyid Muhammad Khatami's "History of Islamic thought", Frederick Starr's "Lost enlightenment".

As a methodological source: Otabek Mahmudov's dissertation "The role of the Toledo school in the study of the scientific heritage of Central Asian scientists in Europe (XII-XIII centuries)", Sadikov Rauf Gaysinovich's PhD dissertation on "Man and the world in the philosophy of Ibn Sina", Niyazov Yormahmad Boboevich's dissertation on the subject "Ibn Sina's philosophy assessed by contemporary Arab scholars" for the degree of Candidate of Philosophical Sciences, Rakhimov Mukhsin Huseinovich's dissertation for the degree of Doctor of Philosophy on "Anthropology of Abu Ali ibn Sina", an example is the dissertation of Sultanov Soqiboy Aslonboyevich on the topic "Ibn Sina in the philosophical tradition of France" for the candidate of philosophical sciences.

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## ETIQUETTE OF USING THE LULLABY IN THE EDUCATION OF AN EASTERN WOMAN

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### ABSTRACT

*Today's topic "Etiquette of using the lullaby in the education of an Eastern woman" is a very important issue for family education, which is the basis of society. Today's topic is the problem of women and girls, gender equality, the role of mothers in the upbringing of society, their learning etiquette using the oriental cradle, which seeks to reveal the culture of oriental women, manners and communication. It provides information about preparing expectant mothers for life and the correct fulfillment of their responsibilities for raising children.*

**KEYWORDS:** *Personality - Social Relations, Oriental Woman, Manners Of Communication And Speech, Lullaby And Their Use, Educate Girls And Women To Be Patient, Tolerant, Cultural, Strong-Willed, Smart And Exemplary, Stability In The Family. Dignity, Pride And Thrift Of A Woman Of The East In Accordance With Our National Values, As Well As Prudence, Politeness, And Good Look.*

### INTRODUCTION

A person is an active participant and creator of any aspect of the development of modern society. Among them, women have their place, their own potential. We cannot imagine our life without women, wives or mothers, therefore today women are the founder, manager, leader of all processes and the leader of this activity. It has long been known in history that where moral maturity is high and educational activities are rationally organized, the criteria of social justice in society develop rapidly.

The President of the Republic of Uzbekistan Sh.M. Mirziyoyev paid special attention to the role of women and showed the creation of all the necessary conditions for the development of their

activities in society, the transfer of talents and abilities in the interests of the country. In this regard, the role of the Women's Committee of the Republic of Uzbekistan has increased even more.

Increasing the socio-political and social activity of women in our country, creating conditions for them to realize their abilities and potential in various spheres and spheres, ensuring the unconditional observance of their rights and legitimate interests, comprehensive support of motherhood and childhood, as well as the family. A lot of work is being done to strengthen the institute.

### **Main Part**

Today's topic "Etiquette of using a lullaby in the education of an oriental woman" is a very important topic for family education, which is the foundation of society. In the introductory part of the topic, we consider the problem of women and girls, gender equality, the role of mothers in society as one of the most pressing problems today, and of course we will try to explain this problem based on full examples. It is very difficult for us to imagine human life without a mother, the development of society without a woman, a family environment without our daughters. In the clear context of the topic, I hope that we will try to provide enough information to prepare our girls for today's life and force expectant mothers to consciously fulfill their responsibilities for raising children, realizing a huge responsibility to them.

The main goal of the article is to educate our future mothers who are part of society, that is, our daughters, so that they can behave and communicate beautifully, using the values and national characteristics of the cradles. A person is a product of social relations and means that he is always in the circle of people. This indicates that communication is one of the most leading and influential human activities. The types and forms of communication are different. For example, this activity can be carried out directly "face to face" or carried out using certain technical means (telephone, telegraph, etc.); be practical or friendly to the process of professional activity; subject-subject can be different (dialogicity, partnership) or subject-object (monologue).

The main theoretical aspects of the topic are that human relations are such interaction processes in which interpersonal relations are formed, and in this regard, the communicative education of girls entering society, expectant mothers, is of particular importance. Among them, cradles are of particular importance. Each nation, nation has its own culture, traditions and values, which, of course, affects the upbringing of the younger generation entering society. Eastern communication of our Uzbek girls should be formed in every home, because our daughters are future mothers. The more patient, cultured, strong-willed, intelligent and exemplary mothers are, the more stable the family will be.

Preparing our daughters to become mothers in the future is preparing them to be role models as imaginative, noble, proud, thrifty and wise mothers in accordance with our national values.

"It will not be a mistake to say that the equality of genes in society, the active participation of our girls in life is no less than that of anyone else, this is the happiness of the family, the well-being of the neighborhood and the prosperity of the country." So raising girls is an extremely delicate matter, negligence can cause very big problems. Of course, every parent wants their daughter to be a good person, to have the honorary title "MOTHER" in society. Our people say that there is

no guilt in dreams, different dreams, different practice. In this regard, beautiful communication, the use of lullabies and lancers is the main duty of each of our daughters, that is, our mothers.

The legend of lullabies and lancers goes back to the thousand-year history of our people. We will talk a little about lullabies and lancers in accordance with our national values.

### **Алла жоннинг роҳати, алла...**

The lullaby is initiated by the great-grandmothers, while the young continue. For example, Akramov's eighty-five-year-old grandmother straightens a white handkerchief in preparation to face the sacred altar:

Бисмиллаҳи роҳмани роҳийм!

Она алла бошламоқчи, дилим бирдан хушёр тортади. Хазил, дардли, дармонли овоз  
Алла бошлайди:

Ман сани аллолар қилай, алла-ё алла,

Кўтариб каттолар қилай, алла-ё алла,

Худойим умрингни қўйса, жоним қўзим, алла,

Ўқитиб муллолар қилай, алла-ё алла...

Шу қадар соддаю сеҳрли, меҳрли... чолғулар жим... сўзларга юрак титроғи жўр.

There are countless contests, contests and debates held in Tashkent. However, the contest of performers of the Republic among eastern women, held on June 25-28 in the blessed Abulkasim madrasah, is undoubtedly one of the brightest and most unique events of the year. Main slogans:

Do you receive daily updates on your mother's condition? Either you have gone far in search of happiness, or by the winds of fate? When was the last time you visited your mom? When you leave, do you have time not only to show your growth, but also to completely forget about your successes and failures, look your parents in the eyes, talk, follow them and tell about your dreams, as you did in childhood? Today each of us is looking for a soul that understands our language. And our mothers since our birth have never found a better friend than us. I can clearly feel this truth when I listen to the lullaby.

Эй, худойим, қудратингнинг шеваси, алла,

Фарзанд экан бу дунёнинг меваси, алла.

Фарзанд бўлса бу дунёнинг меваси, алла,

Сабил қолсин молу давлат – ҳаммаси, алла....

I did not know who was interested in the order and details of this wonderful conference attended by girls and boys. My friend said: "When I was a child, I fell asleep from a lullaby, but when I grew up, I could only dream about a lullaby."

Кўкрагимга қўлим солсам, ширинтойим, алла,

Юрагим бор, жигарим йўқ, ёлғизгинам, алла,

Ўтганларни ёдга олсам, қўзичоғим, алла,

Бу дунёда турарим йўқ, алла-ё алла.



Why are lullabies inherited from mothers who want their children only happiness, peace and joy, now problematic, sad, hopeless? Do not look for the answer to this question in the social structure of the past. The lullaby is a divine power that has always won at large and small stages of history, revolutions, decrees and orders - an expression of the revived life of mothers on the border of Dream and Hope.

Олло, олло, ойишқинам-ай, олло,  
Эл, оллоға етгай нолиш гинам-ай, олло,  
Нолиш этаман оллаға-йй,  
Эй, ёлбораман ёлғиз худоға-йй, олло.

Hundreds of thousands of copies of newspapers and magazines about the holiness of the mother, the duties of the child are read by the masters of the word. But why is the number of unloving children increasing every hour?

"It's just a hobby," said my sisters and friends, who listened to the radio and put the child to bed! Did you know that even before this creature is born, it begins to recognize your voice under your heart already at 4-5 months of pregnancy? Do you know that your gentle, loving voice, your lullaby, awakens in his soul peace, tolerance and integrity, an incomparable feeling of longing for himself, only and only for himself? Let each person have their own lullaby that they heard from their mother. May the highest, most intimate dreams of a mother be in the heart of a child with this eternal Shula.

Кетар бўлсам маконимга, Жоним болам, алла.  
Арзим баён айлаб кетай, Ширинтойим алла.  
Отам бўлгин, онам бўлгин, Мени йўл бўйига қўйгин.  
Мозоримга ғишлар териб, Лойлар билан шуваб қўйгин...

Legend has it that a savage invaded the country's doorstep. The people began to look for a way not to be defeated, but the enemy's anger was cruel, and their weapons were even stronger. When the inhabitants of the country had no choice but to recognize the dark day, the Lullaby of the young bride, who had not yet taken the child in her arms, began to cry. Then the bride's lullaby seemed like a cry of her mother in the ear of the wild leader, who went out onto the roads with evil intentions. The swords fell into their scabbards.

This is a myth, as if created for us. Is it not because the home of our hearts has been destroyed by such enemies as selfishness, arrogance, materialism, laziness and ambition, and because the flowers of kindness fade into the vastness of our souls?

The girl is the stone of fate. The woman drinks when the water comes and gnaws when the stone comes. The mother exaggerates the dignity of the house and hides the bad, while she does not swallow the deals. Modern psychologists point out that there is a limit to patience. Instead of enduring pain, it is good for the health of the person who sometimes has a broken heart. However, the Uzbek woman, who inherited from her grandmother the ability to swallow pain like a river, not to take a secret at home on the street, does not share her grief in front of others. In moments like this, there is no better friend than a lullaby:

Отам бор эди улуғ тоғдек ,алла,Онам бор эди оқар боғдек, алла.

Ҳар бир сўзлари сарёғдек , алла,Ўлим синдирди бўйнимни, алла.

Кўрикнинг энг кекса иштирокчиси Онахон момога Алла суянч экан:

I have only one son left, and at a very young age he accidentally left me in this world. Leaving me two of four children, my daughter-in-law also moved in with her mother. When I came to my mother, I was working on a collective farm, in poverty. My grandchildren go to school, and their mother receives a pension. It is difficult to feed an orphan on a pension of 160 soums. I don't have a single loaf of bread to help.

Мен сени қайдин топарман, болам-о, алла,

Тоғу тошларни изласам, жоним болам, алла.

Бир тутам ўтлар ёқарман, алла-ё алла,

Танда жонимга болам, бир кўрсам-о, алла.

On the last day of the show, the winners were announced ahead of the final concert at the Mukumi Theater. In a very difficult situation (because there were many good ones), the members of the jury who distributed the places said that the first place was given to the representatives of Fergana and Kashkadarya, the second place ... even if it does not matter to me. Because all the participants of the competition, with their lullaby clear and rich voices, each of which is a separate world, are dear to me by the sacred heritage of our people - incomparable respect for cradles. Decorated cradles, deeply meaningful rituals associated with the birth of a child, distinctive regional costumes - the right to live beautifully, forever from each other. For the same reason, the participants recognized that this event was a prelude to the Ministry of Culture of Uzbekistan, the State Committee on Television and Radio Broadcasting, and the Committee for the Preservation of Cultural Monuments of Tashkent.

The most elementary task of any communication is to ensure that the interlocutors understand each other. It begins with a sincere greeting and an open face of the Uzbeks. One of the rarest and greatest qualities of the Uzbek people is that when someone enters their house, they are greeted with an open face, they see, ask, ask about the situation. Our girls say "Assalomu-aleikum" on their chest, one hand on the chest and the other hand on the tea. In Eastern communication, they communicate with such sincerity, even when it comes to condolences. Such primary methods of communication exist among other nations and peoples, that is, in this respect, national identity is of particular importance.

All educational communication activities in which our oriental girls participate are appropriate if they are based on a more modern nationality, based on free and conscious relationships. There are certain rules for raising girls in a family, which in practice should be guided by parents and which should be organized as follows:

1. To teach the girl humility and modesty in the family;
2. Avoid looking directly at parents and defending their dignity;
3. Formation of good manners and etiquette of communication between parents and adults in education;
4. Preparation and education of girls for family business;

5. Collaboration of family, school and community in this regard;
6. Love, respect and honor the girl;
7. To teach to strict discipline in the family;
8. Taking into account the age and personal characteristics of girls in education;
9. Creation of the qualities of independence, initiative, honor in the family, modesty and frugality, intelligence, etc. in a girl.

If in the spiritual relationship necessary to improve the spiritual world of the family, there is also sincerity, kindness, mutual respect, sweetness, caring for each other, such an attitude will have a positive effect on the upbringing of the girl. They, too, can bring real happiness and joy to their children.

Especially when we say an Uzbek girl or woman, Kumushsiymo, Nodirabegim, who wakes up at night in a cradle and sings a lullaby, gives us a sweet smile, pours love into our hearts and shines in her eyes. Girls like Uvaysi, if we are only a minute late for work or school, will show our lovely mothers who speak with their loving eyes, saying: "My child, why are you late, I am worried." We, Uzbeks or residents of the East, say: "A woman is 40 years old." But even in this case, as one of our famous writers said: "An Uzbek woman sacrificed 39 lives for her child and lived with one soul," Uzbek women have long represented great scientists to the world. The roots of the virtues called modesty, decency, pride, andish lie in the hearts of Uzbek women. Family relations, raising children, hospitality, good neighborliness, kindness between relatives, mutual respect - all these have always been the main qualities of our women, who considered them their main qualities.

As our young girls learn oriental communication etiquette, they strive to master the art of hearing, not speaking. In oriental upbringing, the more modest and more beautiful a girl speaks, the more she thinks that this is a sign of her wisdom.

As you know, when people speak, one speaks, the other listens, hears. The effectiveness of communication depends on how well the two aspects are compatible and understand each other. Why can we often be good speakers but not good listeners? Listening has the same technique and style as speaking. There are many types, but in our daily life we use two methods of it: literal repetition and different interpretation.

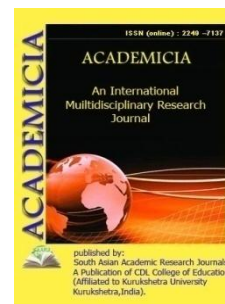
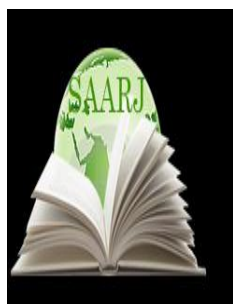
The first is the ability to support a partner by repeating part or all of the interlocutor's words. The second way is to listen to your partner's words and express the main idea in them in your own interpretation.

## CONCLUSION

In conclusion, the life of a girl entering any society will be happier if she uses oriental traditions and lullabies to form upbringing and communication manners. Because the most valuable thing in the communication process is communication itself. The listener gets useful information from good dialogue. Therefore, the use of a lullaby in the education of women in the East and the study of morals is a necessary need for our girls.

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## EFFICIENCY OF THE ELECTRONIC EDUCATIONAL-METHODICAL COMPLEX IN STUDYING THE SUBJECT “NATIONAL AND INTERNATIONAL JOURNALISM”

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### ABSTRACT

*The article presents the importance of the effectiveness of the use of modern information technologies in the transfer of knowledge and skills to students to achieve sustainable self-education and self-realization by studying the subject “National and international journalism”. In article also covers the necessity of different methods and strategies for the efficiency of the electronic educational-methodological complex as an example of the strategy "FAN". There also reported about the “MOODLE” system, which recently entered in our educational system due to the pandemic.*

**KEYWORDS:** *E-Teaching, Self-Education, Teaching Materials, Independent Work, Journalism, Source Of Knowledge, Hypertext Mode, Higher Education, "Fan" Strategy, "MOODLE" System.*

## INTRODUCTION

The modern journalism teacher must be able to manage the learning process and guide students in acquiring knowledge, using modern information technologies, which contribute to their self-education and self-actualization. Nowadays, teachers must cease to be a "source of knowledge", on the contrary, they must be co-organizer of the research process, search and information processing, creative work. In turn, the students must be an active participant in the learning process, acquire new knowledge, skills and abilities, learn to analyze, compare and draw conclusions, to discover and develop their creative potential, as well as have the ability to obtain information from various source, process it and apply real-life situations.

Thus, modern educational technology require the formation of intellectual knowledge, training methods and techniques of a rational mental activity, and computer technology will facilitate the acquisition of educational material and provide students opportunities to develop their creative abilities.

## MAIN PART

Currently, professional software developers and experts in the field of information and communication technologies in many, especially the developed countries are the most popular and highly paid. In order to fill the growing gap in these countries is widely practiced in expensive programs to train specialists in the field of computer and information technologies, as well as their recruitment from abroad in various fields of science, including in the field journalism.

Nowadays, the creation of high quality and reasonable price electronic teaching materials for the study of the journalism subjects is a challenge.

To develop these methods characteristic of an individual approach to a variety of media: print, audio, video, and is especially important for e-books - there are educational materials that are delivered over computer networks, such as online databases, electronic journals and computer training programs.

## RESULTS AND DISCUSSIONS

As a scientific result is stated position that the informational-learning is purposeful interactive, asynchronous process interaction between the subjects and objects of learning together and learning tools, and training process is invariant to its location in space and time. The educational process is learning the information in a specific didactic system, which consists of subsystems: the purpose of teaching, learning content, teaching methods, learning tools, the organizational form of training, identification, control, and training materials. The proposed system-specific principles include principles: the pedagogical appropriateness, such as the use of new information technologies, opens learning, interactivity.

One of the important principles of formation of the journalistic potential is the visibility, which is due to the peculiarities of perception and the development of student thinking. Student draws his



or her knowledge from the outside world through the senses, and visual aids are a source of information for him.

The main forms of work is to develop skills of information processing, analyzing, modeling, forecasting, communication, group work, research and project activities. Main activities include-individual, independent, creative, discussion, interactive, communicative methods. It should be noted that at each stage of studying the national or international journalism, we use the visual material, as it helps to activate students' mental activity. They learn to compare the characteristics of the national and international components of journalism, using various materials as a source for the formulation of questions and tasks of a problematic journalism, the creation of problematic situations. Journalistic material should be used as a source for the implementation of practical and independent works, demonstrations of models and strategies of national and international journalism. When performing independent work on the characteristics of objects, phenomena, processes, it is important to study the subject in order to determine the relationship between the person and information.

On this basis, have been designed assignments of different levels of the individual sections, themes, maps, diagrams and drawings of programmatically didactic materials for the formation of practical skills provided by educational programs in journalism and based on the requirements of state educational standards.

Especially, at such distance learning time during the study of a new topic in the platforms of higher educational institutions or universities, illustrated, animated presentations should actually be used. They should be provided with a narration, a variety of pictures and videos, allowing students to achieve a deeper memorization of the educational material through imaginative perception and emotional impact.

By making a short video, explaining sections of one topic, teacher can use different pictures, animations, diagrams and even interactive methods and strategies.

Let's try to create an online lecture plan using the "Fan" strategy. At first, teacher should collect all the materials (photos, videos, diagrams) related to the topic and prepare the slide using the "Fan" structure. This complex and multidisciplinary strategy focused on exploring different areas. In essence, the information gives in paragraphs, sections of the topic. Stripes and sections are discusses separately. Below given an example:



This strategy helps students to develop the abilities of ordinal, systematic, critical, analytical, logical thinking and the successful development of their ideas, the laconic expression of personal ideas in writing and orally, the ability to effectively defend them. It is based on the study of specific aspects of a subject based on team, group, pair and individual active work of each participant.

Technologies can be used not only in education, but also in the process of spiritual and educational work. At the same time, students can assimilate the following qualities and skills:

- teamwork;
- activity;
- discuss problems and situations from different points of view;
- making informed decisions;
- respect for the opinions of others;
- politeness;
- creative approach to classes;
- focus on the problem and others.

This strategy can be used not only in the part of the lesson explaining the topic, but also in the part of testing the knowledge of students.

Demonstrated by observing the objects, the students themselves or with questions mulling conclusions, make generalizations and conclusions, they develop memory, language and imagination.

The level of complexity of the assignment, the teacher can check the students' knowledge and mastery of its educational materials in a high journalistic degree, and most importantly - the mastery of special skills. The level of complexity of tasks implies the ability to not only play the assimilation of material, but also apply their knowledge and skills to address a wide range of tasks in unusual situations.

The gradual improvement of the education system as a result of the development of above aspects will provide a solid foundation for the future work of coming up journalists, both in the media and as in agencies.

I would also like to note that the recent introduction of "MOODLE", a virtual learning environment in the education system of Uzbekistan, has created great convenience for both teachers and students. Now, due to this system, the orderly management of education has been established. Along with this, now each teacher has a personal home page at a virtual world. On these home pages, they can easily control their various subjects, posting videos, podcasts, assignments, literatures, slides related to their subjects. As a result, they can save their time and get rid of paperwork. In addition, students can study from anywhere and at any time, that suits them. Sometimes some students due to their circumstances may not be able to participate in the lecture process. In such cases, the platform allows students to quickly navigate the task, and they can independently study the material presented in the lectures, or simply repeat what they did not remember.

Also, creative and research tasks are of great importance for the development of functional literacy and journalistic competence of a student in the learning process of national and international journalism. The process of increasing the number of creative assignments should be gradual. However, the increase in creative tasks does not imply non-reproductive tasks, but their volume must be reduced. Research tasks are a logical continuation of the creative tasks, under which a theoretical or experimental study of the problem. Their performance establishes the basic knowledge and skills in the form of scientific opinion in the minds of students. Creative assignments form the cognitive personality traits, research - creative quality.[8] In carrying out research assignments, students create new knowledge element of objectivity for the rest, but when the teaching of creative tasks - mental element of new knowledge for themselves.

One of the important places in the research took the tests; they are based on an intellectual strain. Using tests helps to develop creativity, self-judgments, the ability to conduct scientific dispute has attracted considerable interest to contemporary journalistic and information problems, creates the opportunity to participate in the search for promising solutions. At the stage of consolidation of knowledge, we used a computer program controlling the character test, which takes into account the number of incorrect answers were recorded during performance of tasks and exhibited a final mark based on the scoring.

Every teacher in the course of their educational activities meets many students who have difficulty in mastering the training material. As the accumulation of knowledge it appears that many students are unable to digest. They have a negative attitude to the subject, as well as a kind

of psychological barrier. Using various computer programs help students perform tasks independently, as well as repeat driven materials [8].

The effectiveness of any type of training depends on several components: a technical basis the effectiveness of the developed teaching materials, training techniques used in training. Development and application of computer-based training programs and new information - educational tools seamlessly incorporated into modern educational technologies. That teacher, like no other, can determine exactly to what extent and at what particular stage the computer is able to facilitate student learning. Many related issues can be resolved only in the evaluation of the reaction of the student.

In the interactive databases systematized set of data that can be accessed via telecommunications. Using these resources, course developers can maintain a local database for both students and faculty. Another solution is to provide access to external databases. Number of databases available through computer networks is growing rapidly.

## CONCLUSION

Studying the course of national and international journalism through simulation of various processes and phenomena with a computer has significantly increased student interest in the subject, the effectiveness of the educational process, improved the assimilation of the subject, and gave an opportunity to study sections of the course. There are numerous examples from real life, the easier of the main forms of occupation in the form of a dialogue between teacher and students.

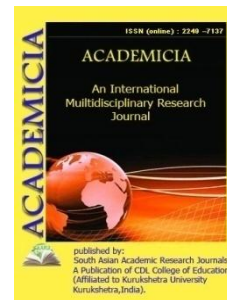
E-teaching and methodical complex and automated training system should be viewed as a medium of information teaching, which is an organic extension of the traditional methods of learning, built on the book, which by virtue of specific intellectual abilities of personal computers. It provides:

- Continuous improvement of the educational process: the introduction of innovative technologies, development of other teaching systems based on application of information technology
- Democratization of higher education;
- Increased test base on fundamental subjects to levels that provide coverage of all topics, and individual tasks to control knowledge;
- creating methodically sound sets for all forms of control: an intermediate, the current and final;
- Rapid and full access to all information in hypertext mode;
- Organization of independent work by students;
- Audio-visual facilities; graphics sound, the acquisition of new knowledge through analogy, taking his motivational and informational components of behavior from different hemispheres in a single operation.

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## THE ROLE OF SIDDIQI-AJZI IN UZBEK JADID LITERATURE

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### ABSTRACT

*The article reflects the political, legal, socio-economic, spiritual and enlightenment views of the enlightened poet Siddiqi Ajzi, the nation plight, the world ignorant, the ignorance state of Turkestan, which is lagging behind in development. It is said that the purpose of literature and poetry is to cure the pain of the Motherland and the nation, to encourage it to science, enlightenment and development.*

**KEYWORDS:** *Ignorance, Enlight, Enlightenment, Science, Motherland, Nation, Nation Decline, Nation Development.*

### INTRODUCTION

At the beginning of the last century, the Turkestan Jadid movement put on the agenda the idea of raising the homeland and the nation to the level of developed countries and peoples of the world, to reform all aspects of society - political, legal, socio-economic, spiritual and educational. In order to carry out this complex and responsible task with dignity, it was necessary to raise the nation spiritually, to inculcate Jadidism ideas in the hearts of the younger generation. The Jadids directed fiction to this end. It is from this criterion that the study of Siddiqi-Ajzi poetry, a well-known Uzbek modern literature representative, should be approached.

The scale and scope of the poet's literary heritage is much wider. "Ayn ul-adab" ("Source of upbringing"), Uzbek poems collection published in 1914-1916, "Ganjinai hikmat" ("Treasure of wisdom") collections of Tajik poems, epics "Mir'oti ibrat", "Anjumani arvoh", his problem-solving art journalism, his translation of Gogol's "Shinel", and his stories confirm this idea. His poems have been published in the Caucasus magazines "Mulla Nasriddin" and "Dirilik", which is a testament to his recognition in the Turkic world. Tashkhoja Asiri from Khojand, who read the work "Mir'oti ibrat", was very impressed and in response wrote "Timsoli asiriy dar javobi "



Mir'oti ibrat" Ajzi Samarkandi". He praised the poet's talent and described him as "farhunda fitrat."

Siddiqi-Ajzi deeply understood the task set before the intellectuals of the time. He was disturbed by the tragic fate of the backward Turkestan, a nation ignorant of the world in the midst of ignorance. He felt in his heart that the purpose of literature and poetry was to cure the pain of the Motherland and the nation, to encourage it to science, enlightenment and progress. That's why he gave up his love-themed poems and burned them in the fire.<sup>1</sup> According to the modernist Begali Kasimov: "Such a situation occurs not only in our literature, but also in the literature of other nations"<sup>2</sup>. As an example, the scholar translates the following lines by Modesto Mojico in the 1960s, when the struggle for independence in Panama was in full swing:

*I don't sing love anymore,  
My hand does not go to divine poems.  
Until there is freedom and happiness in the homeland,  
Our song is one: Freedom or death!*

In his article "Turkish poet Ajzi", Wadud Mahmud analyzes the poet's poetry in two ways: 1) Ajzi's love; 2) his social opinion. The fate of his love poems has been mentioned above. In his poems, which express social opinion, the poet condemns Russia's colonial policy. He expresses his sorrow at the plight of the oppressed nation. The poet, whose heart aches from the stones thrown at Islam:

*Kavkablar-la nation is against Islam  
Liver injury is a serious condition*

analyzing the lines, Wadud Mahmud writes: "The first activity of the Jadid period was to enlighten the people - the nation. This period would be appropriate even if it is called the period of enlightenment. The poisonous wounds of Russian nationalism have left deep scars on Ajzi's heart. He is always forced to stay under the bloody claws of the people, he looks in every direction, he sees, he extracts this from every event. The stars are stones thrown at Ajzi's hand"<sup>3</sup>.

Jadid poetry is not only important for raising the socio-political theme to a leading position, but also for renewing the traditional images in classical literature, giving them a completely different meaning. In particular, the traditional flower and nightingale images served to express the state of the nation in the whirlpool of oppression, rather than the symbol of the lover and mistress for the Jadid poets. The image of tulips in these lines of Ajzi is characterized by the same feature:

*(When you see a tulip leaf, it is easy to suspect that  
This is an example of a literal lesson.  
Shahidi dagger love homeland blood clot,  
The visible veil is a snake's blood shroud)*

That is, do not assume that the tulip leaf we see is parterre. It is a conference that teaches by example. He (the tulip leaf) is a clot of blood flowing from the dagger of martyrdom in the love of the Motherland, a shroud of blood that appears on the veil of honor. The poet skillfully used the figurative image to express his heartaches.

The poet adds a new meaning to the image of the nightingale. As it renews the essence of the image, it contrasts it with the image of a crow - a raven and a crow - an owl, in order to increase the effectiveness of thought. He skillfully uses the opportunity of the art of tazad, which is characteristic of classical poetry, and artistically interprets the social reality of the period in which he lived in the following lines:

*(What a pleasure to just masti jamu bodai,  
In every kitchen today is the day of the dead.)*

"Innovating in image is more complicated than in form," writes professor Nurboy Jabborov. – But the true rise of poetry depends more on this poetic phenomenon"<sup>4</sup>. The high level of creative work that requires a special skill, such as the poetic renewal of traditional images, is a testament to the creative potential of Siddiqui-Ajzi.

In the following lines, the poet adds a new social meaning to the traditional image of the nightingale - the pain of the nation:

*(Nightingale sing flowerbed passion.  
The cage is from Eram, the spot on the dahr.  
Bodai is drunk with greed,  
Ajzi in this regard)*

In a poem depicting the image of a nightingale, which dreamed of the passion of Gulistan, but whose place was dust, and could not reach the reed flower in the garden of Eram, it was stained from the cage of time. It is difficult to describe the situation of a nation that was honored under history, oppressed under colonial oppression, and whose rights were violated, worthy of living freely and freely, of conquering the highest peaks of development.

The image of a nightingale requires the image of a flower according to artistic logic. According to the poet's interpretation, the redness in the flower scene should not be suspected to be the color of a rose petal, it is the soil of the Homeland reddened by unjustly shed blood. This image shows that the artist has a deep understanding of the realities of the time, the essence of the policy of oppression, and his heart is filled with anguish and pain because of the unjust bloodshed of his compatriots:

*(Do not doubt the color of the petals in this flower scene,  
Red blood is the unjust color of the homeland - that's it!)*

Professor Begali Kasimov notes that the Jadids took three different paths in the struggle for independence:

- “1. Forced liberation from dependence on Russia, forcible acquisition of independence (Dukchi Eshan uprising, labor movement of 1916, printing)
2. The way of reconciliation. Achieving enlightenment with the help of the Russians. Acquisition of rights in the field of enlightenment, restoration of national identity (I. Gasprali, M. Behbudi).

3. Way of cooperation. Tsarist administrators, and then the Soviet government, to participate in their programs and, if possible, to gain independence. Make certain preparations for this (Munavvarqori, Hamza, Avloni)”<sup>5</sup>.

Following the path of Ismailbek Gasprali and Mahmudhoja Behbudi, Siddiqi-Ajzi, who sought to develop the nation through enlightenment, mobilized all his creative potential to inculcate this profession in the minds of his contemporaries through his poems.

Ajzi is one of the potential figures of his time. Wadud Mahmoud describes how talented he is and how versatile he is in science: “He is a master of many arts, rather than having a great talent. From the beginning Siddiqui is a good technician. He is adept at repairing watches and machines. She is a good weaver and seamstress. He has lived with this art for many years. He is a good hunter and is also very interested in music. He speaks Arabic, Persian and Russian in addition to his own language. Persian poetry is a testament to his familiarity with Persian literature. He is also well acquainted with Arabic and Russian literature”<sup>6</sup>. In one of his poems, the poet, who knows many languages, expresses in one of his poems that having such an ability gives honor to a person, that a person who knows a language knows it, that it is possible to find a way to the hearts of other peoples through language:

*(You know the language of every fugitive,*

*You will die more precious in the world)*

The poet emphasizes that a great deal of knowledge of the language is a factor in the sanctity of man in the world. Through this, he encourages his compatriots to learn the language.

In one of Ajzi's poems, which emphasizes that the acquisition of knowledge is the basis of the nation's happiness, he gives an artistic interpretation of this theme as follows:

*(The flower of civilization that has opened its buds,*

*The people of the world were amazed by the industrial flowers ...)*

*(Praise be to the school children, pure soul,*

*Aiming to transform education with pure law)*

The poet expresses his joy that the buds have blossomed in the flower of civilization, that the flowers of industry, that is, the flowers of literature, have become so beautiful that they amaze the people of the world. Praise be to God that the pure law, that is, the method of teaching, has been achieved in a serious way, and that the school and the children in it have been given a pure spirit. Throughout the poem, we read the following:

*(It is worthwhile to congratulate the people of thought,*

*Every moment, every hour, every moment.)*

*(It is not easy to recreate the state of Dahr,*

*It's easy to understand a problem with height ...)*

*(To the people, Ajzi, to strive for progress,*

*Aylaram's proposal was based on the character of gnosis)*

The poet, who is happy with the results achieved due to the reform of education, has to congratulate the thinkers at every moment, every hour, every moment. It is not easy to recreate the state of the times - to renew, to change. We should be thankful for making such a difficult task easy to understand, that is, for making hardship easy. The poet invites the people to move towards progress, documenting the nature of gnosis, that is, the nature of enlightenment.

In a poem published in the 38th issue of "Oyna" magazine in 1914, the poet writes:

Илм экан фарз, недан жаҳлга табдил этдук,  
 Ғарқай зийнат ўлуб жуббау дасторлара.  
 Ғарб илан Шарқ уёнмақ-ла бошин қолдурди,  
 Таъна пайқонини маҳдуфи биз ағёрлара.

The poet suffers from the fact that he has replaced science with ignorance, even though he believes that science is obligatory. He explains the reason for this in the form of "g'arqai ziynat ulmoq." That is, it expresses the feeling of regret that we have fallen into this state as a result of being enslaved to adornment, lust. He urges us to wake up, following the example of the West and the East, instead of throwing taunts at our aggressors - our enemies - for our helplessness.

As a result of studying his poems, it can be observed that Siddiqi-Ajzi's socio-political outlook was constantly growing. The poet, who wrote warm poems about the need to awaken the nation from the sleep of ignorance and ignorance, to express the state of the world through science and enlightenment, sought a solution to the problems of the motherland. Literary critic Nurboy Jabborov's analysis of Cholpon's poems can be fully applied to Siddiqi-Ajzi's work: "A true poet cannot be trapped by the desires of his heart. It is clear that a dream grows out of this desire. After all, a man's wings turn away from a dream, and his hope for the future fades. This is what our enlightened ancestors were able to avoid. In their heartbreaking works, they managed to express not only their own desires, but also the dreams of the nation"<sup>7</sup>. In this sense, Siddiqi-Ajzi mourned for the fate of the nation in the colonial vortex, called it to enlightenment, science and knowledge, as well as the dreams of his people to achieve their freedom and liberty. In particular, in the epic "Mir'oti ibrat" the poet expressed his dreams of independence as follows:

*(Take with knowledge and fun,  
 State, language, law,  
 Every nation is deprived of these,  
 The future is doomed)*

To take science, state, language, law is to achieve independence in practice. According to the poet, the future of the people deprived of them will be even worse than it was then. It is not hard to feel that these lines express the poet's dreams of national liberation.

Evaluating Ajzi's work, Wadud Mahmud correctly defines the essence of the poet's poetry: "Our poet is also in love. Only the love of this is neither the love of mysticism, nor the apparent love of realist poets. Our poet is in love, and the lover is the people, the nation. And that love tells us that. Ajzi is a poet watered by the love and pain of the nation. His excitement is not artificial, it is real, it is natural. When he sheds tears, he sheds for his nation, and when he is upset with someone, he

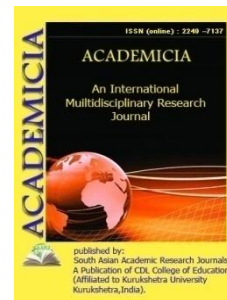
is upset because he did not look after his nation. Even if he is happy with someone, it will be for his nation, his people”<sup>9</sup>.

Indeed, Siddiqi-Ajzi is a lover of the homeland and the nation. His love is nourished by such sacred feelings as the progress of the motherland, the freedom of the nation. The works of the poet, whose feelings are true, whose emotions are true, who shed tears for the nation, who is upset when someone is upset, are very important for today in terms of calling the younger generation to knowledge, patriotism and nationalism.

In short, the literary heritage of Siddiqi-Ajzi is of great importance due to the unique expression of the socio-political life of Turkestan at the beginning of the last century, the dreams and aspirations of the nation. It is especially important that the literary and aesthetic ideal of the poet is closely connected with the history and destiny of the motherland and the nation. The works of the artist differ from the poems of his contemporaries by their unique style of expression, enlightening content and system of images. The renewal of the traditions of classical poetry, the poetic synthesis of content, forms and images typical of Uzbek and Oriental classical literature are proof of the high creative potential of the poet. These facts prove that Siddiqi-Ajzi has a worthy place in the development of modern Uzbek literature.

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## ROLE OF ADVERTISING ON SHAPING CONSUMER BEHAVIOUR: A COMPREHENSIVE STUDY

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### ABSTRACT

*Advertisements are influencing the buying behaviour of the consumers from last so many years that create the awareness and perception amid the consumers for the products that are there in the market. The companies are using this tool for creating the awareness and also shaping the perception of the customers that can either positive or negative which completely depends on the content of the advertisement. The quality of the product is perceived by the consumers as they gather the information which they generally get with the help of advertisements. The buying decision of the consumers is drive by the “perception” of the quality, “awareness” of the quality, and the “opinion” of the consumers. The buying behaviour of the consumers like “brand consciousness, social class effect, good experiences, suitability, or loyalty with the brand” are all created with the help advertisements and promotions. Instead of so much advertisement, “social circle, peers, friends, and family” had a huge affect on the consumer’s perception.*

**KEYWORDS:** Advertising, Behaviour, Consumer, Purchase, Buying Behaviour, Consumer’s Perception

### INTRODUCTION

In the modern era, the marketers are following the simple rule that “customer is their first preference” and for this they are always keeping an eye on their customers. They are gaining the knowledge of their consumers and consider this as their primary responsibility. Due to this practice they are gaining success in meeting the expectations, and are also seeking the better opportunities in the global market. It is important for the marketers to understand that “customers make rational decisions so they can get the best product available in the market,” “customers also make irrational decisions and they are very impulsive and can be attracted towards the promotional activities,” “emotional association also put an influence on the mind of customers,”



“and customers also buy as a problem solver, they seek the products which can solve their problem” so that they can serve their customers in much better way (**Gupta, 2013**).

Advertisements is an effort which is applied to influence the “motive” of the consumers to purchase any particular product and it also changes and makes the “perception” of the product in consumer’s mind. Its appeal works as a “supplier” that raises the “psychological motive” of the consumer to purchase and also involve rational in which the “product can be emphasized mainly on its benefits and the problems which it can solve” and emotional appeals that “meet the consumer’s psychological, emotional and social requirements” (**Baheti, 2012**). Advertisements are very helpful in communicating with the audience and actually change the requirements and needs of any individual and also help in creating the needs among them.

Advertisements are used by the organizations to target the mass and influence their buying behaviour and they use “above the line” and “below the line” techniques of the advertisements that blend perfect with their product. Media advertisements, television advertisements, and posters are some of the commonly used medium of promotion along with modern technologies, mass media channel, modes of communication that are booming the market and are considered by majority of technology advertisers as they are providing fast access to the consumers. These advanced technologies are helping the consumers to have plenty of information that makes their buying decisions much easy. And at the same time the advertisers found it difficult to build the “brand awareness” and “condition the mind” of the customer to take their buying decision, as people are attaining control over the “product” and “information” (**Raju, 2013**). The buying pattern of the consumers is directly related to its behaviour which is highly influenced by the advertisements that encourages the audience to make their purchase decisions.

## LITERATURE REVIEW

Advertising is a mode of communication that encourages the consumers to make their buying decisions for goods and services and it also conveys the information to the consumers. The marketers and the companies are considering it a very important element which is necessary for their economical growth and success. It is a form of “exposure” and “promotion” which is used by the sponsors to reach their audience by conventional modes like “television, newspaper, commercial radio advertisement, magazine mail, outdoor advertising, or modern media such as blogs, websites, and text messages” (**Ahmed & Ashfaq, 2013**).

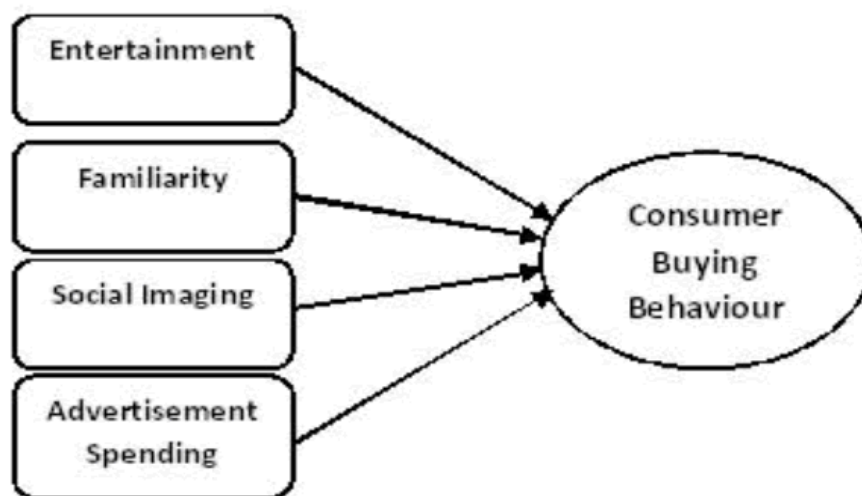
The companies and advertising partners are focussing in “social media” and “mobile advertisements” and “television advertisements these days to promote their products. Along with these advertising modes “digital marketing” is blooming in the market and is practiced by majority of “large local” and “multinational giant” companies in full swing. The aim behind these advertisements is to influence the purchase behaviour of the consumers and on the other hand this brand related impact is frequently changed or get deep in consumer’s memory. The brand related memory is formed in the mind of the people by the association which is related to the name of the brand (**Khan et al., 2012**).

The brands are making their continuous effort to influence the “consideration, evaluation, and finally purchases” because great importance is given to the “purchase behaviour” of the consumers which is highly influenced by the advertisements. It is generally found that the “buying behaviour” of the consumer depends on their “liking or disliking” towards any particular product’s “ad.” The consumers are more influenced by a good quality advertisement to buy that

product and this get reversed for the advertisement with poor quality. The basic concept behind creating an ad is “entertainment” which is utilized by the creators as a tool that helps in gaining the consumer’s attention and it is only remembered by the people when they are “interesting” and “entertaining” as well. This entertaining feature of the advertisements makes them more effective and this is the reason why the companies invests a lot to make their ads more “interesting,” “entertaining,” and “humorous” as well (Mandan, Hossein & Furuzandeh, 2013).

The process known as “Product-class cues” shows the effect of the “brand familiarity.” In number of cases, the sub category of the product to which is brand is associated can serve as a “cue.” The way we perceive our environment around us is generally influenced by the different kinds of advertisements, particularly the “TVCs” that portrays the user of any particular product. It shows user’s “social class,” their “life style,” and their “attitude” as well. A report, “Beauty at any cost” highlights the cost of the “beauty obsession” on women and girls in USA with the help of media. The purchase of beauty products is been triggered by the feeling of “insecurity” and “obsession” in women and girls (Britton, 2012).

The “buying behaviour” of the consumers show the methods that are involved when the person or the group of persons “choose, buy, utilize or dispose of products, services, concepts or experiences to suit their needs and desires.” The consumer’s behaviour is displayed through their searching methodology for “paying modes, using, evaluating, and disposing the products and the services” that according to them is useful to them and also satisfies their requirements. It is very important to have the knowledge about “consumer buying behaviour” because it is very helpful in facilitating the companies to design their plans and strategies and execute them to achieve success in their business (Khaniwale, 2015).

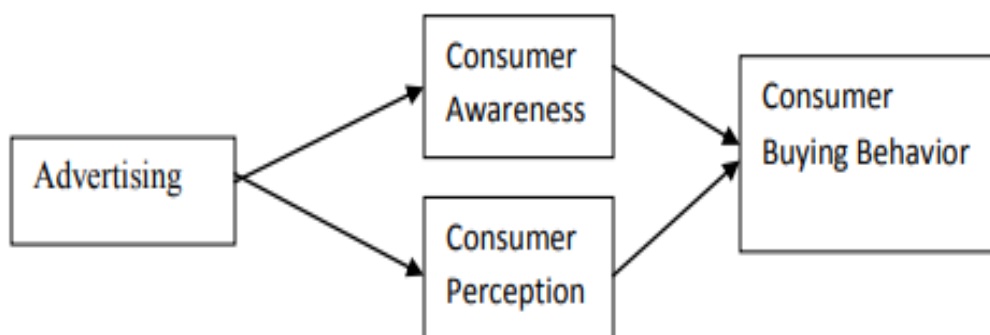


The industry of advertisements is considered as a social institution that is established to meet the human expectations and fulfil their requirement to get information about any particular product, its availability, its associated brand, and also its services as well. The key role of advertisements is to create new customers and retains the consumers for any particular brand and its products. The “buying behaviour” of the consumers is highly affected by “advertising spending” because

when more money is spend on the quality and frequency of the advertisement, it is more effective in creating and retaining the customers. There is an indirect role of these advertisements where it is linked with the “brand loyalty” and is involved in affecting the perception of the customers of any particular brand and plays very important role in having an impact on consumer’s “buying behaviour” (Ha, Janda & Muthaly, 2011).

**Shakib (2017)** studied the “impact of advertisement on consumer buying behaviour” in which the author had considered 4 variables like “in Advertisement, Familiarity of Advertisement, Social Imaging in Advertisement and Advertisement Spending.” After analysing the results of the study it is concluded by the author that there is a significant impact of “advertisements” on the “buying behaviour” of the consumers. Through his study the author is trying to help the marketers to know the situation that triggers the intention of the consumers to buy any product or avail the service. It is also helpful in determining the effective advertisement elements and also the elements that are comparatively less effective.

In the modern world of competition and business, the strategies and execution of advertising and marketing completely depends on interaction and communication between the “business” and their “consumers.” In this era of technology, the “advertising” is the most popular and common tool that is able to deal with the changes. It also deals with the “marketing changes” of competitive market, and manages to “reanalyse” and “redesign” the tasks both “in” and “outside” of the organization. It is easy to predict the “purchase behaviour” of the consumers of the brand is able to know the “purchase intentions” of the consumers which is an important source of information that significantly influences the “purchase decision” of the consumers. The “purchase decision” of the consumers is significantly and positively affected by the product information like its “brand image” and “awareness” **Farris et al. (2010)**.



In spite of the cost of the product the consumers are directly influenced by the advertisements as it is very effective in creating the awareness among the consumers which in result motivates them to purchase any particular product. The advertisements are responsible for building the “positive or negative” perception about the brands.

**Salem & Abideen & (2011)** indicates through their study that an “emotional response” among the consumers is been created by the advertisements which has a “significant” impact on their

“purchase decision” as well. The “buying decision” of the consumer is significantly affected by the ads that advertises and attracts the “brand associations.” The “attention, retention, and effectiveness of advertising message” affects the “purchase behaviour” of the brand which is advertised by the marketers and therefore it is well-known fact that different “media advertisements” have degree of difference in their effects on the “purchase decision.” The ad related memories of the consumers is been triggered when they are exposed to advertisements and this is helpful in building up a “positive attitude” towards the ads which in result affects the “purchase decision” of the consumers.

**Rai (2013)** stated that the people identify and have their strong “perception” for number of brands that “national and international” as well and theses “perceptions” are set deep n their mind due to their “culture, life styles, and surroundings.” It is also found that there is a key role of advertisements which is to shape the “consumer behaviour” and also works as the “source of motivation” that pushes them to purchase a particular product and build a trust in a particular brand. Consumers are significantly encouraged if he or she is seeking for “quality” and “prices” of the product. The “product evaluation” and “brand recognition” builds up the “purchase attitude” in the consumers. Advertisements are attracting the consumers globally towards the “brands and the products” to which they are attached. It is also found that there is a huge influence of “emotional attachment” on the consumers and their “buying behaviour.”

## CONCLUSION

Advertisements are used by the brands to create the awareness among the consumers and shape their “purchase behaviour.” The most popular modes of advertisements are “TVCs, billboards, newspapers, social media platforms etc” that are commonly used by marketers to target their consumers and change their buying behaviours. The “entertainment” and “interesting” features of the advertisement is very effecting in creating the customers and retaining them as well. The ad contains all the necessary details about the product that is helpful in attracting the customers and creating the awareness in consumer’s mind. The people gather all the information regarding the product through these advertisements and make their purchasing decisions. It is very important for the advertisement to be attractive, entertaining, and full of all the information to be effective in attracting, creating, and retaining the customers.

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